



Article

# Telework Implications on Work-Life Balance, Productivity, and Health of Different Generations of Romanian Employees

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**Abstract:** The purpose of this article is to analyse the impact of telework on the work-life balance, productivity, and health of different generations of Romanian employees. Qualitative and quantitative methods provide the means to exploit the richness of data and deepen the understanding of the phenomenon studied. The quantitative data derived from a research instrument was associated with qualitative data collection. Quantitative research was conducted to achieve the stated purpose using the survey method, the number of respondents being 1098 persons. The research tool was an online questionnaire. Results highlight how telework affected each generation of employees. The satisfaction towards teleworking achieved by Generation Z and Baby Boomers is, on average, higher than that of Generation Y and X. The differences between the age groups (Generation Z, Y, X, and Baby Boomers) in terms of telework satisfaction levels were also tested, considering each of the three aspects examined and presented in the article's title. At the conceptual level, research brings a new methodological approach as an element of originality that can be used for similar future research. Moreover, new concepts on the effects of telework on employees were connected and analysed simultaneously: work-life balance, productivity, and health of employees during teleworking. At the operational level, this type of research can determine the degree of satisfaction of employees in different companies/organizations and identify solutions to increase employee engagement.

**Keywords:** telework; work-life balance; productivity; health; employee engagement; generations of employees



Citation: Ivasciuc, I.S.; Epuran, G.; Vuṭă, D.R.; Tescașiu, B. Telework Implications on Work-Life Balance, Productivity, and Health of Different Generations of Romanian Employees. Sustainability 2022, 14, 16108. https://doi.org/10.3390/ su142316108

Academic Editor: Guy Hochman

Received: 30 October 2022 Accepted: 30 November 2022 Published: 2 December 2022

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#### 1. Introduction

Throughout 2020, the spread of SARS-COVID-19 has led to the manifestation of new facets of working life, such as the unprecedented amplification of telework. Since it was first introduced in the scientific literature by Allen et al. [1], the concept of telework has been expressed in various interchangeable terms, namely: telecommuting, remote work, distributed work, virtual work, flexible work, flexplace, work from home, home office, and distance work. In most of the definitions found within the literature, telework is considered: (1) work carried out using information and communication technology (ICT) outside the employer's premises [1–5] and (2) work carried out from the employee's home [6,7].

A broad definition is provided within the European Framework Agreement on Telework, which depicts telework as "a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis" [8]. The Romanian National Institute of Administration defines telework as "a form of work organization through which the employee, voluntarily, performs his/her specific duties, tasks or occupation, in a place other than the working place organized by the employer, at least one day per month, using information and other means of communication technology." In addition, the Romanian legal framework for teleworking, provided by [9], states that telework is established through a working schedule

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agreement between employee and employer, it has a temporary nature, and its features should grant the opportunity to be conducted remotely.

According to Eurofound [10], almost 4 in 10 employees in Europe started teleworking during the pandemic, while 56% of employees have previously and sporadically worked from home. As noted by Contreras et al. [5], "teleworking was imminent, but the pandemic has made it a compulsion" (p. 2), turning it into a "measure to combat the spread of the COVID-19 virus" [11]. Eurofound [10], reconducted in 2022, concluded that the return to the workplace has continued across the EU as public health restrictions were lifted and 12% of respondents still worked exclusively from home in spring 2022. However, there is a clear preference for teleworking with over 60% of both women and men expressing their preference to work from home at least several times per month, implying that the return has not been complete [12].

Like most EU countries, Romania has statutory definitions and specific legislation on telework. Romania implemented a state-centred governance model whereby telework is regulated through statutory legislation. Thus, in the Official Gazette no. 1042/2020, the Government Emergency Ordinance no. 192/2020 for the amendment and completion of Law no. 55/2020 was published, as well as to amend letter a) in art. 7 of Law no. 81/2018 ([13]). In 2021, Ordinance no.36/2021 supplemented the legal framework [14].

According to statistics [15], Romania was one of the European countries with the smallest number of employees who worked remotely before the pandemic. For this reason, the global transition to telework in the country can be seen as a large-scale social innovation. Thus, investigations of the range of telework in Romania and similar countries such as Lithuania, Greece, Croatia, Cyprus, Hungary, and Bulgaria where the practice of telework has not been widespread so far are promising in terms of originality of insights.

The interest in teleworking increased in the context of the challenges of COVID-19. Moreover, the scope of scientific research on teleworking increased during the pandemic. To illustrate, Google Scholar provided 1910 papers on various issues of telecommuting in 2019 and as many as 17,100 scholarly papers until October 2022. Although research on telework has advanced in recent years, some knowledge gaps remain. Firstly, studies on the association between teleworking practices, and work-life balance, health, and productivity are still scarce and inconclusive [16,17]. Telework arrangements affect workers in diverse ways. On one side, telework offers workers more autonomy and flexibility, which usually leads to better work-life balance [1,18,19], health [20], and work productivity [21–24]. On the other side, there can be disadvantages: it can lead to an intensification of work, longer working hours, and the overlapping of work and home life, which may be particularly harmful to their work-life balance [25–28], health [25,29–32] and work productivity [33]. Therefore, the present study aims to explain these contradictory findings considering the different approaches to telework between diverse generational of teleworkers.

An intensive study of the literature revealed another research gap. There are no studies that address the influence of telework on all three considered aspects (well-being, productivity, and health). To examine work-life balance, productivity, and health of each employee involved in telework, this research provides a score-based evaluation system. Moreover, one of the objectives of this study is to check whether there are differences between generation groups (Baby Boomers, Generation X, Generation Y, and Generation Z) when evaluating telework, considering the scores they reached for each of the three areas affected by teleworking.

Examining recent studies on telework, it was found that the influence of sociodemographic characteristics of workers on their attitudes toward telework continues to raise questions. The second research gap is the strong need to understand the current characteristics of teleworkers. Most current studies are focused on gender differentiation [28,29,34–37]. Although some studies address this age differentiation topic [36,38–41], they do not consider all generations of teleworkers and the differences between them. Considering the age criterion, this study contributes to the debate on the micro-level consequences of these arrangements of work, providing a qualitative and quantitative, more Sustainability **2022**, 14, 16108 3 of 24

nuanced understanding of the implications of telework on different work generations of employees [36,38,42–44].

