

Lappeenranta-Lahti University of Technology LUT
LUT School of Engineering Science
Industrial Engineering and Management
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TELEWORK CHALLENGES DURING PANDEMIA OF COVID-19

Master's Thesis

Examiner(s): Daria Podmetina, D.Sc. (Tech.)
Marko Torkkeli, Professor D.Sc. (Tech.)

2020

ABSTRACT

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Total lockdown during the pandemic of Covid-19 in 2020 forced companies to remote work mode. For some people, this transition was harder than for others due to a lack of experience in telework. So, the goal of this research is to study how global lockdown and mandatory remote work affect people's life, especially in maintaining work-life balance. The methodology includes a survey, based on a literature review and previous studies in this field. Analysis of the result was done by ANOVA test and regression analysis. The obtained results show that previous experience in telework affects the level of loneliness, isolation, feeling lack of face-to-face interaction with colleagues, feeling of limited possibilities to demonstrate exceptional skills or extraordinary work results, problems with self-organization and following the work routine, and worryness about future. The following WHO recommendations influence only at the level of isolation and feeling of limited possibilities to demonstrate exceptional skills or extraordinary work results. Therefore, future studies on Covid-19 effect on humans' life in a longer perspective is needed.

Keywords: remote work, telework, pandemic, Covid-19, work-life balance.

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Lappeenranta, November 2020

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LIST OF ABBREVIATIONS

GWA – Global Workplace Analytics

HRM – Human resource management

ICT – Information and Communications Technologies

IIA – The Internet Industry Association

ILO – International Labour Organization

OECD – Organization for Economic Co-operation and Development

PM – Performance management

T/ICTM – Telework/ICT-mobile work

WHO – World Health Organization

1 INTRODUCTION

The first part of the thesis “Telework challenges during pandemia of covid-19” describes the general background of the study, define a framework, indicates research problem and objective, as well as providing research questions and hypothesis. The structure of this thesis is presented in subchapter 1.4.

1.1 Background of the study

Despite the fact that telework is a well-known way of working, new problems and weaknesses appear over time. Implementation of Information and Communications Technologies (ICT) gives an opportunity for everyone to do their job remotely at any place. There are still concerns about this type of working – does teleworkers are more productive than office workers? And if so, which aspects affected on it?

Pandemic of Covid-19 has changed all the world. People have to change their habits and lifestyle to protect the human population against such a terrible disease. Borders are closed, people stay at home and even cannot go walking. Economic is in a crisis situation because companies have to close offices, transfer employees to online, or even fire them. For some people, this transferring is psychologically difficult, which can lead to issues such as depression, insomnia, and a huge lack of face-to-face communication (de Lima et al. 2020; Grey et al. 2020).

Total lockdown during pandemic in 2020 made people transfer almost all communication into the internet and online. Companies has started to operate almost online, which is a big challenge for them. Nowadays, around 40% of teleworkers, who are working full-time, are the result of the pandemic (Eurofound, 2020). This continuous social-distancing affects mental health and activates symptoms of anxiety and depressive disorders (Czeisler et al, 2020). Moreover, recent studies have shown an increasing level of loneliness and isolation, which has brought lots of other phycological problems (Grey, 2020, Czeisler et al, 2020).

1.2 Research objective

Telecommuting is well known for everyone. Some people are more productive at home while others cannot spend their working day without a cup of coffee with colleagues. The global pandemic made people transfer all the communications to online to make them stay safe and healthy. For some individuals this transfer was easy, but for the rest of them, this transferring brings more problems and concerns. So, the objective of this thesis is to study how global lockdown and mandatory remote work affect people's life.

1.3 Research questions

The specific questions which drive the research are “What challenges did people faced due to shifting from regular offices to remote work?” and “Have people faced with psychological problems such as loneliness, isolation, and routine because of lockdown?”. More closely, the research questions and hypothesis in this study are shown in Table 1 and Figure 1.

Table 1. Research questions and hypothesis

Research question	Hypothesis
RQ1. What challenges did people faced due to shifting from regular offices to remote work?	H1. The lockdown significantly affected psychological condition and performance of employees
RQ2. Have people faced with psychological problems such as loneliness, isolation, and routine because of lockdown?	H2 Employee with previous experience in telework better cope with lockdown challenges H2.1 Employee with previous experience in telework have lower level of loneliness H2.2 Employee with previous experience in telework have lower level of isolation

	<p>H2.3 Employee with previous experience in telework does not feel lack of face-to-face interaction with colleagues</p> <p>H2.4 Employee with previous experience in telework does not feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work</p> <p>H2.5 For employee with previous experience in telework it is not hard to make boundaries between work and personal life</p> <p>H2.6 Employee with previous experience in telework does not faced problems with self-organization and following the work routine</p> <p>H2.7 Employee with previous experience in telework are less worried about future due to the unknown situation with the Covid-19</p>
<p>RQ3. Is there a connection between people’s feelings and worryness and following WHO recommendations for maintaining life-work balance?</p>	<p>H3 People who follow WHO recommendations better cope with lockdown challenges</p> <p>H3.1 People who follow WHO recommendations have lower level of loneliness</p> <p>H3.2 People who follow WHO recommendations have lower level of isolation</p> <p>H3.3 People who follow WHO recommendations does not feel lack of face-to-face interaction with colleagues</p> <p>H3.4 People who follow WHO recommendations does not feel limited possibilities to demonstrate</p>

	<p>exceptional skills or extraordinary work results due to remote work</p> <p>H3.5 For people who follow WHO recommendations it is not hard to make boundaries between work and personal life</p> <p>H3.6 People who follow WHO recommendations does not faced problems with self-organization and following the work routine</p> <p>H3.7 People who follow WHO recommendations are less worried about future due to the unknown situation with the Covid-19</p>
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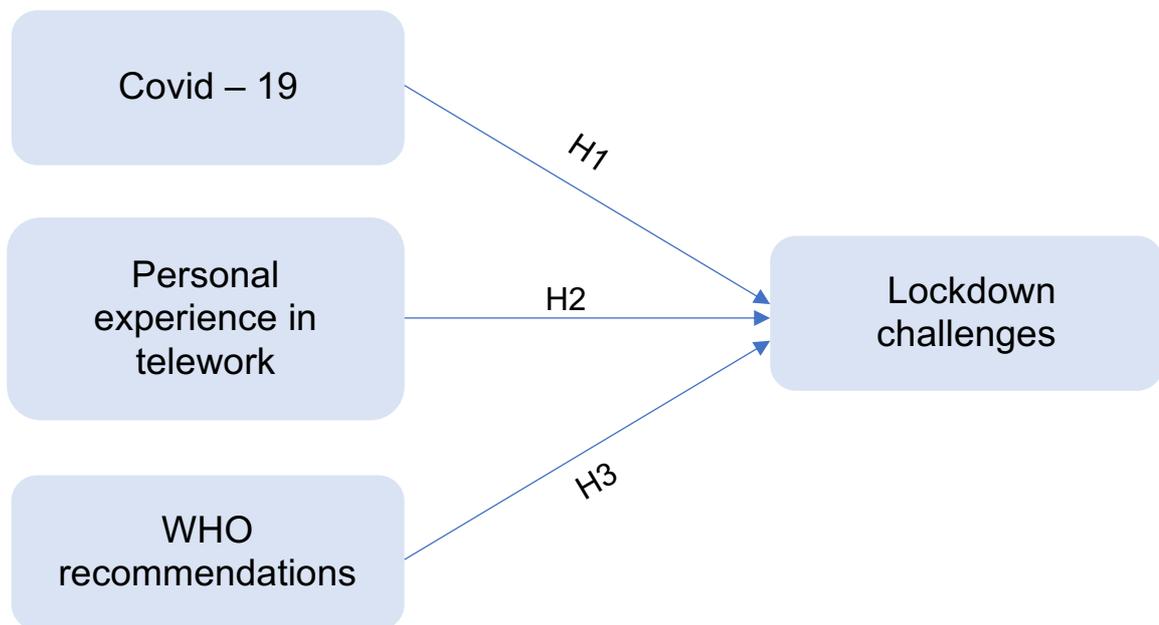


Figure 1. The conceptual model of the study

1.4 Structure of the thesis

The thesis has been organized as illustrated in Figure 2. All chapters considering as a process, where all parts have their input and output, which is related to a thesis aim. Also, each chapter helps in answering the research questions.



Figure 2. Structure of Master's thesis

The first chapter presents the research objectives and questions, providing information about the structure of the thesis. The literature review ties together the various theoretical and practical studies as well as showing actual information about telework problems and challenges. The third part describes the research methodology, data gathering and analyzing processes. Results of the survey and findings formulated in the fourth part. The final section includes a summary of the work together with a discussion of the implication of the findings to future researches.

2 LITERATURE REVIEW

The impetuous development of digital technologies, associated with the widespread introduction of virtual communication into our existence, affects all spheres of life and makes people adapt to new conditions. With the expansion of the Internet and social media interaction, our everyday actions also have turned into the online. People used to communicate online, buy some products and clothes online, plan their vacations online. Almost every action can be done via the Internet. Remote work is well-known and widely studied almost all over the world. Some companies are operating online or have remote workers, so that makes them more flexible. Altogether, globalization and the internet establish a new norm of social interaction and new working conditions. The main goal of this chapter is to study how companies used to operate online and how pandemic Covid-19 forced them to struggle with new rules and conditions.

2.1 Theoretical framework

A theoretical framework for this research is illustrated in Figure 3. The studying area is limited by identifying what is telework, how it is affected by global lockdown, and what kind of problems are faced by teleworkers and those who usually work in the office.

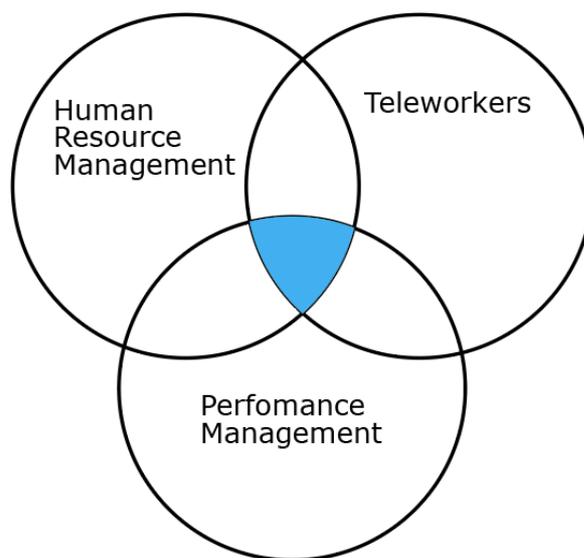


Figure 3. Theoretical framework of the research

Telework and its studying is related mostly to human resource management (HRM) (Bernardino, 2012) and performance management (Limburg, Jackson, 2008). Bernardino (2012) claims, that HRM needs new practices, so implementing telework allows companies to expand their activities. Performance management (PM), in this case, may use telework as a supportive tool to improve overall performance (Limburg, Jackson, 2008).

So that, Human resource management considers teleworking as a new way of working, which is need greater knowledge of how to manage and implement it. According to Braga (2006), the difference between HRM of telework and the usual way of working considers aspects such as place, time, communication, organization, management model, organizational policies, leadership, HR policy, and organizational climate. Also, HRM looks at telework as a flexible method with the purpose of establishing an organizational climate based on trust (Martinez et al, 2007).

Performance management explores telework as a way to improve organizational performance as well as support the telework success itself as illustrated in Figure 4 (Limburg, Jackson, 2008).

