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Comparative study between face-to-face job satisfaction and teleworking in a mixed system in Portugal

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Master in Management

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Resumo

O teletrabalho nos dias que correm é algo que é visto como muito normal. Com o aparecimento do Covid-19 tornou-se numa prática obrigatória para a grande maioria das empresas. Felizmente com o aparecimento e a constante evolução das tecnologias de informação e comunicação, o teletrabalho tornou-se possível neste tempo mais difícil que o mundo tem atravessado. Mesmo antes do Covid-19 aparecer o teletrabalho já era encarado com uma excelente oportunidade na estratégia e na inovação das empresas, pois contribui para uma maior competitividade das mesmas.

Nesta fase da pandemia, devido à grande percentagem da população em Portugal se encontrar vacinada, a pandemia encontra-se mais controlada, pelo que este estudo tem como objetivo comparar a satisfação no trabalho entre os trabalhadores que trabalham presencialmente e os que trabalham em regime misto, ou seja, tanto exercem funções presencialmente como exercem funções em modo de teletrabalho.

Neste estudo comparativo é realizado um inquérito de forma online, com o objetivo de obter dados qualitativos e quantitativos que demonstrem qual a forma de trabalhar que traz mais satisfação aos trabalhadores. O estudo envolve uma amostra de 178 empregados de várias profissões.

Depois de uma análise cuidada aos resultados concluímos que com base nas respostas ao inquérito a forma de trabalhar que traz mais satisfação aos trabalhadores é quando o trabalhador se encontra em sistema misto. Na comparação com o sistema misto e trabalho presencial as todas as perguntas revelaram que o sistema misto faz com que haja maior satisfação, como a vida profissional e a vida pessoal.

Palavras-chave: Teletrabalho, Trabalho presencial, Pandemia, Satisfação no trabalho.

Sistema de classificação JEL: I12, J01

Abstract

Teleworking these days is something that is seen as very normal. With the appearance of Covid-19 it became a mandatory measure for most companies. Fortunately, with the emergence and constant evolution of information and communication technologies, teleworking has become possible in this most difficult time that the world has gone through. Even before Covid-19 appeared, teleworking was already very important in companies' strategy and in their innovation, as it contributed to greater competitiveness in companies.

At this stage, the pandemic is under more control, with a large percentage of the population already vaccinated. That said, this study aims to compare job satisfaction between workers who work face-to-face and those who work in a mixed regime, that is, both works face-to-face and telework.

In this comparative study, an online survey will be carried out, with the objective of obtaining qualitative and quantitative data that demonstrate which way of working brings more satisfaction to workers. The study involves a sample of 178 employees from various professions.

After a careful analysis of the results, we concluded that, based on the responses to the survey, the way of working that brings more satisfaction to workers is when the worker is in a mixed system. In comparison with the mixed system and face-to-face work, all the questions revealed that the mixed system causes greater satisfaction, such as professional and personal life.

Keywords: Telework, Face-to-face work, Pandemic, Job satisfaction.

JEL Classification system: I12, J01

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1. Introduction

Today the way of work is very different from a year and a half ago with the emergence of Covid-19. The world suddenly entered a pandemic that changed the daily lives of human beings. There was now intensive care that did not exist before, such as the use of a mask and the constant use of alcohol gel.

The world went into quarantine and many companies had to adjust by using teleworking as a primary tool for carrying out their functions. This change has both positive and negative effects that will later be analyzed and exposed in this master's thesis (International Labor Organization, 2020).

Now after a year and a half, the pandemic is more under control, which slowly leads to the elimination of the measures taken when the pandemic started (International Labor Organization, 2020). Something that has partially returned to normal was the face-to-face work regime, which now includes two alternatives:

- The employees work at their place of work always,
- Or they work in a mixed regime, that is, they work some days at the office and other days they work at home.

These days, the expression going to work has taken on different meanings with the emergence of Covid-19. The workplace is no longer just the company office, now our home has also become a working office. Due to the pandemic, the option of not physically going to the company came into being.