Lastly, an important research gap is the yet insufficient understanding of telework in Romania. Several studies address the socio-economic impact of telework in Romania [45–48]. Other studies discuss the teleworkers' well-being [49–51], job satisfaction [52], productivity [49], but a shortage of studies about the generational characteristics of Romanian teleworkers was noticed. Nedelcu [53] studied the perspective of young people on the effects of telework on the quality of life at work. Therefore, this scientific approach is oriented towards a better knowledge of the effects of telework on Romanian employees, to identify its advantages and disadvantages, and the perceived benefits and disruptions on their well-being, productivity, and health considering the generational division.

This study aims to contribute to the elimination of these identified gaps. To support this scope, the following objectives are stated:

- 1. Determining the impact of telework on work-life balance, individual productivity, and employee health.
- 2. Exploring the characteristics of teleworkers considering the experiences of each generation with telework.

The paper has a structure divided into four sections. A review of the literature was carried out in the first section. The research methodology is widely described in a separate section, followed by the main results and discussions overview. The last part of the paper concludes and highlights the implications of our research results, presenting study limitations and further research directions.

#### 2. Literature Review

Since research efforts have focused on specific manifestations of different generations in telework processes, the literature is explored in direct connection with the proposed objectives.

#### 2.1. Work-Life Balance

Work-life balance is a key factor in determining employees' participation in company goals. A proper work-life balance is important not only for health and relationships, but can also improve employee productivity, and finally performance. The term "work-life balance" was first used in the United Kingdom in the late 1970s, and in the United States in 1986, and refers to the appropriate assignment of priorities between "work" (career and ambition) and "lifestyle" (health, pleasure, leisure, family, and spiritual development [54]). Work-life balance is even more of a struggle in the 21st century since many people work extended hours, have additional part-time jobs, and have family responsibilities [55]. Therefore, any organization's managers need to learn how to help employees in balancing the boundaries between work and home life. Eurofound study from 2017 [56] presents the factors which can influence work-life balance: flexibility and autonomy, working hours and working time quality, work intensity and workload, and the boundary between work and home. An analysis of the existing studies about teleworking reveals some benefits and downsides for work-life balance. The literature highlights several benefits such as higher job satisfaction, more realistic perceptions of performance, reduced intentions to leave the organization, and decreased levels of job-related stress for teleworkers [42–45]. Jamal et al.'s [57] study found that job autonomy and family-supportive supervisory behaviors have significant positive direct and indirect effects on work-life balance and job satisfaction. Work-life balance also gives freedom for employees to manage their care responsibilities (such as visiting a public authority or attending a medical appointment during core hours) [46–48] and empowers employees to adjust the place and time of work to their individual needs. For some individuals, remote working has provided a release from the restrictions of officebased hours and more flexibility [58–60], saving commuting time [61,62], and a lower rate of work-to-life conflict [63]. Sufficient technology resources positively influence employees

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work-life balance and further better productivity and performance and job satisfaction, as Jamal et al. [64] found in their study.

Undoubtedly, teleworking gives workers higher levels of autonomy and flexibility, but downsides for work-life balance should also be considered: time management and scheduling can be an issue because there is no clear difference between weekdays and weekends [59], blurring of boundaries between working time and private time [65]. Separating work from private life, missing out on or neglecting family activities because work interferes with their personal life, and interruptions by children and family members can be challenging for teleworkers [1,56,60,66] and increased levels of work intensity [10,59], [67–69]. Some studies mention that working from home determines higher levels of stress [70,71] which affect satisfaction with life. Hayes [71] also presented work-related burnout as a negative aspect of teleworking considering communication, collaboration, and time management with colleagues via technologies as important challenges.

### 2.2. Productivity

OECD [72] agrees that telework has been an essential measure to sustain economies and production during the COVID-19 crisis. A policy brief released by the European Commission in 2020 highlighted that working from home under normal conditions has the potential to boost employees' productivity, whilst benefiting from a healthy work-life balance. Nevertheless, considering its widespread and fast extension among employees and companies, not always prepared to effectively implement it during these exceptional circumstances, the impact on productivity is still elusive. The Eurofound study from 2020 [10] suggests that productivity is influenced not only by the employee's abilities or attitude but also by some organizational peculiarities, such as communication, work management, or technology upgrade and usage within its internal processes.

### 2.3. Health

The Eurofound study from 2013 [73] has shown that people's working schedules and level of work flexibility affect their health. The health outcomes are related to general health, well-being, and psychosocial symptoms. Telework has recognized effects on health, although the overall impact on health is neither well-known nor consensual [74,75]. Most empirical work reports positive and negative consequences but there has been little analysis of the trade-offs associated with telework and its net benefits or costs [65]. While avoiding the office and staying socially distant was crucial to stopping the spread of the virus during the pandemic and still is for regular diseases, working from home can bring along other health concerns. According to Tavares [65], the health problems associated with telework belong to four categories: musculoskeletal problems, isolation and depression, stress and overwork, and others such as metabolic, cardiovascular, gastrointestinal, or fertility disorders. Despite all these health issues, positive effects on health accrue from reducing the stress [76,77] of the daily home-work commute. People who work from home are less likely to be overweight and are more active due to their better health habits. The lack of commute leaves more free time for exercise and healthier meals.

# 2.4. Generational Groups and Teleworking

Generational researchers consider that people who grew up with similar environmental conditions, such as political events, economic situations, and technological changes, will have related outlooks [78,79]. The literature establishes four generations in the current workforce: Baby Boomers, Gen Xers, Millennials (Gen Yers), and Gen Zers with different values and preferences. The differences between these groups influence attitudes which may bring challenges in managing such a diverse workforce [80]. It is important to note that different sources may have slightly varied timeframes that define the birth years (typically a 15-year cycle) for each generation.

Baby Boomers (born between 1946 and 1964) are active in the workplace. Although they are nearing retirement age, it is predicted they are seeking to stay in work that Sustainability **2022**, 14, 16108 5 of 24

"provides satisfaction and fulfilment" [81]. Baby Boomers often hold respective leadership roles as employees [39].

Members of Generation X (born between 1965 and 1980) are the first generation of computer-literate workers since most have used technology since grade school [82]. As [39] mentioned, they may be senior employees in an organization or play a significant role in the succession plan of boomers who are retiring. Gen Xers are less loyal and committed, "feel that making money is not as important as experiencing life" [82] (p. 42), and want flexible work schedules [83]. Global insight firm [84] found that, even if they are most concerned about the financial impact of COVID-19, more than half of Gen Xers think it is more convenient to work from home during these times, enjoy the freedom of being able to work anywhere, and do not mind staying inside their homes for long periods of time.