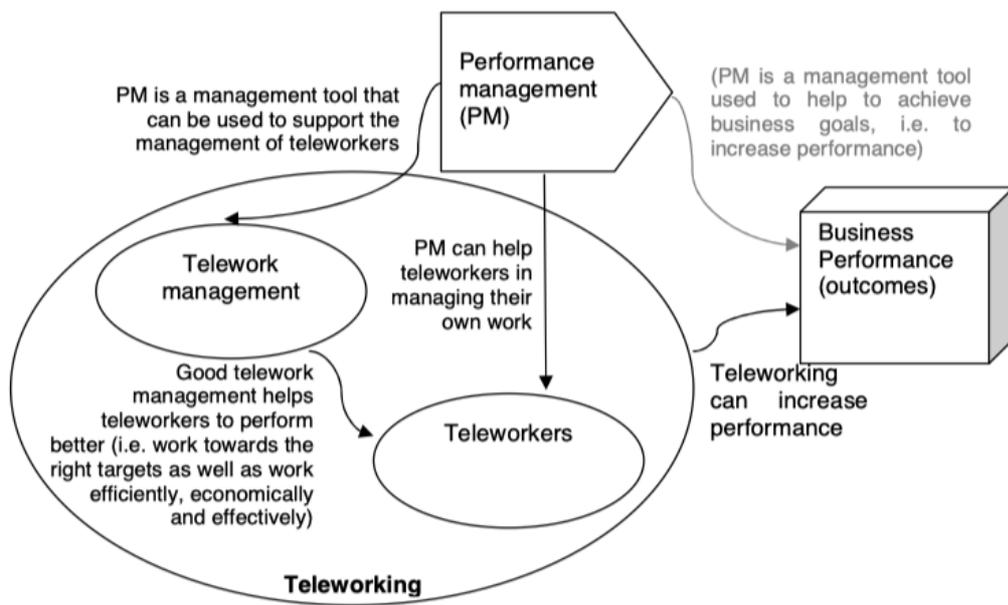


Figure 4. How PM and telework are related
(Source: Limburg, Jackson, 2008)

2.2 Literature review overview

The aim of the literature review is to provide a theory and concept of the thesis topic with the purpose to answer the research questions. The search was made by using the keywords “telework” and “telecommuting”. The reason is that “telework” is mostly used in Europe and Asia, while “Telecommuting” is used in the USA. Scopus database provides 1868 results, which were limited by English language, and document types were limited to articles and excluded conference papers, reviews, books and book chapters. After this narrowing, the number of articles was limited to 654. Figure 5 shows the dynamic of papers published per year. This increasing trend shows that interest in this topic continues to grow, moreover there is a significant growth during the last year.

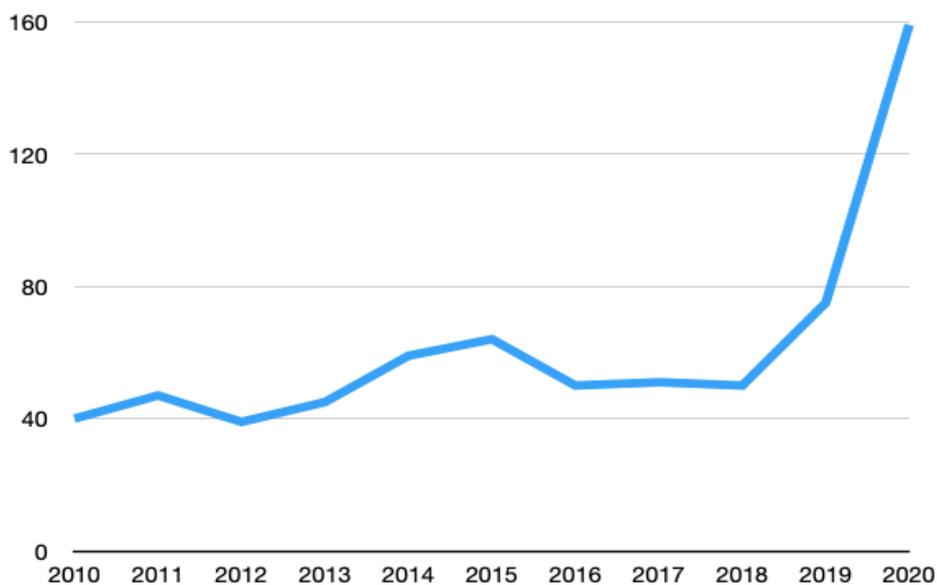


Figure 5. Articles published per year at Scopus database

2.2 Telework

To start with, it is necessary to identify what is telework. According to the International Labour Organization (ILO), telework or telecommuting is the usage of Information and Communications Technologies (ICT), such as smartphones, tablets, laptops, desktop computers for work that is performed outside the employer’s premises (Messenger, ILO,

2017). In other words, telework is a type of working which allows an employee to work remotely by using distant tools, such as ICT. Back in a history, the first mention of “telecommuting” dates to 1972, when the American scientist Nilles stated, that it is not necessary to keep employees in the office, since there is a new way to communicate at the distance. At those times, Nilles was working remotely on the NASA communication system. Seven years later, in 1979 Frank Schiff published his article “Working from home can save gasoline” in The Washington Post, where he indicates advantages for both sides, for the company and its employees. Since that moment, the idea of remote work has spread worldwide and arise as a well-known technic for organizations.

The telework can be introduced in a different form, but most definitions concern this term as a form of flexible-working outside the traditional office environment. One major theoretical issue is how to identify types of remote work. Nowadays, according to ILO, telework is divided into 3 main parts (Table 2): regular home-based telework, high mobile T/ICTM and occasional T/ICTM (Messenger, ILO, 2017).

Table 2. Categories of T/ICTM according to ‘use of ICT’ and ‘place of work’ items
(Source: Messenger, ILO, 2017).

Category	Use of ICT	Place of work	
Regular home-based telework	Always or almost all the time	Working in at least one other location than the employer’s premises several times a month.	From home at least several times a month and in all other locations (except employer’s premises) less often than several times a month.

High mobile T/ICTM			At least several times a week in at least two locations other than the employer's premises or working daily in at least one other location.
Occasional T/ICTM			Less frequently and/or fewer locations than high T/ICTM.

Moreover, The Internet Industry Association (IIA, 2012) mention four types of telework:

- Home-based employed teleworkers. It includes full-time or part-time work from home, either on set days and times work, and also usage of different telecommunications technology (or ICT);
- Home-based self-employed teleworkers. These people are contractors and the self-employed, who generally work from home and use ICT;
- Mobile teleworkers, who work at least 10 hours per week remotely from their main office (either home or employer's workplace) and use ICT;
- Day extenders, who originally work at employer's workplace, but from time to time may work from home, commonly after work or on weekends.

So, the key elements that provide the definition of telework: location, time, organization and technology usage. A recent study by Messenger, Gschwind and ILO (2017) provide a conceptual framework, which contains all these elements (Figure 6). The framework is divided into three generations (Home office, Mobile office and Virtual office) and key elements (organization, location and technology).

The first generation is based on Nille's (1972) determination and illustrates the core of this framework split into key elements. Technology is presented by the usage of computers and telephones, in other words, stationary old ICT's at employees' home (or close to it) as a total replacement to a traditional office.

The second generation is layered as a second layer around the core and described above: partial work with mobile old ICT's, such as laptops and mobile phones, in a third space. In this case, "partial" means that employees' work can be replaced by telework or arranged flexibly, as well as work on evenings and weekends. Typical locations for the second generation are any places, where work can be done regularly by using ICTs, and these places neither the home nor office. Authors define these locations as "third spaces", and they are usually cafes, co-workings, libraries and so on.

The third generation is an outer layer, presented new ICT's like tablet computers and smartphones, which enables occasional telework in intermediate spaces. It has to be mentioned, that these intermediate spaces have to be separated from the third spaces of the second generation. Intermediate spaces are placed between the employer's premises, third spaces and employee's home. For example, it may be an elevator, parking garage or parks. Intermediate spaces with the support of the features of new ICTs – the combination of information and communication technologies, and remote access to information – allow people to work anywhere anytime. A typical type of such work is occasional telework, which is less-formal and less-regulated than others. It also describes work beyond the time of teleworking - responding to phone calls, replying to e-mails.

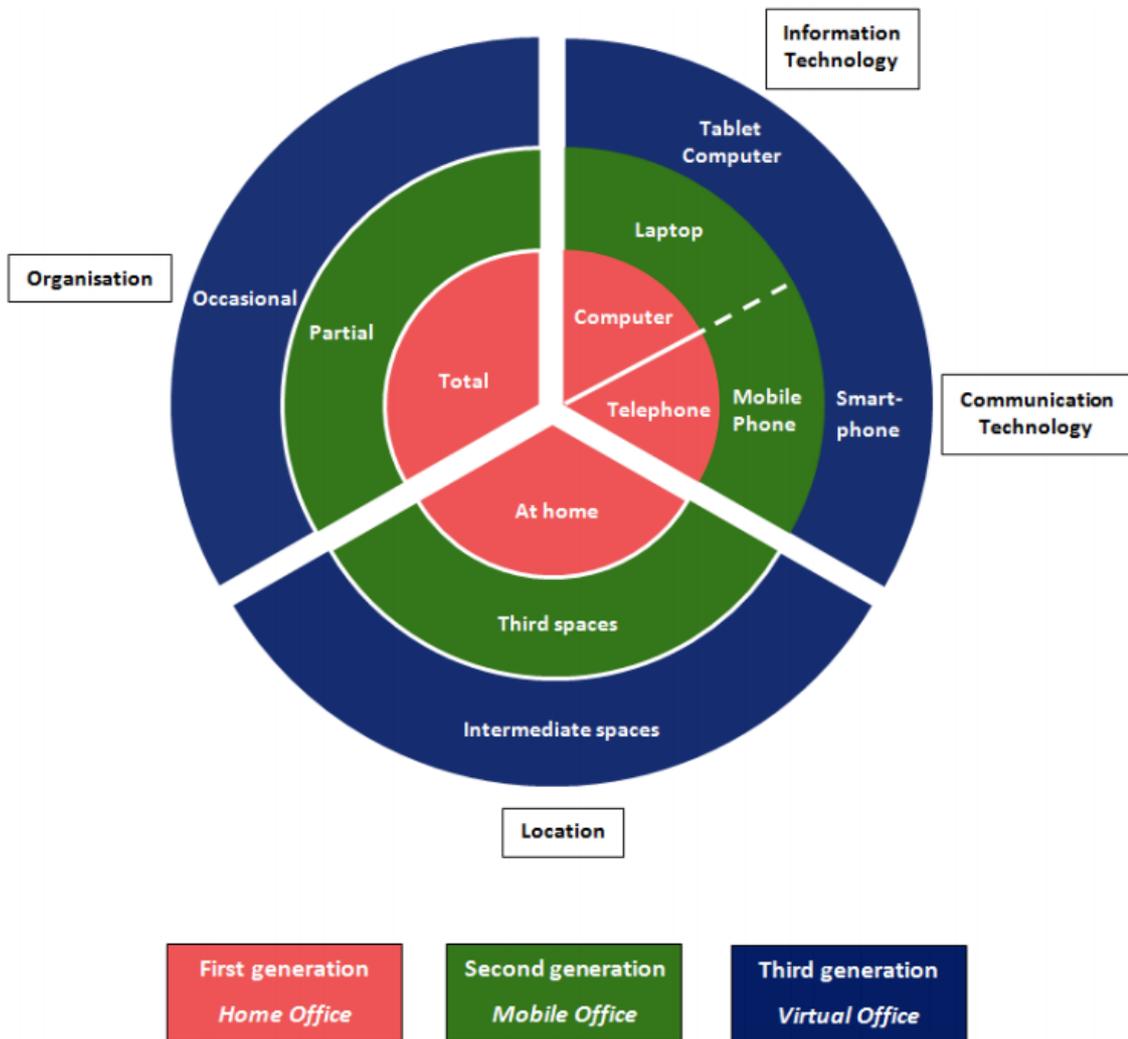


Figure 6. Conceptual framework of Telework
 (Source: Messenger, Gschwind and ILO, 2017)

Considering all the information above, these studies highlight the complexity of the definition of the telework. Due to the continuous development of ICTs, new types of remote work are emerging. Both workers and employers face the positive and negative sides of teleworking, which makes them think about whether to implement remote work or not. Sure, there are some industries and professions where remote work cannot be applied, but in general, companies still can use this approach for selected departments.