Now we can say that the pandemic was a starting point for something that was already being thought by many companies, but that due to implementation difficulties, it was always being postponed.

In Portugal, adherence to telework in companies was much lower before covid-19, about three out of five companies did not use telework as a way of performing their job when the pandemic appeared, then 70% of employees were forced to start teleworking. A study by the journal Human Resources found that in 45% of cases the workload increased (Macaire, 2020).

We can say that teleworking was the best solution to avoid an economic crisis that would be inevitable with the confinement that took place in the country. And it was an excellent opportunity for the country to grow in terms of information and communication technologies, which made teleworking a practically mandatory measure in most companies in Portugal (Stoicov et al., 2021).

At this stage in which we are already in the post-pandemic period, most companies continue to use telework as a way of working in the company. Most workers themselves continue to want to keep teleworking in the post-pandemic phase, and they see better the balance between working in the company's office and working at a distance (Ferreira et al., 2021).

The assessment of job satisfaction should be done regularly so that managers have an idea of what is happening with workers. This satisfaction is not easy to measure, as job satisfaction varies from person to person and from context to context (Ahmadi et al., 2021).

The comparative study between face-to-face job satisfaction and teleworking in a mixed system in Portugal was chosen as the theme of the thesis because of the great impact that teleworking has had on most companies. Teleworking has not only become a means of work in times of a pandemic, but it has also become an innovation tool that helps in company strategies. Since almost all workers now either work face-to-face or work in a mixed regime, it is important to know what their preferences, motivations and satisfaction are in relation to the two ways of working (Andrade et al., 2021).

The main aim of this research is to verify which system has more job satisfaction, if it is the face-to-face system or the telework in the mixed system and how the pandemic affected the way of work in the world. The choice of this theme is due to the big use of telework in recent times, which has become an important innovation tool that helps in the strategies of organizations.

This Master's thesis is divided into five chapters. First, we have the introduction (chapter 1). Then we have the literature review (chapter 2) which will be organized by sub-themes that are important for the thesis, more specifically history of teleworking, contextualization of telework, advantages and disadvantages of teleworking and happiness and job satisfaction. In chapter 3 will be the methodology referring to the research question. Next, we have chapter 4 which will be an analysis of the results obtained in the research. Finally, we have chapter 5 where all the conclusions regarding the dissertation theme are presented.

The main conclusions obtained in the comparative study on the satisfaction of face-to-face work with the telework regime in a mixed system are that the telework regime in a mixed system brings more satisfaction. To reach this conclusion, there was an analysis of a survey carried out for this study and it is possible to conclude that in all the questions that were used both for face-to-face work and for the mixed system there was a considerably greater satisfaction for respondents who work in a mixed system.

2. Literature Review

Since the beginning of the pandemic, the word telework has gained another dimension. From March 2020 (when confinement began) several scientific studies on telework and its impacts on people's lives began to appear. At this stage of the work, I will present existing studies around telework and job satisfaction.

In this chapter, the various concepts, studies and other research that have already been worked on and published will be addressed. The literature review of this dissertation has grown immensely since the beginning of the pandemic, this is since most companies have joined teleworking since the beginning of the pandemic and consequently publications related to this topic have also grown a lot.

2.1. The beginning and evolution of COVID-19

The virus that is responsible for the pandemic we are going through is coronavirus 2 (SRA-CoV2). The first outbreak of this virus took place in the city of Wuhan in China in December 2019. Since then, this virus has spread throughout the world, infecting hundreds of millions of people and causing the death of millions of people (Riley, 2022).

It was on March 11, 2020, that the World Health Organization declared the outbreak of the coronavirus as a pandemic and forced them to take measures around the world in order to combat the spread of the virus. Due to the virus being highly contagious, governments had to adopt several measures, one of them being social distancing. For this social distance to happen, it was necessary for schools, companies and everything that is closed spaces with many people to have to close. Blocking measures were also taken by several countries, thus allowing travel only in extreme cases (Macaire, 2020).