The Millennials or Generation Y (born from 1981 to 1999) is the largest cohort group in the working world [81,85]. Millennial generational groups may acquire different viewpoints toward new means of working [42]. For example, Strauss [86] described Millennials as being more positive than Gen Xers, cooperative team players, and accepting of authority. They anticipate having to work over 40 h a week to maintain their lifestyles [80] but showed the desire for balance between work and family life, meaningful work, and autonomy [87]. Nearly half of employed Millennials, said they have never worked remotely before the pandemic [88].

The youngest workforce generation is Generation Z (born after 2001) [40]. Generation Z is the first digital generation entering the labour market and will cause an important generational shift within the workplace [89]. Exponents of this generation are used to being very skilled and practical when considering technology [1]. In terms of working skills, they could learn faster and be more efficient than their colleagues because of their flexibility and autonomy [41]. Global insight firm [84] found that Generation Z exponents are less productive when they work from home compared to coming into the office because they are more distracted. They would like to attend the office because they enjoy interacting with their co-workers and find it far easier to communicate and share ideas in person.

## 3. Research Methodology

This research includes qualitative and quantitative components. Bryman [90] argued that integrating quantitative and qualitative research can be used for instrument development. This refers to contexts in which qualitative research is employed to develop a questionnaire and the scale items. This study used qualitative research before quantitative to better word more comprehensive closed answers.

In the qualitative stage, researchers investigated the effects of teleworking on different generations using in-depth semi-structured interviews. Based on the respondents' answers, a questionnaire was developed for the quantitative part of the research to investigate the impact of telework on work-life balance, productivity, and health, using a larger sample. Figure 1 reveals the plan for both stages. In the following, the two methods will be explained separately.

## 3.1. Stage 1, the Qualitative Research

# 3.1.1. Participants in Qualitative Research

For the qualitative research, participants had to fulfil at least one of the following criteria: (1) having experienced teleworking for at least 2 years, (2) coordinating employees who telework, (3) being a high-performing teleworker rated by their supervisors. Participants were recruited through publicity among the researchers' network and on social media.

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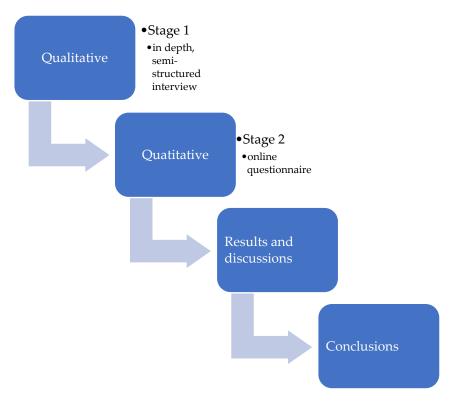


Figure 1. Study design.

# 3.1.2. Procedure of Qualitative Research

The qualitative research took place in March–April 2022. In this study, 16 people are selected as interviewes and after 14 interviews, the researchers concluded that the data collection reached theoretical saturation. Theoretical saturation was a basis for sample selection [91] although saturation is no longer considered important in qualitative research [92]

In-depth semi-structured interviews were used to generate data. Interviews lasted for about 55 min and were recorded by digital devices. To observe ethical considerations, at the beginning of the interviews, the participants were provided with information about the purpose of the study, interview procedure, privacy, and their rights regarding participation or lack of participation. The time and place of interviews were determined with the coordination and agreement of the participants so that there is no disturbance in their daily life. Most of the interviews were administrated by phone. The principle of confidentiality of all information was strictly implemented at all stages.

The first questions were designed to 'warm up' the participants. There were discussions about how the teleworking activity in general. The discussion topics were established considering the presented literature review. For the work-life balance topic, the following themes, excerpts from the Eurofound 2017 report [56], were considered: flexibility and autonomy, working hours and working time quality, work intensity and workload, and the boundary between work and home. The interviews continued with discussions about productivity during teleworking, considering the factors that influence it presented in the Eurofound 2020 report [10]: organizational communication, work management, and technology usage within its internal processes. As for the health component, the respondents had to evaluate their state of health during teleworking and present the possible health problems they had due to this type of work.

Interviews were listened to as soon as possible and written word by word. For data analysis, the content analysis method was used. These stages included the following steps. First, the entire interview was written. The entire interview text was read to obtain a general understanding. Basic units and codes were identified. Similar codes were classified and

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placed in more general classes. The guidelines provided by Guest et al. [93], who propose to focus on so-called high-frequency codes in data codification, followed when presenting the final data coding structures (Figures 2–4).

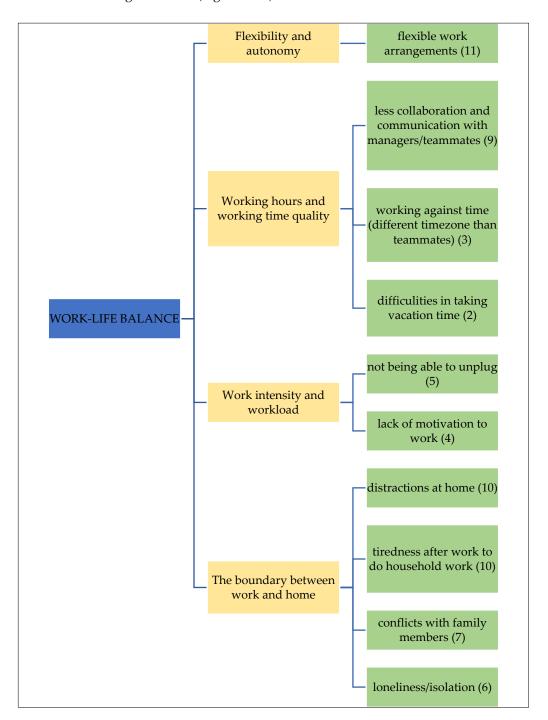


Figure 2. Results of data coding: Implications on teleworkers work-life balance.

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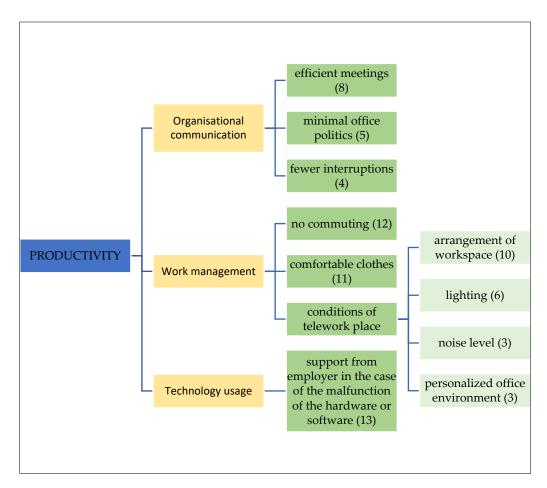


Figure 3. Results of data coding: Implications on teleworkers productivity.