Nowadays, remote work is a relevant tool for companies. To support that, research shows that almost 86% of global firms allow people to work remotely (ILO, 2020). Figure 7 shows the percentage of workers that were home-based before the pandemic.

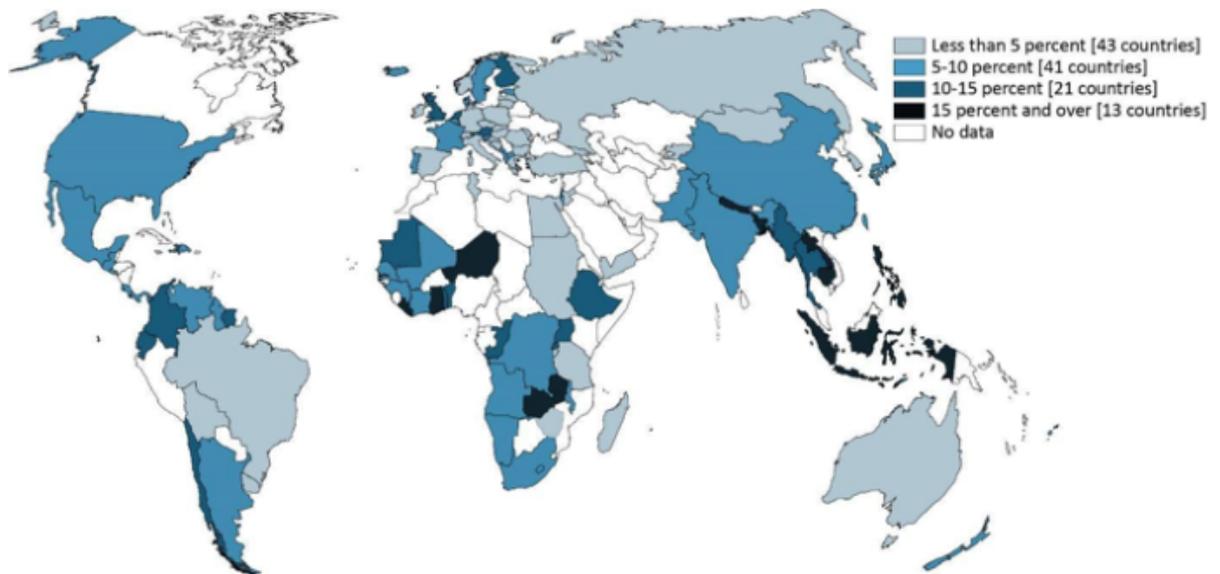


Figure 7. Percentage of workers that were home-based (all employment statuses) prior to pandemic

(Source: ILO, 2020)

One of the key advantages of remote work for employers is that there is a need for less working space. Companies can significantly reduce their business expenses, such as rent, internet, phone, electricity and water bills. The Global Workplace Analytics states, that company, where a worker works remotely at least 50% of the time, can annually save 11000\$. This saving is the result of an increased productivity, lower real estate costs, reduced absenteeism and a turnover, and better disaster preparedness (Global Workplace Analytics, 2020). Also, due to remote work, the company has greater access to employees, which allows finding a suitable specialist even from another continent. Additionally, remote work “reduce greenhouse emission by the equivalent of taking off over 600000 cars off the road for a year” (Global Workplace Analytics, 2017).

From the employer’s perspective, the main concerns are based on productivity, efficiency, trust and information security. Companies are struggling with the idea on how to organize a working process in the right way to track employee’s performance. Also, management has concerns about employee availability, productivity and loss of management control (Arnold, 2006). The best way to deal with this and decrease the level of worryness is to provide for managers corporate training, which gives them tools to evaluate performance and manage all tasks remotely (Arnold, 2006).

On the other side, there are several of reasons why people are looking for remote work. Tavares (2016) studied the advantages and disadvantages of telework from the employee perspective in choosing the type of work (Table 3).

Table 3. Advantages and disadvantages of telework

(Source: Tavares, 2016)

Advantages	Disadvantages
Better balance of home and work life	Blurring of boundaries between work and home time and overwork
Increased flexibility and autonomy	Presenteeism
Reduction in commuting time	Social isolation
Increased productivity	Lack of support, inadequate equipment
Higher morale and job satisfaction	Career progression or promotions
Avoidance of office politics	Resentment from colleagues

In literature, there is various studies on a telework effect on a work-life balance. On the one hand, telework increases working flexibility arrangement, which leads to an increase life-work balance (Sullivan, 2012). Work-life balance is considered as a reasonable consequence of the ability to reallocate your resources (Crosbie, Moore, 2004). Moreover, there is a connection between the happiness and productivity of teleworkers (Oswald, Proto and Sgroi, 2015, Tavares, 2016). But on the other hand, there are still concerns about the telework

effect. The overall effect is neither good or bad (Crawford et al., 2011; Steward, 2001). Most studies show both effect sides, but little of them examined “trade-offs associated with telework and its net benefits or net costs” (Tavares, 2016). Also, the advantage of telework is uncertain (Bloom et al., 2015), because it depends on individual socio-economic status (Aguilera et al., 2016).

Another issue of remote work is blurred lines between personal life and work. 22% are can't unplugged after work, 19% feel lonely, 17% struggling in communication and collaboration with co-workers, 10% have distractions at home, 8% work in a different time zone from the team and 3% have problems with Wi-Fi (Buffer, 2019).

2.3 Challenges during Covid-19

Total lockdown since spring 2020 brings the world to a new reality with social distancing, online communication, wearing masks and the use of sanitizers. One day, life will be normal again, but the economy will need much more time to recover and return to the pre-pandemic level. The pandemic has hit every country in the EU, and its economy shows a big drop in output in 2020: from -4,2% in Poland to -9,7% in Greece (European Commission, 2020). The impact on jobs has been 10 times bigger than the global financial crisis in 2008 (OECD, 2020). Because of lockdown measures and economic slowdown, some people have transferred to remote work, others lost their jobs or even has lost an opportunity to start a new job. Also, people who were previously considered unemployed, but were in the process of looking for a job, could refuse it for a certain period of time due to economic factors or the possibility of closing the enterprise. Others may have been unemployed due to the need to care for their children during periods of isolation. These changes in the EU market are illustrated in Figure 8. The lowest point is 12,9% in the fourth quarter of 2019, then goes 13,3% in first quarter 2020 and 14,6% in the second quarter of 2020 (Eurostat, 2020). In addition, the percentage of people available to work but not seeking has significantly raised from 3% in fourth quarter 2019 to 4,6% in the second quarter of 2020 (Eurostat, 2020).

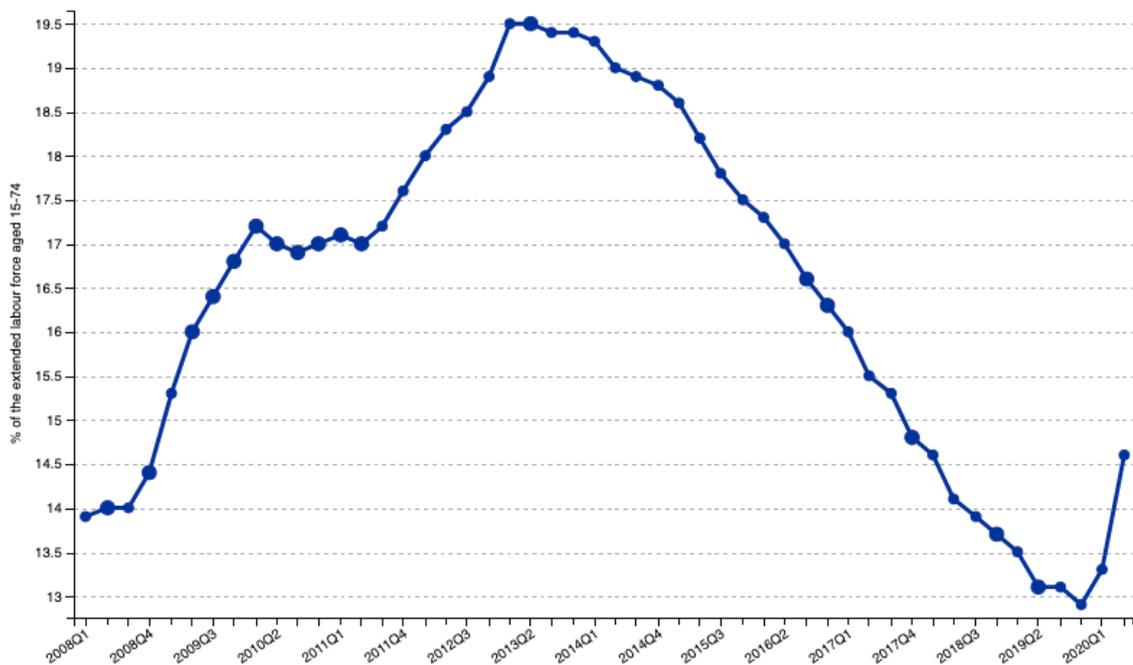


Figure 8. Labour market slack
(Source: Eurostat, 2020)

Huge platforms for video-calls started to grow exponentially, replacing the usual face-to-face meetings. Platform for video-calls Zoom had grown by almost 78% (Tilley, 2020). The giant such as Facebook launched a new event platform without any fee for creators, at least until 2021 (Business world, 2020). This action assumes to support small businesses to create and promote online events, sell tickets and host an event at one place due to following social distancing norms. Altogether these factors push companies and industries to adapt and find new ways to continue operating in the new reality.

Nowadays, around 40% of teleworkers, who work full-time are the result of the pandemic (Eurofound, 2020). Remote work may not be available to unskilled or untrained individuals. In general, this applies to manual occupations or people with low digital skills who, even before the pandemic, were representatives of the low-paid segment of the market.

As it was discussed above, all previous studies on the telework effect were conducted in normal living conditions, where people can go outside, meet friends and relax in their free time. So, the main issue in this part is the lack of available information and studies on how

lockdown affected teleworkers. Most of the information is just statistical surveys (Eurofound, 2020, ILO, 2020).

Raisien et al (2020) state, that during the quarantine teleworkers mentioned the need for socialization more than before the pandemic. Also, people without previous experience in telework more likely to mention the negative sides of telework, such as lack of feedback, lack of internal interaction (Raisien et al, 2020).