The most important measure that had a great impact on society during the time of confinement was the use of telework by workers in jobs that were possible to use. About one million people in Portugal started teleworking, which is equivalent to 23.1% of the employed population (Mateus, 2021).

The main objective of the confinement measures is to flatten the contamination curve, that is, to get cases to go down overnight, in order to combat the exponential growth of the pandemic (Peixoto et al., 2021).

2.2. Covid-19 in Portugal

It all started in Portugal on January 14, 2020, when 59 cases of Covid-19 had already been reported in people who had been in Wuham. On that day, the first statement was made by the DGS for the country to report a possible pandemic soon, but that there was still no certainty of the gravity of the situation.

After some time, on March 18, 2020, there were 642 cases of Covid-19 and the President of the Republic decided to declare a state of emergency throughout the country since cases were increasing exponentially since the first case recorded in Portugal on March 2, 2020. The objective of putting the country in a state of emergency was to control the virus in order to save lives (Duque et al., 2021).

After the measures were taken, people had to live only with the essentials and normal life took on another meaning, as it was necessary to restrict human rights in order to save several lives. On March 19, the Council of Minister approved a decree that leads to the existence of exceptional and temporary measures for when confinements are necessary (Portuguese Government, 2020).

These measures are different for the population depending on the state of health of each one, for example, there was greater care if the person was at risk. With the appearance of confinement, circulation on public roads and in public spaces was much reduced. Citizens only go out to buy food, for health reasons and for short-term trips to walk their pets and to perform individual physical activity.

The measure taken by the government regarding this dissertation is the beginning of the use of mandatory teleworking whenever possible. The educational establishments closed were all and had to adapt to having online classes. On March 22, a decree came into force that prohibited the holding of religious celebrations or worship events.

It was on March 22nd that the country changed a lot. Schools closed, businesses either went into lay-off or went bankrupt, and people stayed home whenever possible. On that day in Portugal, 1600 infections and 14 deaths with Covid-19 had already been recorded and only 5 people had been recovered and people started wearing a mask on the street (Nunes, 2020).

Less than two months later, on May 4, the country went from a state of emergency to a state of calamity, thus reducing the country's confinement. The elderly is no longer obliged to confine themselves in their homes and commercial establishments with more than 200 m² were open again. At that time, the country was already at a stage where the pandemic was more controlled (Sá, 2020).

At the height of the summer, the cases of Covid-19 continued to decrease and the concern for the pandemic was less and less, which could make the economy work normally again, which also coincided with the season with more tourists in Portugal and because of that the economy of Portugal did not suffer a big impact like was expected when the pandemic situation started.

At the beginning of 2021, a new wave appeared, which until now was more worrying, as at the peak of the wave there were more than 300 deaths a day, hospital admissions continued to increase every day. On the other hand, the process of vaccinating the population had already begun, which gave hope for this phase to be overcome in a short time.

After the colder months, the cases of covid-19 dropped a lot and a large part of the population was vaccinated, which meant that the measures imposed by the state were not so severe. In most cases people started to return to their offices or they started using the mixed system, that is, some days they went to the office and other days they stayed doing telework.

More recently, in December 2021, a new variant of SARS-CoV2 (Omicron) emerged that resulted in a new wave of covid-19 causing tens of thousands of infected people every day in Portugal, something never seen before. However, due to the high vaccination rate, deaths and hospitalizations were much lower than the situation at the beginning of 2021, so there were no confinement measures as serious as happened at the beginning of the pandemic in 2020.

With the pandemic situation controlled, in April of 2022 the government of Portugal could take a big step to make the lives of people back to normal, that was the ending of the obligated use of masks except for public transports and in health spaces.

2.3. History of telecommuting

Working outside the office has been around for a long time. According to the oldest data, teleworking first occurred in 1857 when J. Edgar Thompson, who owned the railroad, managed to find a way to use his company's private telegraph system to manage remote divisions, in which the main objective was to monitor the equipment at the construction sites of the railroad (Pineiro, 2012).