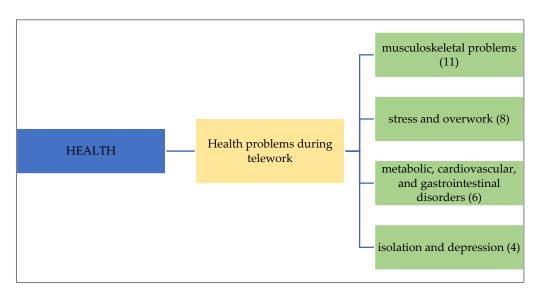


Figure 4. Results of data coding: Implications on teleworkers health.

# 3.1.3. Findings

The topics considered during the interviews contributed to formulating the questions from the quantitative research, while the identified codes and subcodes represented the basis for draw-up the answer variants in the quantitative research questionnaire.

Legend: Blue box presents the themes. Orange boxes present the sub-themes. Green boxes present the codes. Light green boxes present the sub-codes. Figures in brackets reflect

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the frequency of mentioning (number of times a specific code was mentioned by the study participants).

#### 3.2. Stage 2, the Quantitative Research

## 3.2.1. Participants in Quatitative Research

The quantitative research was based on a sample of 1098 respondents. The inclusion criteria were as follows: 1. employees who worked full-time, part-time, or occasionally on teleworking in the last three years; 2. interest in participation. Before the study, necessary explanations about responding and the purpose of the study were provided, and by emphasizing the privacy of information, they were asked to answer the questions honestly. Sample determination used a convenience sampling method.

## 3.2.2. Procedure of Quatitative Research

A questionnaire made up of 19 questions, measured on different scales, was used (Appendix A). The research team generated the questionnaire in Google Forms. A pilot test was performed with ten persons to assure clarity and internal coherence. Following the pilot test, the questionnaire was accordingly finalized. The questionnaires were administered between May 15 and June 15, 2022. For the data analysis, the researchers used Microsoft Excel 365, the Data Analysis module, and its extension the RealStatistics module.

In line with the first objective set in the introduction, determining the impact of telework on work-life balance, individual productivity, and employee health, we issue the following hypothesis:

**H<sub>0</sub>:** There are no differences between age groups (Generation Z, Y, X, or Baby boomers) concerning the satisfaction level towards telework, scored for each of the three areas under observation: work-life balance, productivity, and health.

**H<sub>1</sub>:** There are differences between age groups (Generation Z, Y, X, or Baby boomers) concerning the satisfaction level towards telework, scored for each of the three areas under observation: work-life balance, productivity, and health.

The second objective set in the introduction (exploring the characteristics of teleworkers considering the experiences of each generation with telework) is a descriptive objective that does not need a hypothesis [94,95].

#### 3.2.3. Results and Discussions

Considering the descriptive statistics of our participants, of the sample of 1098 respondents, 72.95.2% were female, and 27.05% male. Most of them were Generation Y respondents (age group 26–40 years old), 15.57% were Generation X exponents (41–55 years old), 6.56% were Generation Z exponents (18–25 years old), and 4.10% were Baby Boomers (56 plus years old). Given the education qualification, 45.9% of the respondents had master's degrees, and 39.34% had bachelor's degrees. Most respondents work in education (22.95%), IT (17.21%), or industry/production (11.48%). A total of 10.66% of respondents work in marketing/sales, the distribution of the other respondents being as follows: customer service (9.48%), finance-accounting (6.56%), administration/management (6.56%), human resources (4.92%), consulting (3.28%). Analysing the respondents according to their family situation, 36.07% live with their partner and do not have children, 56.56% live with their partner and one or more children, 6.56% are single parents with children, and 0.80% live alone. There is no data available on the distribution of teleworkers in Romania during the pandemic; therefore, it is impossible to tell if this sample reflects the characteristics of the teleworkers' population in Romania.

To find out more about the previous and the present respondents' experience regarding teleworking, as well as the future intention to continue with teleworking, three questions were introduced. The respondents had to evaluate their teleworking experience before March 2020: 36.07% of them have never worked remotely before while 35.25% worked occasionally remotely. A total of 28.69% of the respondents worked remotely on a full-time

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or part-time basis. If we consider the division into generations, 75% of Generation Z respondents worked remotely on a full-time basis before March 2020, 41.11% of Generation Y respondents worked occasionally remotely, and 23.34% worked remotely on a full-time or part-time basis. Generation X respondents know better this kind of work arrangement: 57.9% of them worked occasionally, full-time, or part-time remotely. The percentage of those who have never worked remotely is the highest for Baby Boomers respondents, 60% of them did not experience teleworking.

Since March 2020, 20.16% of the respondents worked full-time teleworking and 39.84% worked part-time teleworking (sometimes from home, sometimes from the office). A total of 79.59% of the respondents who worked full-time on teleworking since March 2020 are exponents of Generation Y. Regarding respondents' expectation to continue the current teleworking style over the next 12 months, 47.54%-of them say they will continue. A total of 36.89% of the 366 respondents who expect to continue the current teleworking style over the next 12 months are exponents of Generation Y. Out of the 34.43% of total respondents who do not know yet, 23.77% are also Generation Y respondents. The rest of the respondents (18.03%) say they will not continue with the current teleworking style.

To examine the work-life balance, productivity, and health of each employee involved in telework, a score-based evaluation system was introduced for a predefined set of areas of interest (Table 1), with the reference elements derived from the qualitative research and literature analysis presented above.

**Table 1.** Telework Satisfaction Assessment System.

Field of Interest	Variables	Response Category	Score
	Telework helped me to create more flexible work arrangements	Strongly agree	1
	I have more family conflicts during teleworking	Strongly disagree	1
Work-life balance Productivity	For me, teleworking mean loss of social and professional interaction	Strongly disagree	1
	The ability to work remotely makes me happier	Strongly agree	1
	Working remotely makes me better able to balance work with personal life	Strongly agree	1
	Struggles with working remotely	I find no struggle in working remotely	1
	I worry about work when not working	Never	1
	I am too tired after work to do household work	Never	1
	My job prevents giving time to my family	Never	1
	Hard to concentrate on job because of family	Never	1
	Family prevents giving time to my job	Never	1
	Are you more productive working remotely from home or in a traditional office space?	More productive in a home office	1
	Arrangement of workspace at home (e.g., having a working desk, the position of the desk, having a working chair, position of the computer, etc.)	Much better	1
	Lighting in your home working space	Much better	1
	Noise levels around your home working space	Much better	1
	Availability of a separate room for working at home	YES	1
	Receiving support from employer in the case of the malfunction of the hardware or software necessary for remote working	YES	1
	Job satisfaction during the teleworking period	5	1
	I feel less motivated to work as a teleworker	Strongly disagree	1

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Table 1. Cont.