Internal meetings and organization of the working process. Recent studies show, that employees are struggling with online communication. Web-calls via Zoom, Skype and other platforms reduce transparency in communication and bring confusion and conflicts. Originally, face-to-face meetings, brainstorming and even coffee between meetings help to solve this communication gap (Bhatt, 2020). Despite that meeting became shorter by 20%, the average working day has increased by 48,5 minutes (Scott, 2020; Bhatt, 2020). In addition to this, people are overwhelmed with non-working chat messages (Bhatt, 2020; Igloo, 2020). People with no previous experience in telework mentioned that there is a lack of interaction with managers, hindered access to work-related information, working overtime due to inability to estimate tasks, doubts about how the manager will evaluate the work done (Raisiene et al, 2020). Also, the biggest concerns are based on future career opportunities and more complex communication.

Lack of appropriate equipment and devices. Sometimes, people do not have needed devices such as laptops and telephones and companies cannot provide them to all workers (Bhatt, 2020). Moreover, common problems are network issues, slow internet connection and software breakdowns (Bhatt, 2020; Satter, 2020; Coutre, 2020).

Home distractions, such as other family members, kids, pets and their habits are also significantly influencing to people (Bhatt, 2020; Satter, 2020). People, who used to go to work daily, often do not have a quiet place to work, so that brings them more problem to continue working in a needed mode.

Recent studies show an increasing level of loneliness and isolation, which brings lots of other psychological problems (Grey, 2020, Czeisler et al, 2020). Normally, employees communicate around 40 hours per week with their co-workers and meet with friends and relatives. Teleworkers, who used to work at home before lockdown are also spending their time with people. Nowadays, sometimes it is even impossible to go outside for food without government permission. Continuous social-distancing can affect mental health and activate symptoms of anxiety and depressive disorders (Czeisler et al, 2020). These cause a huge increase in address to specialists by phone or via the Internet (BBC, 2020; WHO, 2020). Worldwide organizations, such as WHO, provide instructions and advisees on how to avoid and prevent such conditions. All of them recommend keeping a daily routine, such as timetable, sport and healthy lifestyle, limit time for news from TV and internet, spend time with family and friends (even online). Also, people may try a new hobby or have a pet. In addition, more and more people are unsure of the future: problems with work, lockdown, shortage of medical equipment make them feel unprotected. All these factors together made people feel fearful and depressed, even if they were not previously predisposed to them (WHO, 2020). Depress symptoms was 63% lower for people, who has support from relatives compare with low social support' people (Grey et al., 2020).

2.4 Future of telework

Considering the current situation in the world, we can say, that telework will become an even more familiar part of life. At least for the next few years, until the vaccine will be invented and people will be protected from Covid-19. Google trends also show that people are interested in this type of work because of different reasons. The reason is not only because of pandemic and people are looking for a job, but also because telework shows its efficiency in productivity along with life-balance (especially in the fact that people themselves can manage their time): it can be seen from the temporary peaks in the growth of Google searches (Figure 9).

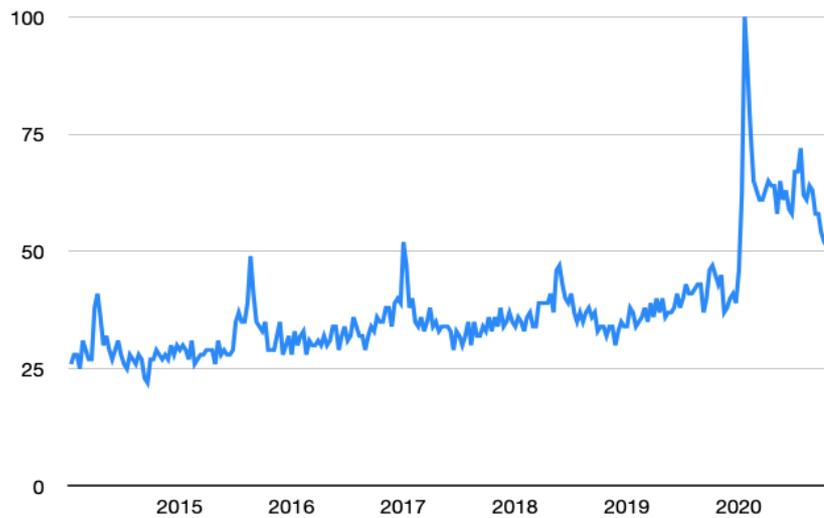


Figure 9. Google trends for “Telework”

It is still unknown how long this global pandemic might be. But one thing is clear: the world will never be the same. Twitter has announced that their employees can continue working at home after the pandemic get over. Google and Facebook prolong remote work policy till 2021. On the one hand, in a short term, there might be a need for more office space to satisfy social distancing norms until a vaccine will be ready. That could increase the rent price. On the other hand, if companies decide to continue remote work, less office space will be needed. Additionally, some companies are planning to go back to normal working conditions due to keep company spirit and collaboration (USA Today, 2020).

In the long term, the proliferation of teleworking will depend on a wide range of factors, such as the impact of teleworking on productivity and working conditions, and its contribution to the achievement of the tasks set. During normal times, teleworkers are highly productive while maintaining a life balance. But in the current realities, these factors can decline people’s productivity due to, for example, a lack of childcare assistance, a lack of work and necessary ICTs. Companies should consider telework not only as a coercive measure due to the pandemic, but also as a way to create favorable conditions for workers to combine work and family life (Belzunegui-Eraso, Erro-Garcés, 2020).

3 RESEARCH METHODOLOGY

Relying on the previous studies in the literature review it is clear that the fact of the forced transition to remote work due to the pandemic showed the need to study how telework has changed. Especially there is a need to pay attention to work-life balance, as it is one of the key concerns of telework. Thus, the aim of the study is to examine these changes in people's life.

3.1 Research design

Sanders et al. (2016) claim that questionnaire is one of the most widely used tool for conducting a survey. It also provides an efficient way to collect responses from a large sample. It has to be mentioned, that the appearance of the questionnaire may affect the result and data reliability. To avoid this, the questionnaire is mostly based on Raisiene et al. (2020) and OECD (2020) studies.

Table 4 summarizes the main variables of this study. Independent variables are defined by the previous experience in telework and following WHO recommendations. The dependent variables were defined by lockdown challenges and rating from 5 = I completely agree to 1 = I completely disagree.

Table 4. Variables of the study

Variable	Definition	Scale/code	References
Previous experience	Have you ever worked from home before the Covid-19?	0 = without previous experience 1 = with previous experience	Raisiene et al, 2020
WHO recommendations	Which of the following tips help you in maintaining life-work balance during the	0 = does not follow recommendation 1 = follow recommendation	WHO, 2020

	lockdown (you can choose several options)		
Lockdown challenges	<ul style="list-style-type: none"> - During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends) - During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions) - I feel the lack of face-to-face interaction with my colleagues - I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work - It is hard for me to make boundaries between work and personal life - I faced problems with self-organization and following the work routine - I am worried about my future due to the unknown situation with the Covid-19 	<p>5 = I completely agree;</p> <p>4 = I agree to some extent; 3 = I neither agree nor disagree;</p> <p>2 = I disagree to some extent;</p> <p>1 = I completely disagree</p>	<p>Raisiene et al, 2020</p> <p>Czeisler et al, 2020</p> <p>OECD, 2020</p>

3.2 Sampling and data collection

Relying on the research questions, cluster sampling is used because it allows us to analyze subgroups. So, all the answers will be divided into two main groups, based on respondents' previous experience in telework and following the recommendations of WHO.

The survey is made by Google forms, also, this questionnaire contains a limited number of questions with answer options, which allows to involve more people. The questions are divided into 3 parts. The purpose of the first part is to determine the age of the respondents, their previous experience in remote work, as well as to find out about the current situation at their place of work. The second part is aimed at identifying the problems and concerns associated with the forced transition to remote work. The third part examines how is the WHO recommendations work, what percentage of respondents use them and whether they help.

The questionnaire was through the author's network. Data were collected from 13th of November till 18th of November 2020 due to tight deadlines. The total number of respondents is 100. The analysis of the results is made in MS Excel and IBM SPSS programs.

4 DATA ANALYSIS AND RESULTS

4.1 Survey results

The total number of respondents is 100. A detailed percentage breakdown for each question is presented in Appendix 2. The age distribution is as illustrated in Figure 10. The number of respondents with and without experience of remote work is equally divided for 50% of each group.

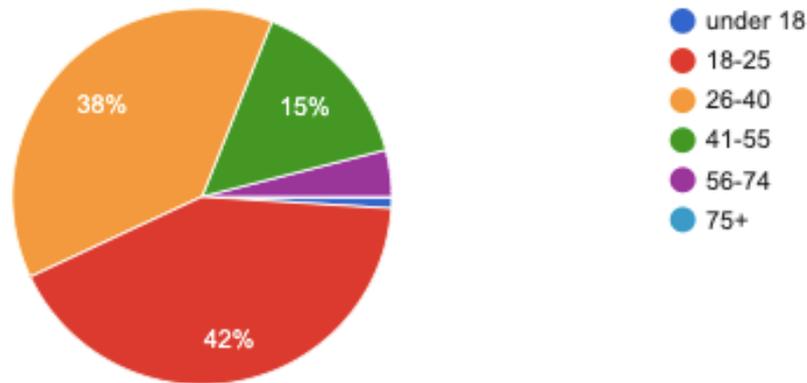


Figure 10. Age of respondents

The division into groups by age and remote work experience shows that both groups (with and without previous experience) almost equal, as presented in Table 5.

Table 5. Share of age and previous experience in telework

Age	Experience in telework					
	With previous experience			Without previous experience		
	Number of responds	%	Cumulative by group, %	Number of responds	%	Cumulative be group, %
Under 18	1	1	1	0	0	0
18-25	22	22	23	20	20	20
26-40	19	19	42	19	19	39
41-55	6	6	48	9	9	48
56-74	2	2	50	2	2	50
Total:	50	50	100	50	50	100

Due to coronavirus recommendations, companies have to switch to remote work. So, this instruction follows almost all respondents' organizations, as illustrated in Figure 11.



Figure 11. Share of organizations switched to remote work

To study how people cope with lockdown challenges, it is necessary to identify the mean of all factors in three different groups: all responses, respondents without previous experience in telework and respondents with previous experience in telework (Tables 6, 7 and 8).

Table 6. Statistics of factors

Factors	Min	Max	Mean	Std. dev.
During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)	1	5	3,22	1,425
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	1	5	3,37	1,383
I feel the lack of face-to-face interaction with my colleagues	1	5	3,39	1,601
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	1	5	2,99	1,494
It is hard for me to make boundaries between work and personal life	1	5	3,18	1,351
I faced problems with self-organization and following the work routine	1	5	3,35	1,473
I am worried about my future due to the unknown situation with the Covid-19	1	5	3,85	1,344

Table 7. Statistics of factors (without previous experience in telework)

Factors	Min	Max	Mean	Std. dev.
During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)	1	5	3,78	1,234
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	1	5	3,86	1,229
I feel the lack of face-to-face interaction with my colleagues	1	5	4,1	1,282
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	1	5	3,64	1,225
It is hard for me to make boundaries between work and personal life	1	5	3,42	1,295
I faced problems with self-organization and following the work routine	1	5	3,72	1,429
I am worried about my future due to the unknown situation with the Covid-19	1	5	4,16	1,095

Table 8. Statistics of factors (with previous experience in telework)

Factors	Min	Max	Mean	Std. dev.
During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)	1	5	2,66	1,394
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	1	5	2,88	1,365
I feel the lack of face-to-face interaction with my colleagues	1	5	2,68	1,584
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	1	5	2,34	1,465
It is hard for me to make boundaries between work and personal life	1	5	2,94	1,376
I faced problems with self-organization and following the work routine	1	5	2,98	1,436
I am worried about my future due to the unknown situation with the Covid-19	1	5	3,54	1,501

The overall situation is presented in Figure 12. Here we can see how people with previous experience in telework are coping with all lockdown challenges, comparing with people without previous experience.