We can define telework as work that is carried out in any space outside the company, by means of information and communication technologies. This concept is first mentioned in the 1970s. This event occurred due to the oil crisis that affected the whole world and because of this the costs of commuting to work became a major expense for workers and so teleworking emerged as an alternative in some activities (Silva, 2020).

Later in the 1990s, with the third industrial revolution (the emergence of the internet, computers, and mobile phones) teleworking in companies started to become increasingly common. In the 21st century, the means of telecommunication have become more relevant and practical, which has also increased telework (Silva, 2020).

More recently, Covid-19 has emerged which has caused the world to be quarantined. As a result, companies had to close their offices and were forced to use teleworking as their employees' means of

work. After this experience with the pandemic, the way to work will never be the same again, with companies continuing to use telework on a part-time or full-time basis (Beckel et al., 2022).

2.4. Contextualization of Telework

With the emergence of Covid-19, teleworking proved to be a solution for companies to minimize the constraints resulting from confinement.

According to the survey conducted by CIP/ISCTE, it was found that telework has been a crucial tool for most companies that adopted it. Despite the little experience in teleworking in the companies, 86% answered that the internal processes were easily carried out in teleworking (Saraiva, 2020).

Regarding the productivity of companies in telework, it was found that:

- 31% responded that it was too early to assess the impact of workers' productivity;
- 43% responded that productivity remained the same;
- 16% of companies felt a reduction in productivity;
- 10% of companies had an increase in productivity.

Still according to the same survey, it was found that 57% of workers accepted telework in a high or even very high level of satisfaction, with only 15% of workers accepting it as low. What we can conclude with this survey is that workers and companies that used telework during confinement showed an excellent ability to adapt to something they were not used to.

According to Eurostat data (Saraiva, 2020), before the pandemic happened (in 2019) 11.1% of workers worked from home in the European Union. With the onset of the pandemic, these figures grew significantly, with 37% of workers doing teleworking in the European Union.

In this new way of working, there are some ups and downs for workers, companies, and society.

2.5. Impact of the Telework

For most large companies, teleworking is already seen as essential. In Portugal, an Action Plan for the Digital Transition was created in a Resolution of the Council of Ministers nº30/2020 (Rebelo, 2020). The Action Plan aims at the digital transition, which is essential for development strategies. This Action Plan will be carried out in the programming period between 2021 and 2027. It was the pandemic that accelerated the process of transition to the digital society, due to the large increase in the use of telework resulting from the emergence of Covid-19.

In the post-covid era, teleworking will continue to be used by several companies. The results of the impact of teleworking, for external reasons, will differ from country to country and from company to company (Monroe et al., 2021). Based on a study carried out in France, we can conclude that 71% of company directors will not want to continue to use telework forever as a means of exercising their profession, thus preferring face-to-face work (Lima, 2021).

Regarding the impact of teleworking on productivity, about 78% of managers see negative impacts on workers' productivity. Still 22% of managers expect a major negative impact on productivity, and only 15% believe that there will be no impact on productivity. The negative impact of telework on productivity is not exact, because depending on the profession you are exercising, productivity with telework also varies. In several companies an increase in productivity was presented.

There are several reasons teleworking can affect workers' productivity both positively and negatively. The positive aspect that most influences is the flexibility of workers' schedules, because with telework it is easier to be able to make their own hours, thus improving productivity. Regarding the reasons for the loss of productivity, we can point out the parents who need to take care of their young children while they should be working. Another reason that greatly affects small and medium-sized companies is the fact that there are still no technological conditions for good communication between workers, thus reducing productivity (Camacho et al., 2021).

This pandemic, due to the need for teleworking, has proved that most jobs can be performed at home and not in the office. More precisely, 44% of the work on the planet can be done through teleworking, and only 24% of workers cannot do their jobs remotely at all. It also proved that the richer the countries, the higher the percentages of telework workers (Lima, 2021).