Field of Interest	Variables	Response Category	Score
Health	Self-assess of health during the telework period (1-lowest grade, 10-highest grade)	10	1
	The ability to work remotely makes me less stressed	Strongly agree	1
	Encourage others to work remotely	YES	1
	Rate current feelings toward teleworking	I love teleworking!	1

Source: Data processed by authors.

The maximum number of points a respondent could have obtained according to the calculation methodology presented above is 23, distributed as follows: work-life balance category (11 points), productivity category (8 points), and health category (4 points). The scores were analysed based on the respondents' belonging to each age group (Generation Z, Y, X, or Baby Boomers) (Table 2).

**Table 2.** Score analysis based on the respondents' belonging to a certain age group (Generation Z, Y, X, or Baby Boomers).

Size		Total Score			Work-Life Balance Score				Productivity Score				Health Score								
Age Group	Sample S	mim	max	avg.	StdDev.	midpoint	min	max	avg.	StdDev.	midpoint	min	max	avg.	StdDev.	midpoint	min	max	avg.	StdDev.	midpoint.
Generation Z	72	2	16	9	4.26	9	0	9	4	2.25	3.5	1	8	3	1.74	3	1	4	2	0.98	1.5
Generation Y	810	0	19	5	3.97	4	0	10	2	2.31	1	0	8	2	1.5	2	0	4	1	1.03	1
Generation X	171	1	15	4	3.92	3	0	7	2	2.19	1	0	6	2	1.46	2	0	2	1	0.77	1
Baby Boomers	45	1	14	7	4.37	5	0	7	3	2.39	2	1	4	2	0.99	3	0	3	1	1.03	1
Total re- spondents	1098	0	19	5	4.13	4	0	10	2	2.42	1	0	8	2	1.53	2	0	4	1	1.02	1

Source: Data processed by authors.

The highest total score is obtained by a Generation Y respondent (19 points) and the lowest total score is also obtained by a Generation Y respondent (0 points). The average total score is 5 points (SD = 4.13). None of the respondents reached the maximum number of points (23). Further on, an  $\alpha$  score was calculated, to indicate the positioning of the gross score against the average, according to the number of standard deviations. In our case, 35.25% of the respondents have overall scores lower than the average score (5 points), while 64.75% have total scores higher than the average score. Given the four generational categories considered, the average total scores are as follows: 9 points (Generation Z respondents), 7 points (Baby Boomers' respondents), 5 points (Generation Y respondents), 4 points (Generation X respondents). We can say that the satisfaction level regarding teleworking of those from Generation Z (9 points) and Baby Boomers (7 points) is, on average, higher than that of the other two generations (Generation Y-5 points and X-4 points). The standard deviation for the total score is high and indicates that there is more variation in the data.

To broaden the analysis, one-sample *t*-tests were used to find if the average for each generation is significantly higher or lower than the average or the midpoint (Table 3).

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Age Group	<b>Total Score</b>		Work-Life Score		Productivity	y Score	Health Score		
	Test Statistic t	<i>p</i> -Value	Test Statistic t	<i>p</i> -Value	Test Statistic t	<i>p</i> -Value	Test Statistic t	<i>p</i> -Value	
Generation Z	-0.50	0.62	1.81	0.07	1.85	0.07	2.16	0.03	
Generation Y	6.67	0.00	11.58	0.00	3.98	0.00	0.55	0.58	
Generation X	4.40	0.00	0.00	1.00	-1.43	0.15	-3.57	0.00	
Baby Boomers	2.46	0.02	2.81	0.01	-5.42	0.00	2.61	0.01	

**Table 3.** One-sample *t*-tests.

An alpha level of 0.05 was considered for the data interpretation. We are therefore in a situation where the average total score for Generation Z is statistically different than the midpoint. The average of work-life and productivity scores for Generation Z and X are statistically different than the midpoint and the average health score for Generation Y is statistically different than the midpoint.

Next, the results were connected with three major areas of interest in relation to telework, namely: work-life balance, productivity, and health. Regarding the work-life balance results, the average work-life balance scores are as follows: 4 points (Generation Z respondents), 3 points (Baby Boomers' respondents), 2 points (Generation Y respondents), and 2 points (Generation X respondents). The standard deviation for the work-life balance score is high and indicates that there is more variation in the data. Calculating the  $\alpha$  scores we can say that 32.79% of the respondents have work-life balance scores lower than the average score (2 points), while 67.21% have work-life balance scores higher than the average score of the category.

Considering average productivity scores, these are 3 points (Generation Z respondents), 2 points (Baby Boomers' respondents), 2 points (Generation Y respondents), and 2 points (Generation X respondents) whereas the average score of this category is 2 points. The standard deviation for the productivity score is low and indicates that there is lower data variability, and the mean is more reliable. The determined  $\alpha$  scores indicate that 34.43% of the respondents have productivity balance scores lower than the average score (2 points), while 65.57% have productivity balance scores higher than the average score of the category.

The average health scores are 2 points (Generation Z respondents), 1 point (Baby Boomers' respondents), 1 point (Generation Y respondents), and 1 point (Generation X respondents) whereas the average score of this category is 1 point. The standard deviation for the health score is low and indicates that there is lower data variability, and the mean is more reliable. The  $\alpha$  scores reveal that 25.41% of the respondents have work-life balance scores lower than the average score (1 point), while 74.59% have work-life balance scores higher than the average score of the category.

To check whether there are differences between generation groups (Baby Boomers, Generation X, Generation Y, and Generation Z) when evaluating telework, considering the scores they reached for each of the three areas affected by teleworking, the Kruskal–Wallis test was performed. A significance level of 95% (p <0.05) was selected, this level being accepted in the academic field as a valid scientific result or implicit truth. However, Amrhein et al. [96] proposed a more specific method of communication through which all statistical reporting should implicitly include the p-value—the statistical probability used in the test. The hypothesis testing in this empirical study was performed using the Excel RealStatistics software and the results are given in Table 4.