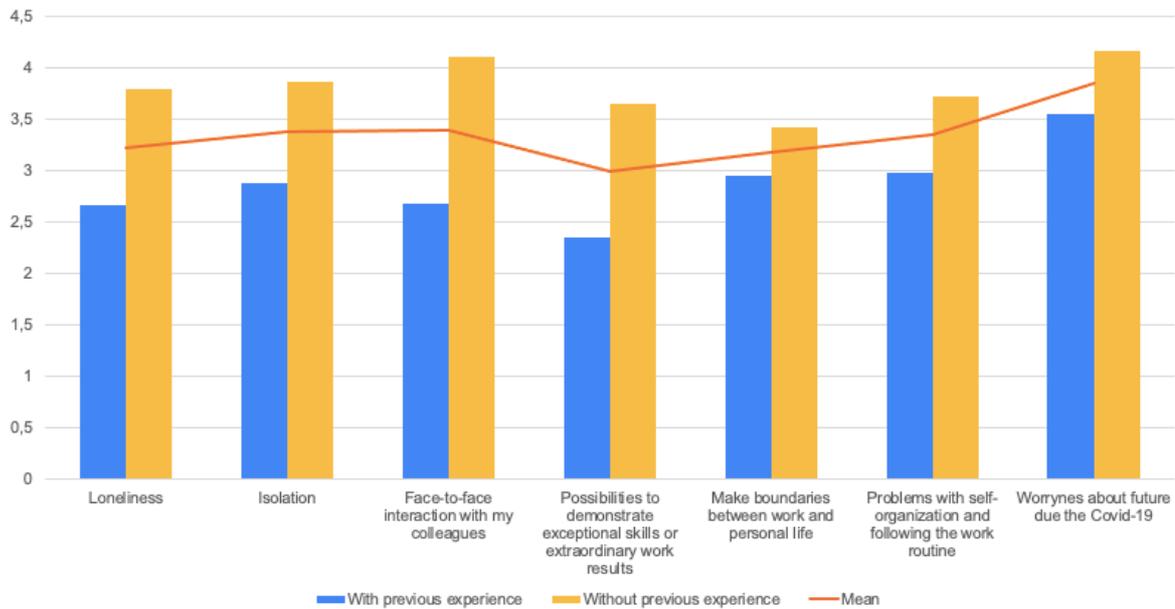


Figure 12. Comparison factors between respondents with and without previous experience in telework

Here we also can examine how different age groups cope with these challenges. Separation by age is done according to generations (McCrimdell, 2012) and relates to Raisiene et al. (2020) study. So here, we also find the mean of all variables and compare them between age groups 18-25, 26-40, 41-55, 56-74. There are no groups under 18 and 75+ due to lack of data. Table 9 and Figure 13 shows, that each group deals with lockdown challenges in its own way.

Table 9. Statistic of factors in a different age group

Age		Loneliness	Isolation	Face-to-face interaction with my colleagues	Possibilities to demonstrate exceptional skills or extraordinary work results	Make boundaries between work and personal life	Problems with self-organization and following the work routine	Worryness about future due the Covid-19
18-25	Mean	3,15	3,20	2,80	2,78	3,00	3,44	3,95
	Stan dev	1,464	1,478	1,666	1,539	1,405	1,612	1,297
26-40	Mean	3,32	3,55	3,58	3,03	3,21	3,26	3,76
	Stan dev	1,454	1,329	1,621	1,585	1,417	1,349	1,441
41-55	Mean	3,60	3,80	4,33	3,33	3,67	3,40	4,13
	Stan dev	1,056	0,862	0,724	1,291	0,976	1,352	0,915
56-74	Mean	2,00	2,00	3,50	3,50	3,25	2,25	2,50
	Stan dev	1,414	1,414	1,291	1,000	0,957	1,500	1,915

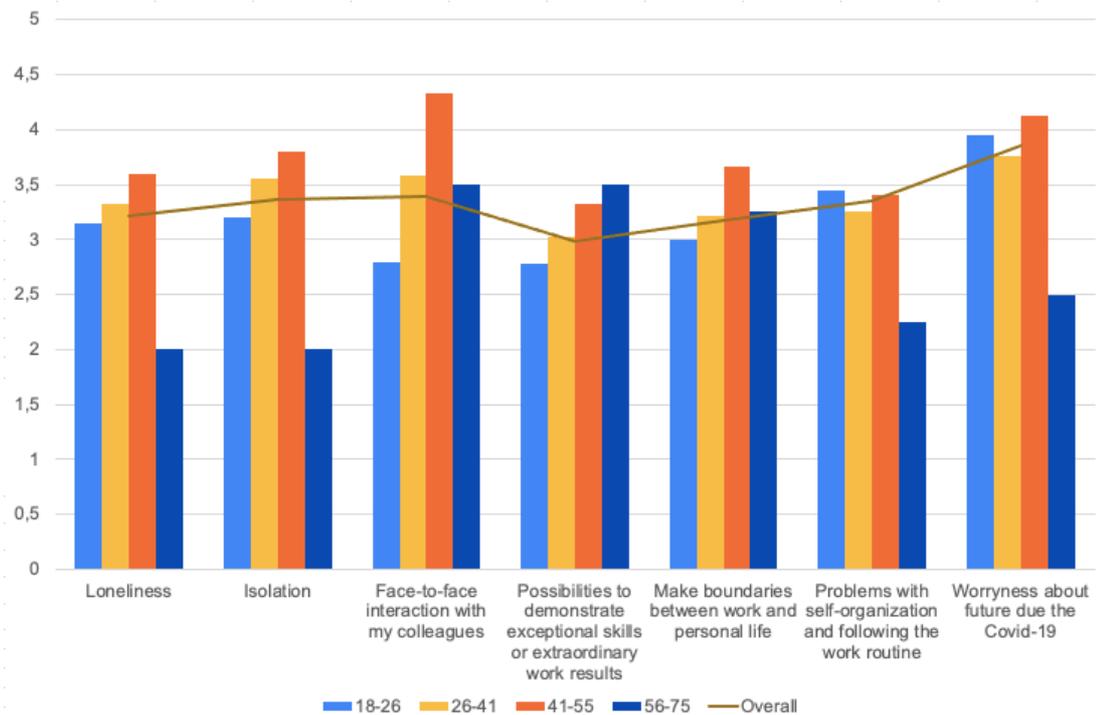


Figure 13. Comparison factors between different age groups

Moving to WHO recommendations, 88% of respondents state, that they follow at least one recommendation (Figure 14). The most common was “Support from family and friends” 60%, “Limited time for "bad" news from TV and Internet” 47% and “Follow the schedule of the day” 43%. There also several additional points, which respondents mentioned:

- *I am an introvert (so fewer contacts are needed to me) and I can't say that I am particularly lonely cos I have a flat mate, a cat and also a boyfriend who visits almost daily. Besides, I talk to friends and family on the phone a few times a week. Meet my colleagues at work once a week too. For a lockdown, it's a lot of contacts with people to me*
- *Good sleep*
- *Switching off all notifications on the phone (mails, work-type apps) so, when I switch off the computer, I am off work too and don't feel it interferes in my life*
- *To do lists for the day/week, self-development*

Which of the following tips help you in maintaining life-work balance during the lockdown (you can choose several options)

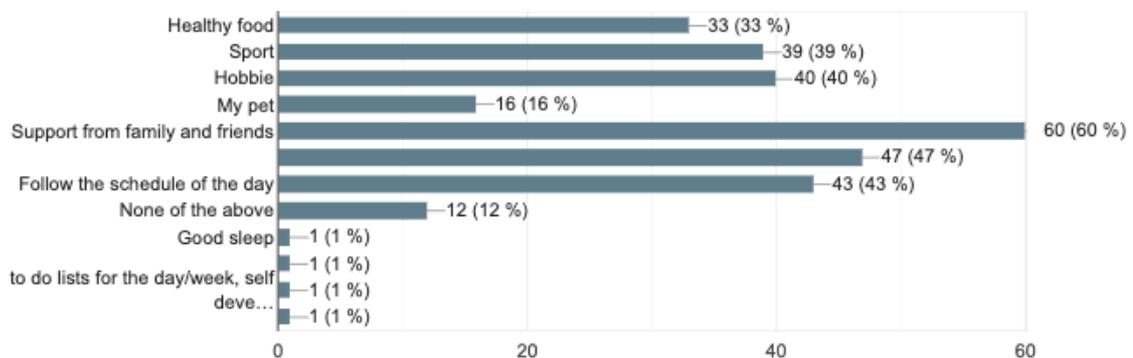


Figure 14. Distribution of WHO recommendations

To study how following WHO recommendations affected how people cope with lockdown challenges there is a need to compare these two groups: who follow them and not. The statistics of these groups is presented in Tables 10 and 11.

Table 10. Statistics of factors (who do not follow WHO recommendations)

Factors	Min	Max	Mean	Std. dev.
During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)	1	5	3,82	1,537
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	1	5	4,18	1,401
I feel the lack of face-to-face interaction with my colleagues	1	5	4,00	1,549
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	1	5	4,00	1,612
It is hard for me to make boundaries between work and personal life	1	5	3,27	1,555
I faced problems with self-organization and following the work routine	1	5	4,09	1,221
I am worried about my future due to the unknown situation with the Covid-19	1	5	4,45	1,214

Table 11. Statistics of factors (who follow WHO recommendations)

Factors	Min	Max	Mean	Std. dev.
During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)	1	5	3,15	1,403
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	1	5	3,27	1,355
I feel the lack of face-to-face interaction with my colleagues	1	5	3,31	1,600
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	1	5	2,87	1,440
It is hard for me to make boundaries between work and personal life	1	5	3,17	1,333
I faced problems with self-organization and following the work routine	1	5	3,26	1,481
I am worried about my future due to the unknown situation with the Covid-19	1	5	3,78	1,346

The results of the comparison of these factors are shown in Figure 15. The graphic shows this difference between the two groups.