There are also several environmental impacts that teleworking has brought to society. The main environmental impacts of teleworking are lower greenhouse gas emissions, lower use of fossil fuels, lower carbon footprint and lower air pollution. All these impacts come from less use of transport to the office, so there are fewer cars circulating in cities (Tahlyan et al., 2022).

But there is also an environmental downside to using teleworking as a way of working. Teleworking saves energy at the workplace, but there is greater energy consumption in homes due to the greater use of electricity while teleworking (Vleeshouwers et al., 2022).

Regarding the impact of teleworking on happiness, we can see that 65.9% of teleworking employees during the pandemic were satisfied with their working conditions, that is, most feel that teleworking is good for their happiness. It was also studied that teleworking reduces the risk of burnout and there is less stress at work, more precisely 55.7% think that teleworking for a long time makes there is a better balance between work and personal life. About 57.2% of teleworkers did not feel bothered by family members during their work, despite this connection and communication with co-

workers dropped considerably, which can cause problems at the organizational culture level (Baert et al., 2020).

2.6. Advantages and Disadvantages of Telework

- Workers

For the workers, teleworking offers the following advantages: better balance between professional and personal life, time-saving travel, stress reduction gaps, flexibility of schedules (better time management), greater job opportunities, more autonomy and greater satisfaction and capacity for innovation. On the side of workers' disadvantages we have: lesser working conditions: physical space, light, etc., isolation and reduction of interpersonal contact (social and professional), greater increase in costs associated with water and electricity consumption equipment's, the non-separation of family and professional dimensions, leading to family conflicts, greater difficulty in progression (promotion) and career development, Increased overtime work and fewer references about the company's culture and values (Ipsen et al., 2021).

- Companies

At a company level, teleworking offers the following advantages: cost reduction in the workplace, increased productivity, greater creativity and attracting talent at national and international level. On the side of the companies' disadvantages, we have lack of communication between teams, more difficulty in controlling the performance of workers, less control over working times, fewer references about the company's culture and values and costs associated with investing in information technologies (Ferreira et al., 2021).

- Society

Finally, regarding the advantages of teleworking in society, we have decrease in car traffic generating carbon emission reduction and growth of local businesses. The big societal disadvantage of teleworking is that there is more unemployment.

Despite all the advantages and disadvantages, the pandemic has changed the way we look at teleworking. What was not very common before came to be a great alternative to face-to-face work. Still on the CIP/ISCTE survey (Saraiva, 2020), in 48% of the companies where teleworking can be used, in the post-pandemic, companies plan to regularly use this way of working and, among these, half think that the best alternative is to use telework two or three days a week (mixed system) (Klopotek, 2017).

2.7. Happiness and job satisfaction

In the more distant past, the only main objective of the work was to receive the salary at the end of the month to pay all the expenses of the family. Therefore, people did not think of work as an experience that positively affected the worker in their private lives (Oliveira, 2021).

More recently, happiness at work has become a mandatory theme in corporate strategy. For workers to feel motivated, it is crucial that companies provide quality working conditions so that productivity and results are high (Giovanis, 2017).

With the pandemic and the resulting confinement, teleworking became an inevitable measure that had an impact on the happiness of workers. According to a study by the London School of Economics and Political Science, teleworking from home increases happiness among workers and, consequently, can increase the productivity in some cases. The reasons for this are since there are fewer distractions, greater flexibility in working hours and savings in commuting from home to work and vice versa, thus giving rise to better use of the individual qualities of the workers (Beauregard, 2013).

We can define job satisfaction as how satisfied a worker is with his daily work at the company, he works in. The feeling of feeling satisfied is related to the recognition of your role and how you can fulfill your responsibilities (Batista et al., 2021).

The level of satisfaction varies a lot from professional to professional, as each one is going through different moments of their life and career. Regarding salary, despite being a great factor of job satisfaction, it is not the only factor that makes a person feel satisfied with their work (Consenza, 2020).