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	Table 4. Resu	ts obtained	d by applying	the Kruskal	l–Wallis test.
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Field of Interest	Generation Group	n	Mean Rank	Chi-Square	р	Н
	Generation Z	72	84.25			
Work-life Balance Score	Generation X	810	150.23	7.815	0.000	20.853
Work-life balance Score	Generation Y	171	168.05			
	Baby Boomers	45	110.80			
	Generation Z	72	82.75			
Productivity Score	Generation X	810	145.60	7.815	0.001	14.913
Troductivity Score	Generation Y	171	173.58			
	Baby Boomers	45	134.80			
	Generation Z	72	58.75			
Health Score	Generation X	810	130.00	7.815	0.000	16.393
rieaith Score	Generation Y	171	145.16			
	Baby Boomers	45	96.40			

Source: Authors own contribution based on data generated by Excel RealStatistics software.

Considering 4—1 degree of freedom and an alpha level of 0.05, the critical chi-square value is 7.815. The critical chi-square value is less than the H statistic for each of the three areas affected by teleworking, namely work-life balance, productivity, and health. We are therefore in a situation where we can reject the null hypothesis set out above in the Research Methodology, which leads us to the conclusion that there are significant differences between generation groups in terms of the scores they have reached for each of the three areas affected by telework: work-life balance, health, and productivity. The results of the one-sample *t*-tests performed above (Table 3) support this result.

The satisfaction towards teleworking achieved by Generation Z and Baby Boomers is, on average, higher than that of the other two considered generations. By analysing the relationship between each generation of employees and the scores obtained for the three categories of variables (work-life balance, individual productivity, and health), we may conclude that Generation Z is the most satisfied. This finding aligns with Bhaskara Mulya Marhadi and Fajar Hendarman [38], arguing that Generation Z is the easier to adapt to teleworking, while the workforce is shifting as Generation Z started to enter work.

Regarding *work-life balance* perceptions, the majority of the respondents (64.75%) appreciate that telework helped them to create more flexible work arrangements. This finding aligns with the Jamal et al. [57,64] Rodríguez-Modroño and López-Igual [17], Eurofound study from 2017 [41], and Tremblay [97], where flexible work arrangement was the main factor that can influence work-life balance. About 80% of Baby Boomers respondents agree with this perspective. Percentages are also high for the remaining respondents: 78.95% for Generation X, 62.5% for Generation Z, and 61.11% for Generation Y. While this study shows that Baby Boomers are the most likely to prefer flexible work arrangements, Cordeniz's [83] results consider that Generation X are the ones that mostly prefer it. However, the difference between the percentages obtained by Baby Boomers and Generation X are close and the results of the mentioned study can be accepted.

The respondents had to evaluate the volume of family conflicts during teleworking. A total of 35.25% strongly disagree, and 26.23% disagree with the increasing number of family conflicts during teleworking. All the Baby Boomers respondents (100%) say that they did not have more family conflicts during teleworking. An explanation for this result can be that Baby Boomers "acknowledge the importance of work-life balance" [98] (p. 89). The study presented by Kapianen-Heiskanen [36] also suggests that older age groups had less difficulty reconciling family and work. Generation Z respondents are also not affected to such an extent by this subject, as 87.50% disagree or strongly disagree that they had

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more family conflicts during the teleworking time. Approximately 43% of Generation Y and Generation X respondents mention that there were family conflicts during teleworking. According to Ojala et al. [99], family type is something to consider when analysing work-life balance during teleworking. Couples with children work in their free time more often than other household types. This informal overtime strongly correlates with increased conflict over the allocation of time for family. Our results show that 62.22% of Generation Y and 84.22% of Generation X have one or more children.

All generations experience the influence of losing social and professional interaction during teleworking periods. This reinforces the call of other previous research to better understand the role of social and professional interaction during teleworking [33,82–88]. The more concerned are Generation X respondents (52.63%) who agree or strongly agree regarding this subject, followed by Generation Y respondents (50%), Generation Z (37.50%), and Baby Boomers (20%). The results align with Fujii [44] who stated that Generation Y and Generation Z do not value as much social interaction in the workplace which is in opposition to the one found by Raišienė et al. [43] where Baby Boomers are the ones that feel more the lack of face-to-face interaction while teleworking.

Generation Z respondents perceive relying on Wi-Fi and technology as a struggle when working remotely. An explanation could be that exponents of this generation are not skilled and practical when considering technology [100]. The results show as well that Generation Z is not able to detach themselves from work issues outside the usual schedule. They are concerned about distractions that may affect their focus on their work tasks.

Generation Y envisions collaboration and communication with managers or teammates as a struggle. For Generation X, their main concerns are the inability to detach from work issues outside the usual schedule and external distractions that may affect focus on work tasks. Baby Boomers' difficulties during teleworking are mainly the collaboration and communication with managers or team-mates, and not being able to detach themselves from work issues outside the usual schedule. The ability of a teleworker to detach from work issues outside the usual schedule is also discussed by Raišienė et al. [43]. The authors consider that Generation Y encounters challenges related to self-organization and following work routines. The results of the present study contradict the previously mentioned study, Generation X and Baby Boomers being the ones that are more affected by the difficulty to detach themselves from work issues outside the usual schedule, mostly because they lack self-organization.

Respondents' perceptions of individual *productivity* during telework were also investigated. The results show that the main factors contributing to higher perceived productivity among remote workers are the following: a more personalized office environment (76% of the sample members), reduced stress from commuting (68%), quieter noise level (60%), and fewer interruptions from colleagues (56%). These findings are in congruence with the work of Montreuil and Lippel [101] who argued that working from home provides an environment that favours better concentration, less noise, fewer interruptions, more privacy, and better air quality. Moreover, in some other opinions, having greater schedule flexibility improves better teleworkers work-life balance [102–106].

Considering individual productivity during telework, Generation Z, Y, and Baby Boomers are highly satisfied with their job during teleworking, while Generation X is just satisfied with their job during teleworking. This confirms the literature which has established a significant increase in productivity while teleworking. The results align with Vitry [107] who conducted several case studies from a variety of small and large organizations. His findings demonstrate the capabilities of the telework program to increase the employee's productivity by 96%. Increased productivity while teleworking was also stated by del Carmen Gutiérrez-Diez [108].

Subsequently, this current study investigates the main incentives for higher individual productivity. Generation Z considers the lack of commuting as the main incentive for their higher individual productivity. For Generation Y, a more personalized office environment is the main reason for being productive while teleworking, while Generation X appreciates

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both the lack of commuting and a more personalized office environment. Baby Boomers consider that fewer interruptions from colleagues, quieter noise levels, and a more personalized office environment are the main incentive for higher individual productivity. This reinforces the call to better understand the incentives of teleworkers for higher individual productivity considering the influence of socio-demographic characteristics of workers set by Raišienė et al. [43].