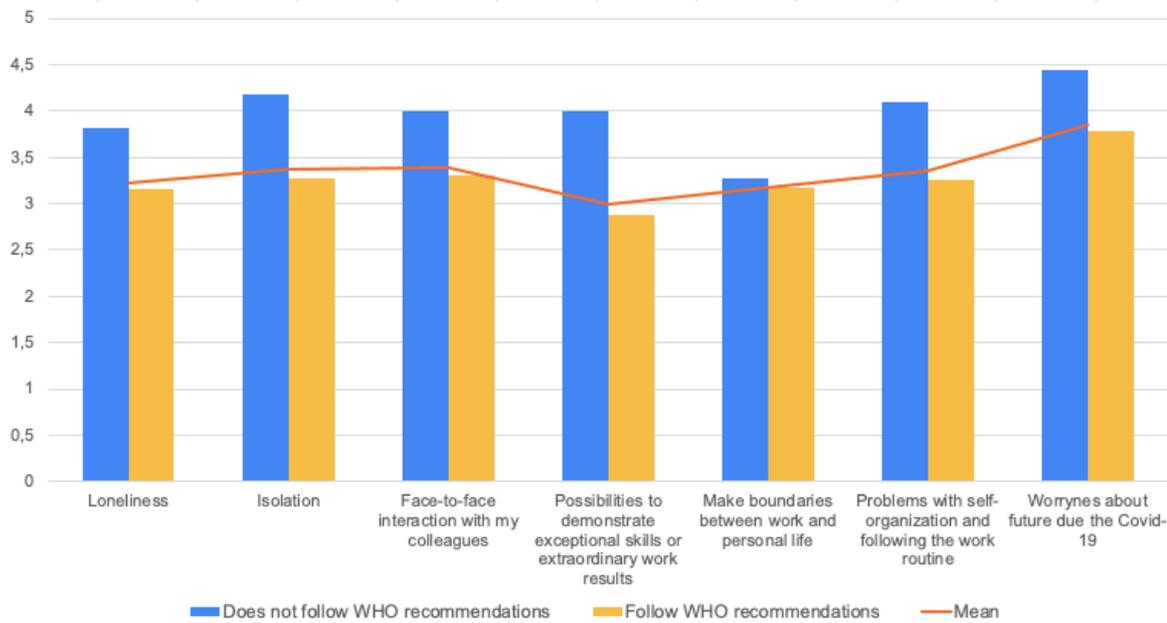


Figure 15. Comparison factors between respondents who follow WHO recommendations and not

4.2 ANOVA test and regression analysis

To analyze differences between the means of two groups we do the ANOVA test. The ANOVA test is used to determine whether there are any statistically significant differences between the means of independent groups. For this purpose, IBM SPSS was used. Firstly, we examined the relationship between two groups: people with previous experience in telework and people without previous experience in telework, and how this influence on dealing with lockdown challenges. So that, the following hypotheses were formulated:

H0: $\mu_1 = \mu_2$ ("There is no significant difference between people with and without previous experience in dealing with lockdown challenges")

H1: $\mu_1 \neq \mu_2$ ("There is a significant difference between people with and without previous experience in dealing with lockdown challenges ")

Table 12. ANOVA analysis of impact of previous experience in telework on lockdown challenges.

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
During the lockdown, I started to feel lonely (due to lack of face-to-face with family and friends)	Between Groups	31.360	1	31.360	18.099	<.001
	Within Groups	169.800	98	1.733		
	Total	201.160	99			
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	Between Groups	24.010	1	24.010	14.235	<.001
	Within Groups	165.300	98	1.687		
	Total	189.310	99			
I feel the lack of face-to-face interaction with my colleagues	Between Groups	50.410	1	50.410	24.290	<.001
	Within Groups	203.380	98	2.075		
	Total	253.790	99			
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	Between Groups	42.250	1	42.250	23.165	<.001
	Within Groups	178.740	98	1.824		
	Total	220.990	99			
It is hard for me to make boundaries between work and personal life	Between Groups	5.760	1	5.760	3.226	.076
	Within Groups	175.000	98	1.786		
	Total	180.760	99			
I faced problems with self-organization and following the work routine	Between Groups	13.690	1	13.690	6.673	.011
	Within Groups	201.060	98	2.052		
	Total	214.750	99			
I am worried about my future due to the unknown situation with the Covid-19	Between Groups	9.610	1	9.610	5.568	.020
	Within Groups	169.140	98	1.726		
	Total	178.750	99			

After carrying out this analysis, we can make the following results (Table 12).

“During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)” – Sig. is <.001, which is lower than 0,05, what leads to the rejection of H0. So that, there is dependance on this variable and employee’s previous experience in telework.

“During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)” – Sig. is <.001, which is lower than 0,05, what leads to the rejection of H0. So that, there is dependance on this variable and employee’s previous experience in telework.

“I feel the lack of face-to-face interaction with my colleagues” – Sig. is <001 , which is lower than 0,05, what leads to the rejection of H_0 . So that, there is dependance on this variable and employee’s previous experience in telework.

“I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work” – Sig. is <001 , which is lower than 0,05, what leads to the rejection of H_0 . So that, there is dependance on this variable and employee’s previous experience in telework.

“It is hard for me to make boundaries between work and personal life” – Sig. is 0,076, which is higher than 0,05, what leads to the accept of H_0 . So that, there is no dependance on this variable and employee’s previous experience in telework.

“I faced problems with self-organization and following the work routine” – Sig. is 0,011, which is lower than 0,05, what leads to the rejection of H_0 . So that, there is dependance on this variable and employee’s previous experience in telework.

“I am worried about my future due to the unknown situation with the Covid-19” – Sig. is 0,020, which is lower than 0,05, what leads to the rejection of H_0 . So that, there is dependance on this variable and employee’s previous experience in telework.

Next, we analyze the effect of following WHO recommendations on how people deal with lockdown challenges (Table 13). Following hypotheses were formulated:

$H_0: \mu_1 = \mu_2$ ("There is no significant difference between people who follow WHO recommendations and not in dealing with lockdown challenges")

$H_1: \mu_1 \neq \mu_2$ ("There is a significant difference between people who follow WHO recommendations and not in dealing with lockdown challenges ")

Table 13. ANOVA analysis of impact following WHO recommendations on lockdown challenges.

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
During the lockdown, I started to feel lonely (due to lack of face-to-face with family and friends)	Between Groups	4.423	1	4.423	2.203	.141
	Within Groups	196.737	98	2.008		
	Total	201.160	99			
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)	Between Groups	8.146	1	8.146	4.406	.038
	Within Groups	181.164	98	1.849		
	Total	189.310	99			
I feel the lack of face-to-face interaction with my colleagues	Between Groups	4.599	1	4.599	1.809	.182
	Within Groups	249.191	98	2.543		
	Total	253.790	99			
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	Between Groups	12.608	1	12.608	5.929	.017
	Within Groups	208.382	98	2.126		
	Total	220.990	99			
It is hard for me to make boundaries between work and personal life	Between Groups	.106	1	.106	.058	.811
	Within Groups	180.654	98	1.843		
	Total	180.760	99			
I faced problems with self-organization and following the work routine	Between Groups	6.785	1	6.785	3.197	.077
	Within Groups	207.965	98	2.122		
	Total	214.750	99			
I am worried about my future due to the unknown situation with the Covid-19	Between Groups	4.517	1	4.517	2.541	.114
	Within Groups	174.233	98	1.778		
	Total	178.750	99			

Analogically, after carrying out this analysis, we can make the following results.

“During the lockdown, I started to feel lonely (due to lack of face-to-face interaction with family and friends)” – Sig. is 0,141, which is higher than 0,05, what leads to the accept of H0. So that, there is no dependance on this variable and following WHO recommendations.

“During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)” – Sig. is 0,038, which is lower than 0,05, what leads to the rejection of H0. So that, there is dependance on this variable and following WHO recommendations.

“I feel the lack of face-to-face interaction with my colleagues” – Sig. is 0,182, which is higher than 0,05, what leads to the accept of H0. So that, there is no dependance on this variable and following WHO recommendations.

“I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work” – Sig. is 0,017, which is lower than 0,05, what leads to the rejection of H0. So that, there is dependance on this variable and following WHO recommendations.

“It is hard for me to make boundaries between work and personal life” – Sig. is 0,811, which is higher than 0,05, what leads to the accept of H0. So that, there is no dependance on this variable and following WHO recommendations.

“I faced problems with self-organization and following the work routine” – Sig. is 0,077, which is higher than 0,05, what leads to the accept of H0. So that, there is no dependance on this variable and following WHO recommendations.

“I am worried about my future due to the unknown situation with the Covid-19” – Sig. is 0,114, which is higher than 0,05, what leads to the accept of H0. So that, there is no dependance on this variable and following WHO recommendations.

Regression analysis between independent variables (previous experience in telework and following WHO recommendations) and dependent variable “perf” (consist of all lockdown challenges: loneliness, isolation, feeling lack of face-to-face interaction with colleagues, feeling of limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work, problems with self-organization and following the work routine, worryness about future, ability to make boundaries between work and personal life).

The square of multiple correlation coefficient (R^2) indicates what proportion of the variance of the dependent variable is explained by independent variables (Table 14). So here, $R^2=0,196$ which is mean that independent variables explain only about 19,6% variance of dependent variable. Figures 16 and 17 illustrate this relation.

Table 14. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443 ^a	.196	.188	.97318

Correlation explains the strength of the linear relationship between variables. Here, we received next results (Table 16). Person correlation is positive between variables previous experience and following WHO recommendations, but it is only 0,288, which is closed to 0 and shows no correlation here. All other means is negative which means that as one variable increases in value, the second variable decreases in value.

Similarly, we analyze Sig. (2-tailed) value. Previous experience in telework and lockdown challenges – Sig.<001, which is lower than 0,05, what leads to the rejection of H0. So that, there is dependance on these two variables. Following WHO recommendations and lockdown challenges – Sig. is 0,019, which is lower than 0,05, what leads to the rejection of H0. So that, there is also dependance on these two variables. Overall ANOVA analysis of this model shows Sig.<001, which also leads to rejection of H0 and demonstrates dependance between these variables (Table 15).

Table 15. ANOVA analysis of the model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.630	1	22.630	23.895	<001 ^b
	Residual	92.813	98	.947		
	Total	115.444	99			

Table 16. Correlation between previous experience in telework, following WHO recommendations and lockdown challenges.

Correlations

		perf	Have you ever worked from home before the Covid-19?	Following WHO recommendations
Pearson Correlation	perf	1.000	-.443	-.209
	Have you ever worked from home before the Covid-19?	-.443	1.000	.288
	Following WHO recommendations	-.209	.288	1.000
Sig. (1-tailed)	perf	.	<.001	.019
	Have you ever worked from home before the Covid-19?	.000	.	.002
	Following WHO recommendations	.019	.002	.
N	perf	100	100	100
	Have you ever worked from home before the Covid-19?	100	100	100
	Following WHO recommendations	100	100	100