The factors that influence job satisfaction are the physical structure and apparatus, organizational culture, corporate benefits, career plan, feedbacks, training and qualifications, leadership style and preparation and quality of life (Consenza, 2020).

Now, job satisfaction is one of the most studied variables in telework research. The theory of social exchanges is a perspective that makes it possible to analyze the relationship between job satisfaction and work. This theory states that workers feel motivated to reciprocate when they are given benefits. In this way, when workers benefit from telework practices implemented by the company, workers feel the urge to reciprocate (Lunde et al., 2022).

It is important to note that teleworking at the beginning of the 21st century is different from teleworking today due to the great evolution of technologies around the world. Today, we have the possibility to have face-to-face meetings with our colleagues at home, the internet is much faster than

in the past and the new platforms are much better than the previous ones, due to all this, the satisfaction of teleworking these days has grown immensely compared to the beginning of the 21st century (Hennekam et al., 2020).

Teleworking, as already mentioned, has several advantages and disadvantages and for greater satisfaction it is necessary that the advantages outweigh the disadvantages. In certain types of employment, teleworking ends up not paying off. In these cases, the disadvantages are greater than the advantages and satisfaction in telework is lower than at the place of employment (Savin et al., 2022).

3. Methodology

In order to carry out a scientific study of quality and reliability, it is important to analyze the methods that fit the best. For this dissertation it is important that the study obtain primary and secondary data. Therefore, the methodology that will be used in this work is the bibliographical research with the objective of understanding the concepts and theories related to the theme (secondary data) and an empirical study, with the themes related to satisfaction both in the company's office as well as teleworking (primary data).

For this dissertation a survey will be carried out and analyzed to compare the satisfaction of workers in face-to-face work and satisfaction in teleworking in a mixed system. With this survey, it is possible to analyze the expected results in detail and, based on the available studies, we can also understand the trend of these results.

For this survey, the target population will be workers who currently perform functions both in person in companies and in the mixed regime. The sample size is 178 workers, thus having a sufficient sample to reach relevant results in this comparative study.

This method of using a survey as a study assumes that all data are quantifiable and thus can convert the data into numbers, opinions and information.

To prepare this survey, the target population will answer a series of questions online through the Survey Monkey website. In this way, the analysis based on the answers will be facilitated by being able to analyze various graphics made by the website. This survey is carried out in Portuguese because the target population is all Portuguese. The results and questions will then all be translated into English.

The survey is divided into three parts. The first part has 6 questions asking about gender, age, children, marital status, education level and how work is carried out. This last question is very important, as it is from this that the rest of the survey is defined. The question "How do you do your job?" there are three multiple choices, only telework, mixed system (telework and face-to-face work) and only face-to-face work. If the respondent answers only teleworking, the survey ends, as the dissertation is just a comparative study between the mixed system regime and face-to-face work. If the respondent answers a mixed system, he/she has another series of 18 questions to answer and if the respondent answers only face-to-face work, he/she has 10 questions to answer, which are practically different from the previous option. In this way, it will be possible to study the survey with better precision as we can differentiate the answers of those who work in a mixed system and those who only work in person.

4. Analysis of the results

Responses to the survey were made by sharing the questionnaire link given by Survey Monkey. By sharing this link, it became possible to obtain a considerable number of responses to the survey. The time taken to obtain all 178 survey responses was 8 days.

In order to draw conclusions about the satisfaction between the mixed system and face-to-face work, it is necessary to analyze in detail the survey carried out for this study. This chapter will be devoted to the entire analysis of the 34 survey questions. In order to analyze and create this survey, the Survey Monkey was used, which has 178 initiated responses, of which only 162 were answered in full, that is, there was a completion rate of 91%. The average response time for the survey is approximately 2 minutes. Responses to the survey were obtained between 18 and 25 March of 2022, when pandemic restrictions were much lower than in the most severe months of the pandemic.