In general, respondents to the study declared themselves satisfied with their productivity during telework. However, a number of 1188 responses were provided for the question related to the reasons why they are not satisfied with their productivity during telework, by those respondents who previously indicated that they feel less productive when teleworking. Based on the results, five extensive categories were mapped and sub-categories underneath the general ones were established to provide even richer detail (Figure 5).

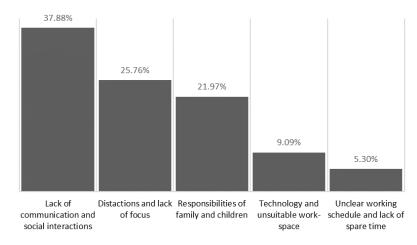


Figure 5. Main factors affecting individual productivity. Source: Data processed by authors.

Data analyses indicate that the lack of coordination and team communication, a disruptive working environment (caused by family and household responsibilities), and high technology requirements are the main elements that can have a negative impact on individual productivity. These results are converging with those obtained in previous research by Eurofound study from 2020 [109] and International Labour Organization [110].

Regarding the overall *health* condition during telework, 18.85% of respondents, most of them part of Generation Y (80.95%), consider that they have perfect health during telework time. The shares of respondents who consider themselves perfectly healthy were lower in the case of the other generations (Generation X 7.91%, Generation Z 5.25%, Generation Baby Boomer 5.90%). Respondents who scored below 10 for their health self-evaluation, were invited to indicate whether they had health problems due to telework. This construct was based on Tavares's [65] research, previously mentioned within this paper, according to whom health problems associated with telework can be grouped into four categories: musculoskeletal problems, isolation and depression, stress and overwork, and others such as metabolic, cardiovascular, gastrointestinal, or fertility disorders. The results of the qualitative research presented above reconfirmed Tavares' study.

This research produced multiple novel findings, thus extending the current body of knowledge on teleworkers' health problems and analysing them according to the generation they belong to. The analysis performed, summarized in Figure 6, shows that the majority of those who worked in telework (79.80%) presented musculoskeletal problems. This is the main health problem reported by each generation. A total of 54.55% of Generation Z respondents, 44.35% of Generation Y respondents, half of Generation X respondents, and all Baby Boomers respondents (100.00%) stated that they have experienced musculoskeletal problems during teleworking.

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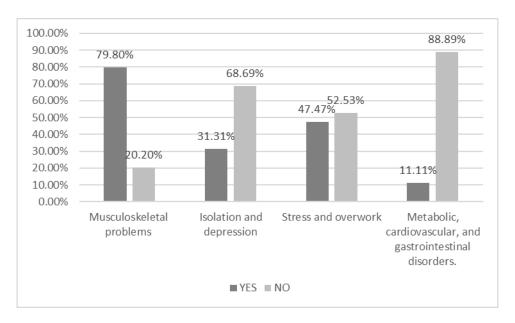


Figure 6. Health problems manifested during telework. Source: Data processed by authors.

Asked to rate their overall experience with teleworking, most of the respondents under each generation said that they enjoy working both from home and in the office: 62.50% of Generation Z respondents, 60% of Baby Boomers respondents, 54.44% of Generation Y respondents, and 36.68% of Generation X respondents. None of the Generation Z and Baby boomers respondents said that they do not enjoy teleworking. The ones that prefer more in-person contact than teleworking provides are Generation X respondents (63.16% of them).

### 4. Conclusions

## 4.1. Theoretical and Operational Implications

The corona-related lockdown has shifted the working world. Telework, previously seen as an exception, has become a permanent reality for many companies. Even after the health restrictions were lifted, teleworking became the new living reality. Working from home set off to be a routine for employees of all ages. Analysing demographics and generational composition and tailoring a specific approach could be a key area for employers to address when shaping the future workforce. Teleworking performed right can hold myriad benefits for both employers and employees, though is essential that employers ensure their people and culture also adapt to the new mode of working [111].

Companies should take inventory of their employees and try to understand the differences and similarities between generational groups. An analysis of their specific age needs and expectations toward work should be the starting point in designing a plan to optimize connectivity and productivity and, eventually, reach their full potential. We consider that an analysis of telework's impact on work-life balance, personal productivity, and health after the pandemic was relevant for shaping future strategies of Romanian businesses.

This study's results support the companies to improve the level of satisfaction among each generation of teleworkers. As a managerial tool, it may guide managers in assessing the level of employee satisfaction regarding telework. The paper acts as a support tool while trying to achieve a balance of the level of job satisfaction while teleworking. Our study has a theoretical contribution due to its role of providing better knowledge of the effects of teleworking on Romanian employees, which sheds light on its advantages and disadvantages, its perceived benefits, or inconveniences.

Based on the first objective, the hypothesis testing revealed significant differences between generational groups in terms of the scores they have reached for each of the three Sustainability **2022**, 14, 16108 17 of 24

areas affected by telework: work-life balance, health, and productivity. The descriptive part of the quantitative research was meant to address the second objective of the study. The characteristics of teleworkers were divided into three categories (work-life balance, productivity, and health), considering the experiences of each generation with telework.

In pursuit of employees' work-life balance during telework, managers should consider flexible telework because all respondents appreciate this kind of arrangement. Baby Boomers are the ones that highly appreciate the flexible telework arrangements.

This study highlights certain challenges employees faced, which affected their worklife balance. All generations feel the influence of losing social and professional interaction during recent teleworking periods. Company management should take these results into account and propose team-building activities with the scope of re-establishing classic communication between employees. Alternating the work schedule from home with the one from the office can be also analysed. These types of actions should address another struggle mentioned by the respondents, namely hard collaboration and communication with managers or teammates. Most of Generation Y indicated this. Managers should also pay attention to technical facilities provided to telework employees. Generation Z respondents perceive relying on Wi-Fi and technology as a struggle when working remotely. Other struggles mentioned in this study are more personal ones: the increased volume of family conflicts or not being able to detach themselves from work issues outside the usual schedule. Most of Generation Y and X reported an increased volume of family conflicts. Generation X and Baby Boomers respondents indicated difficulties in detaching themselves from work issues outside the usual schedules. To respond to these impediments during telework, companies should consider offering some specialized training to prepare employees for better management of their personal life while working from home. Some incentives should also be considered (e.g., family trips, parties with employees and their families).

If individual productivity during telework is taken into consideration, the findings of this study report that Generation Z, Y, and Baby Boomers are highly satisfied with their job during teleworking, while Generation X is just satisfied with their job. Generation Z considers the lack of commuting as the main incentive for their higher individual productivity. For Generation Y, a more personalized office environment is the main reason for being productive while teleworking. Generation X appreciates both the lack of commuting and a more personalized office environment. Baby Boomers consider that fewer interruptions from colleagues, quieter noise levels, and a more personalized office environment are the main incentives for higher individual productivity. These results can be channelized by companies into maximising individual telework employee productivity. It is desirable for companies to offer each generation of employees what they appreciate to increase their level of productivity.