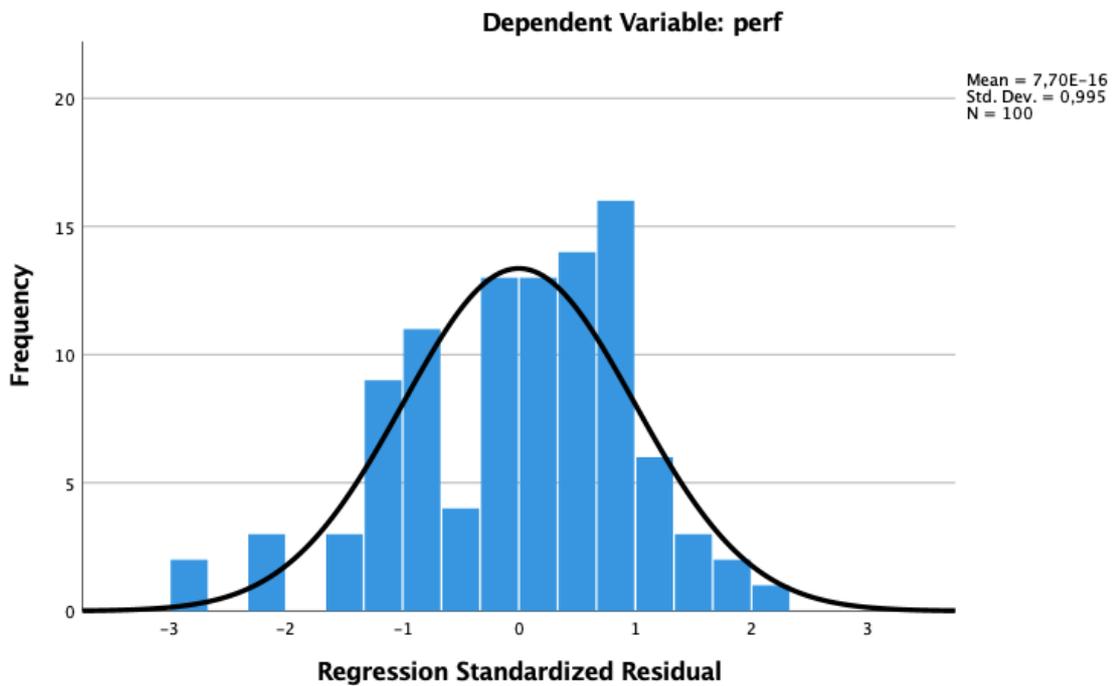


Figure 16. Histogram

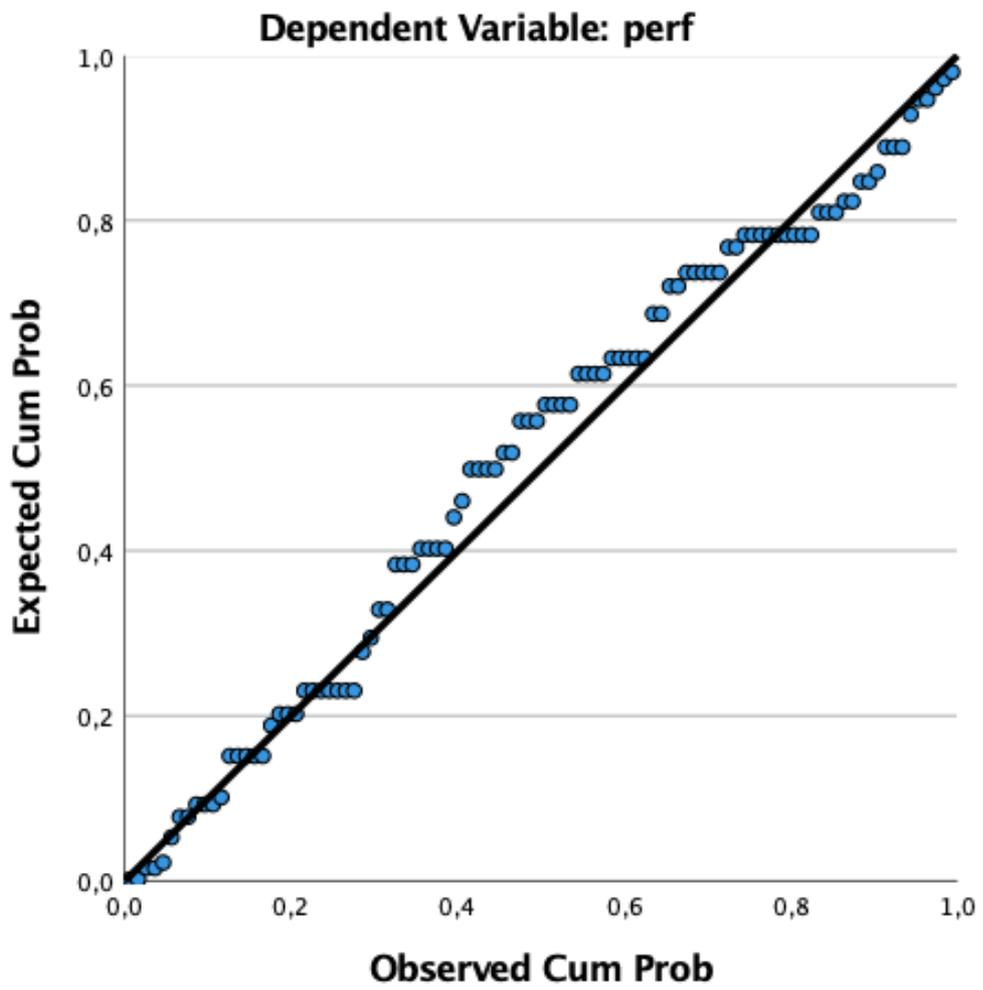


Figure 17. Normal P-P plot of regression

5 DISCUSSION

The survey conducted in this study shows, that pandemic has affected everybody. Based on the responses of the questionnaire, the following conclusions can be drawn.

First, 96% of respondents state, that their companies follow recommendations about remote work. Of which 42% completely switched to remote work, 45% partly switched (here 35% respondents states, that they work remotely and 10% continue work in the office) and 9% have worked remotely, but now they are back in the office. That demonstrates that companies implement telework for employee safety and provide continuity to economic activity (Palumbo, 2020).

Next, we examine lockdown challenges people faced during the pandemic and isolation. Overall, almost everyone is faced with those challenges in varying degrees. In general, people with previous experience in telework are better coping with lockdown challenges. It can be seen that they have a lower level of loneliness and isolation, do not feel lack face-to-face interaction with colleagues, less worry about work performance. Also, an experienced teleworker knows how to be self-organized and follow working routine.

Here, ANOVA test showed following results. Previous employee experience in telework affects on level of loneliness (Sig.=<001, which is lower than 0,05), isolation (Sig.=<001, which is lower than 0,05), feeling lack of face-to-face interaction with colleagues (Sig.=<001, which is lower than 0,05), feeling of limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work (Sig.=<001, which is lower than 0,05), problems with self-organization and following the work routine (Sig.=0,011 <0,05) and worryness about future (Sig.=0,020 <0,05). But there is no dependence between previous experience in telework and ability to make boundaries between work and personal life (Sig.=0,076, which is higher than 0,05). This support Tavares (2015) definition of advantages and disadvantages, where states that “the blurring of boundaries between work and home time may create family conflict or prevent time to rest”, and also Buffer (2019) statements.

In addition to this, comparison factors between different age groups were done. People age 41-55 have a higher level of loneliness and isolation. They more than other groups feel lack face-to-face interaction with colleagues and more worried about the future. For them also harder to make boundaries between work and personal life. On the contrary, people age 56-75 have a lower level of loneliness and isolation, they are better self-organized and less worried about the future. Those connected to McCrindle (2012) definition of generations, where “Baby boomers” (56-75 years old) and “Generation X” (41-55 years old) are more conservative and focused on data and practical. Additionally, “Generation Y” (26-40 years old) and “Generation Z” (18-25 years old) are more user-generated and better in ICT, which helps them in case of remote work.

Going to WHO recommendations, 88% of respondents follows at least one provided tip. According to ANOVA test, the following WHO recommendations influence only at level of isolation (Sig.=0,038 <0,05) and feeling of limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work (Sig.=0,017 <0,05). There is no dependence is observed among other variables.

Furthermore, there were several additional free-form answers on what else helps respondents in coping with stress during the lockdown. So, this pointed also one issue which can be studied in future researches namely, how other psychological factors such as temperament affect performance.

- *I am an introvert (so fewer contacts are needed to me) and I can't say that I am particularly lonely cos I have a flat mate, a cat and also a boyfriend who visits almost daily. Besides, I talk to friends and family on the phone a few times a week. Meet my colleagues at work once a week too. For a lockdown, it's a lot of contacts with people to me*
- *Good sleep*
- *Switching off all notifications on the phone (mails, work-type apps) so, when I switch off the computer, I am off work too and don't feel it interferes in my life*
- *To do lists for the day/week, self-development*

6. CONCLUSION

The research questions of this study were:

- What challenges did people faced due to shifting from regular offices to remote work?
- Have people faced with psychological problems such us loneliness, isolation and routine because of lockdown?
- Is there a connection between people’s feelings and worryness and following WHO recommendations for maintaining life-work balance?

To answer them, the study has to reach the objective and study how global lockdown and mandatory remote work affect people's lives. For this purpose, a questionnaire with cluster sampling survey was used. Seven hypotheses were exanimated (Table 17).

Table 17. The status of tested hypothesis

Hypothesis	Conformation status
H1. The lockdown significantly affected psychological condition and performance of employees	Supported
H2 Employee with previous experience in telework better cope with lockdown challenges	Partially supported
H2.1 Employee with previous experience in telework have lover level of loneliness	Supported
H2.2 Employee with previous experience in telework have lover level of isolation	Supported
H2.3 Employee with previous experience in telework does not feel lack of face-to-face interaction with colleagues	Supported
H2.4 Employee with previous experience in telework does not feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	Supported

H2.5 For employee with previous experience in telework it is not hard to make boundaries between work and personal life	Not supported
H2.6 Employee with previous experience in telework does not faced problems with self-organization and following the work routine	Supported
H2.7 Employee with previous experience in telework are less worried about future due to the unknown situation with the Covid-19	Supported
H3 People who follow WHO recommendations better cope with lockdown challenges	Partially supported
H3.1 People who follow WHO recommendations have lower level of loneliness	Not supported
H3.2 People who follow WHO recommendations have lower level of isolation	Supported
H3.3 People who follow WHO recommendations does not feel lack of face-to-face interaction with colleagues	Not supported
H3.4 People who follow WHO recommendations does not feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work	Supported
H3.5 For people who follow WHO recommendations it is not hard to make boundaries between work and personal life	Not supported
H3.6 People who follow WHO recommendations does not faced problems with self-organization and following the work routine	Not supported
H3.7 People who follow WHO recommendations are less worried about future due to the unknown situation with the Covid-19	Not supported

6.1 Research contribution

The research contribution of this study is referring to exploring the differences between teleworkers and office workers in case of pandemic Covid-19 and mandatory social isolation and remote work. It is still not completely clear how the pandemic will affect not only humanity as a whole, but also certain areas. Also, this study showed that all people were affected by the pandemic to varying degrees. Compliance with WHO recommendations can help not only people who are forced to work remotely at such times, but also disseminate them through the management of the organization to improve productivity and maintain a work-life balance. This study can be used in the future precisely for analyzing the consequences and comparing the results in different time periods. Human resource management and performance management may use this kind of studies to examine and understand their own need (or lack thereof) in teleworkers.

6.2 Limitations and suggestions for future research

The main limitation of this research is the small sample size, with only 100 respondents. Also, this study was narrowed to examine the connection between people with and without experience in telework, WHO recommendations and lockdown challenges. So, they might be quite biased, since people themselves evaluated their feelings. In other words, this can be explained by a small sample, as well as subjectivity in the responses to rating scale questions. Moreover, respondents' answers might be influenced by different situations with the Covid-19 in a different regions and countries. Another limitation is based on the fact, that there is different range of definitions of telework and its type.

Nowadays the situation with the Covid-19 is still unknown, so the future impact of the coronavirus is unknown. So that, there are limited studies of Covid-19 impact on telework in general. Future researches might do and compare studies before and after the pandemic to better understand Covid-19 impact on people live, especially in case of mandatory transition to remote work.

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APPENDIXES

APPENDIX 1 Survey questionnaire

Telework during the pandemic

This survey is conducted as a part of the Master's thesis for LUT University.

The aim of the research is to study how people reacted to the shifting from regular offices to remote work and what problems did they face. Especially, attention is paid to the negative effects of lockdown.

The survey is anonymous and takes less than 5 minutes.