Regarding health during teleworking, most of the Generation Y respondents consider having perfect health. However, the rest reported musculoskeletal problems during recent periods of teleworking. All Baby Boomers reported musculoskeletal problems, though none of them seem affected by isolation and depression or by stress and overwork issues in contrast to the other generations. The most affected by stress and overwork issues are Generation Y respondents. Only Generation Z and Generation X appear slightly affected by metabolic, cardiovascular, gastrointestinal, or fertility disorders. Considering these results, ensuring a working environment that protects the health of employees who are involved in teleworking is very important. Of course, the employer cannot intervene in the arrangement of the workspace from home but can take care of employees' health by offering health service packages or subscriptions to various sports activities. When the employer ensures its concern about the telework employee's health it is likely that the employee will be satisfied and become more engaged in the organization.

## 4.2. Limitations and Future Research Needs

One limitation of this paper is the low number of participants for the generation groups. Further research should consider a higher and more diverse number of respondents.

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Another limitation of the study is given by the fact that productivity was a self-report measure. Future research should consider the actual productivity of telework employees.

Further research may also consider investigating more diverse organizational characteristics of telework, providing new perspectives on how it affects well-being, health, and employees' productivity. Although this paper is based on cross-cutting research, further causality conclusions could be tested using a longitudinal study project, which would allow the investigation of the long-term effects of telework.

**Author Contributions:** All authors have the same contribution to this paper. All authors have read and agreed to the published version of the manuscript.

**Funding:** The APC was funded by Transilvania University of Brasov.

**Institutional Review Board Statement:** Ethical review and approval were waived for this study, due to the absence of sensitive data and to the processing of data by ensuring confidentiality and anonymization of the personal information for all the subjects involved in the study.

Informed Consent Statement: Informed consent was obtained from all the participants in this study.

Data Availability Statement: Data is contained within the article.

Conflicts of Interest: The authors declare no conflict of interest.

## Appendix A

Questionnaire

- 1. Which option is closest to your chosen career field?
  - 1. Information Technology
  - 2. Administrative/Management
  - 3. Industry/Production
  - 4. Education
  - 5. Finance/Accounting
  - 6. Customer Service
  - 7. Marketing/Sales
  - 8. Human Resources
  - 9. Consultancy
  - 10. Other ...
- 2. What is your gender?
  - 1. Female
  - 2. Male
- 3. What is your age?
  - 1. 18–25
  - 2. 26-40
  - 3. 41–55
  - 4. 56–75
- 4. Education qualification:
  - 1. High school degree
  - 2. Professional degree
  - 3. Bachelor's degree
  - 4. Postgraduate degree
  - 5. Master's degree
  - 6. Doctoral degree
- 5. Which of the following best describes your family situation:
  - 1. I live alone (No childcare)
  - 2. Single parent with children (childcare)
  - 3. Family/couple and no children (no childcare)

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- 4. Family with 2 adults and 1 child (childcare)
- 5. Family with 2 adults and more than 1 child (childcare)
- 6. Other
- 6. What was your teleworking experience before March 2020?
  - 1. I worked remotely on a full-time basis
  - 2. I worked remotely on a part-time basis
  - 3. I occasionally worked remotely
  - 4. I have never worked remotely before
- 7. How have you been working since March 2020?
  - 1. Full-time teleworking
  - 2. Part-time teleworking (sometimes from home, sometimes from the office)
  - 3. Occasionally
- 8. Please rate the following statements about your teleworking experience using the following scale 1–5 (1—strongly disagree/5—strongly agree)
  - Telework helped me to create more flexible work arrangements
  - I have more family conflicts during teleworking
  - For me, teleworking mean loss of social and professional interaction
  - I feel less motivated to work as a teleworker
  - The ability to work remotely makes me happier.
  - Working remotely makes me better able to balance work with personal life.
  - The ability to work remotely makes me less stressed
- 9. What are your struggles with working remotely? (Multiple choice)
  - 1. Collaboration and communication with managers/teammates
  - 2. Loneliness/Isolation
  - 3. Not being able to unplug
  - 4. Distractions at home
  - 5. Being in a different time zone than teammates
  - 6. Staying motivated
  - 7. Taking vacation time
  - 8. Dependence on reliable Wi-Fi/technology
  - 9. I find no struggle in working remotely
  - 10. Other ...
- 10. Are you more productive working remotely from home or in a traditional office space?
  - More productive in a home office (next question)
  - Probably about the same productivity
  - Less productive in a home office (second next question)
- 11. What are the reasons you are more productive working remotely from home?
  - Fewer interruptions from colleagues
  - Reduced stress from commuting
  - Minimal office politics
  - Quieter noise level
  - More comfortable clothes
  - Less frequent meetings
  - More efficient meetings
  - More personalized office environment
- 12. What are the main reasons you are less productive working remotely from home?
- 13. Please compare the working conditions at your regular workplace to the following aspects of your living space used for remote working (Much worse/Worse/Approximately the same/Better/Much better):

Arrangement of workspace at home (e.g., having a working desk, the position of the desk, having a working chair, position of the computer, etc.)

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Lighting in your home working space Noise levels around your home working space

- 14. Do you have a separate room for working available at home?
  - 1. YES
  - 2. NO
- 15. Did you receive any support from your employer in the case of the malfunction of the hardware or software necessary for remote working (e.g., advice how to fix problems with programs, or with equipment such as laptop or headphones, etc.)
  - 1. YES
  - 2. NO
- 16. How satisfied are you with your job during the teleworking period?
  - 1. very dissatisfied
  - 2. dissatisfied
  - 3. neither satisfied, nor dissatisfied
  - 4. satisfied
  - 5. very satisfied
- 17. How do you self-assess your health during the telework period? (1–10)
- 18. Considering your health, which of the following aspects affect you during teleworking? (YES/NO)
  - 1. Musculoskeletal problems (neck, shoulders, wrist, hand, and lumbar regions)
  - 2. Isolation and depression
  - 3. Stress and overwork (stress due to family responsibilities, blurred work-home life boundary and, potentially, family conflict)
  - 4. Metabolic, cardiovascular, and gastrointestinal disorders. (hypertension, high cholesterol and higher fasting blood sugar levels, reproductive function)
  - 5. Other ...
- 19. Do you expect to continue your current teleworking style over the next 12 months?
  - 1. YES
  - 2. NO
  - 3. DON'T KNOW

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