Thank you for participation! If you have any questions, feel free to contact me:

AnaFominykh@gmail.com

Telework (or remote work) means, that you work at least once a week outside the employer's place (you work from home or other places, such as cafes or co-working)

How old are you? *

- under 18
- 18-25
- 26-40
- 41-55
- 56-74
- 75+

Have you ever worked from home before the Covid-19? *

- Yes
- No

Has your organization switched to remote work? *

- Yes, completely
- Partially (I work remotely)
- Partially (I continue to work in the office)
- Have worked remotely, but now we back in the office
- No

What challenges did you face during remote work and lockdown?

Express your views on the following statements on scale 1-5 (5 = I completely agree; 4 = I agree to some extent; 3 = I neither agree nor disagree; 2 = I disagree to some extent; 1 = I completely disagree)

During the lockdown, I started to feel lonely (due to lack of face-to-face with family and friends) *

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> |

During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions) *

1	2	3	4	5
<input type="radio"/>				

I feel the lack of face-to-face interaction with my colleagues *

1	2	3	4	5
<input type="radio"/>				

I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work *

1	2	3	4	5
<input type="radio"/>				

It is hard for me to make boundaries between work and personal life *

1	2	3	4	5
<input type="radio"/>				

I faced problems with self-organization and following the work routine *

1 2 3 4 5

I am worried about my future due to the unknown situation with the Covid-19 *

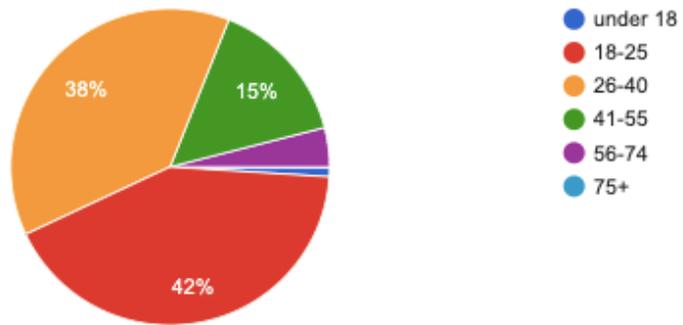
1 2 3 4 5

Which of the following tips help you in maintaining life-work balance during the lockdown (you can choose several options) *

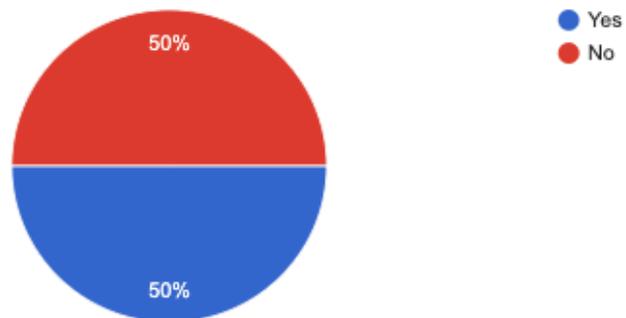
- Healthy food
- Sport
- Hobbie
- My pet
- Support from family and friends
- Limited time for "bad" news from TV and Internet
- Follow the schedule of the day
- None of the above
- Другое: _____

APPENDIX 2 Survey results

How old are you?



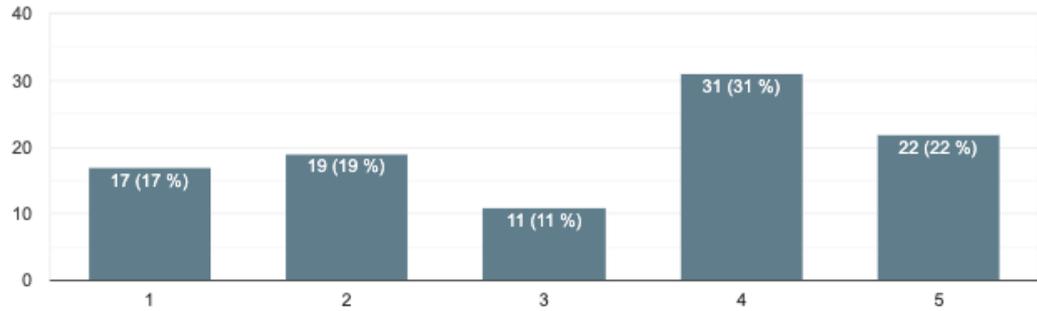
Have you ever worked from home before the Covid-19?



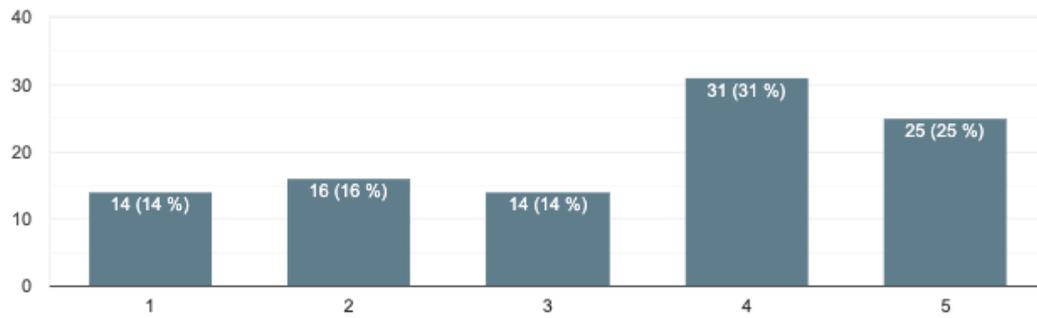
Has your organization switched to remote work?



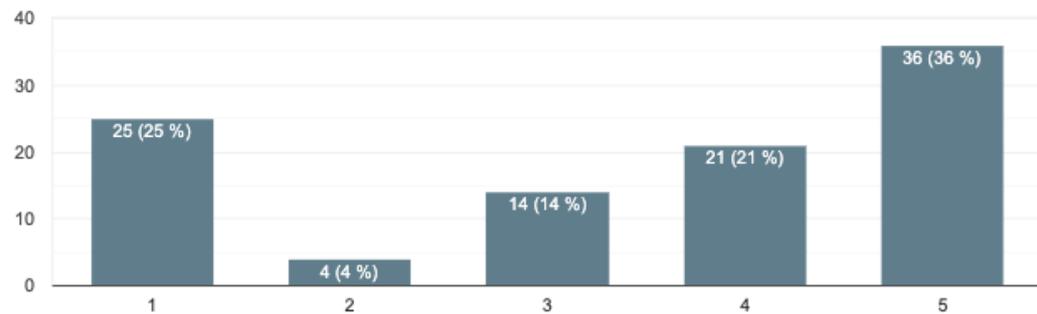
During the lockdown, I started to feel lonely (due to lack of face-to-face with family and friends)



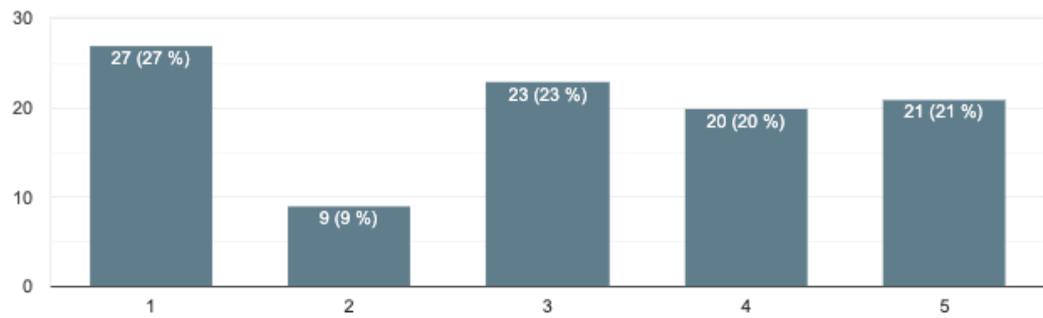
During the lockdown, I started to feel isolated (due to the self-isolation and other restrictions)



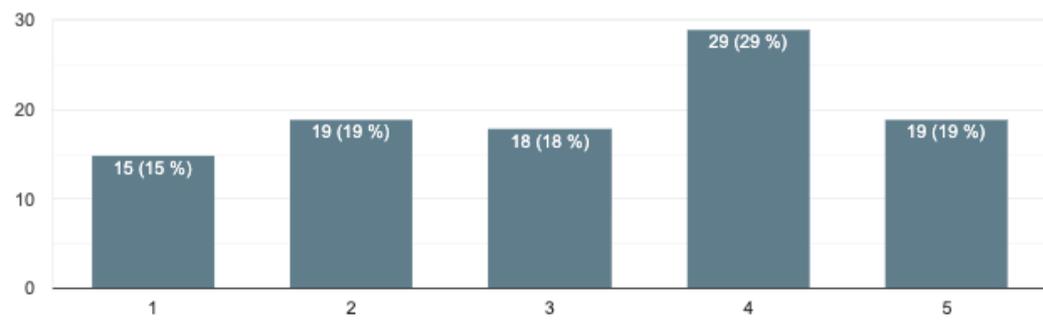
I feel the lack of face-to-face interaction with my colleagues



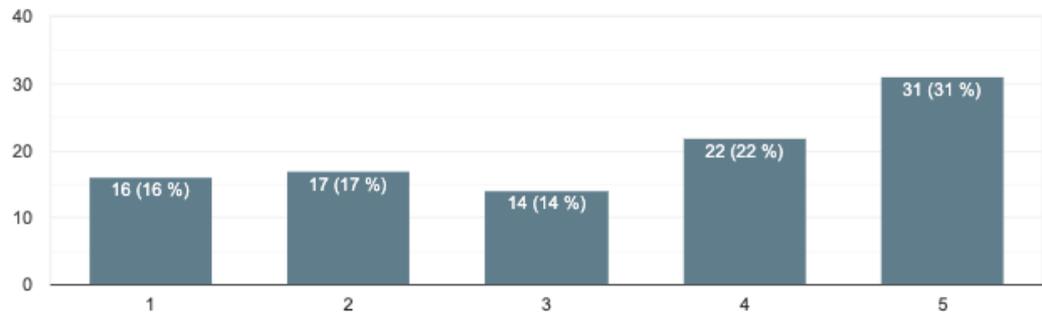
I feel limited possibilities to demonstrate exceptional skills or extraordinary work results due to remote work



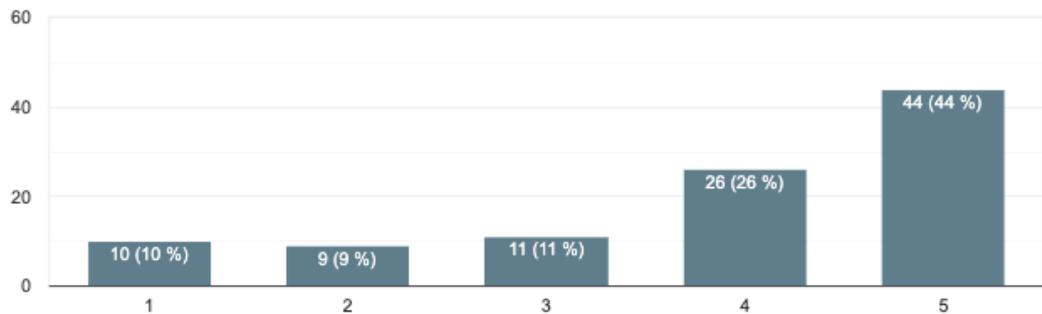
It is hard for me to make boundaries between work and personal life



I faced problems with self-organization and following the work routine



I am worried about my future due to the unknown situation with the Covid-19



Which of the following tips help you in maintaining life-work balance during the lockdown (you can choose several options)