4.1. Sociodemographic characterization of the sample

Questions 1, 2, 3, 4 and 5

In the sociodemographic characterization of the sample, we will analyze the first 5 questions, that is: (What is your gender?), (What is your age?), (How many children do you have?), (What is your marital status?) and (What is your level of education?).

A total of 178 people responded to these first questions. The sample is composed of 40.45% of men and 59.55% of women, that is, 72 men and 106 women.

Respondents are divided into different ages, and the age group with the most responses to the survey is the age group from 26 to 35 years, which is equivalent to 25.28% of respondents, that is, 45 people.

The next age groups with the most people are 46 years old to 55 years old (21.35%), 18 years old to 25 years old (19.66%), then 56 years old to 65 years old (18.54%), then the age group from 36 to 45 years old (14.61%) and finally the age group over 65 years old, with only 1 person responding, which is equivalent to 0.56%.

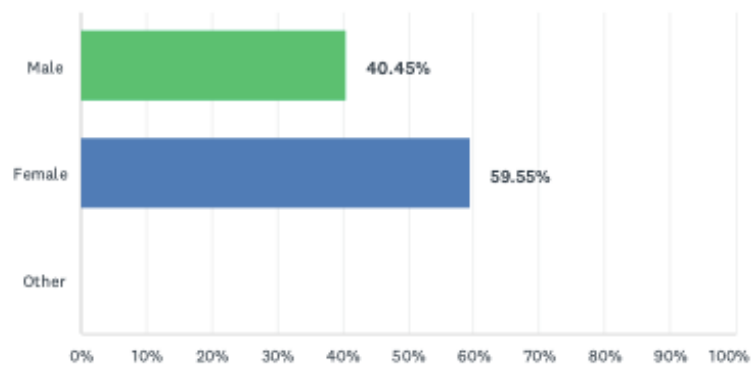
Regarding the number of children, the majority had no children, more precisely 53.37%. The main reason for this figure is due to the large number of people under 35 years of age responding to the survey. Still on the question of how many children the respondents have, 19.66% answered that they had 1 child, 23.60% answered that they had 2 children, 1.69% answered that they had 3 children and finally 1.69% answered that they had more than 3 children.

Regarding the marital status of the respondents, the majority is single, with the same reason as the majority not having children, more precisely, 55.62% are single, that is, 99 people. Then, 31.46% are married (56 people), 22 people are divorced, therefore 12.36% and finally 1 person is widowed, which is equivalent to 0.56%.

The last question related to sociodemographic characterization is about the level of education. As would be expected, the vast majority have higher education, exactly 134 people, which is equivalent to 75.28%. Then we have secondary education with 40 people, that is, 22.47% of respondents. Still, but with a very small percentage, we have preparatory education with 1 person (0.56%) and 4th grade with 3 people (1.69%).

P1 What is your gender?

Responderam: 178 Ignoraram: 0

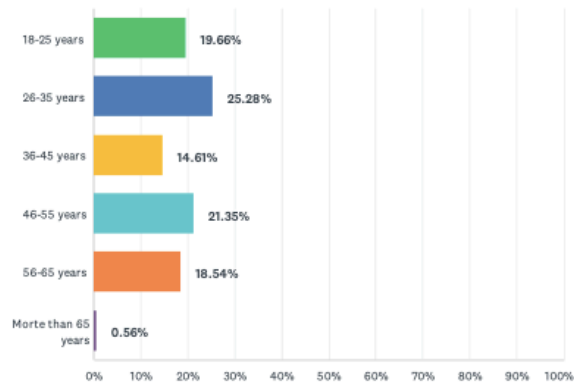


OPÇÕES DE RESPOSTA	RESPOSTAS	
Male (1)	40.45%	72
Female (2)	59.55%	106
Other (3)	0.00%	0
TOTAL		178

Figure 4.1: Graph of the first question of the survey. "What is your gender?"

P2 What is your age?

Responderam: 178 Ignoraram: 0

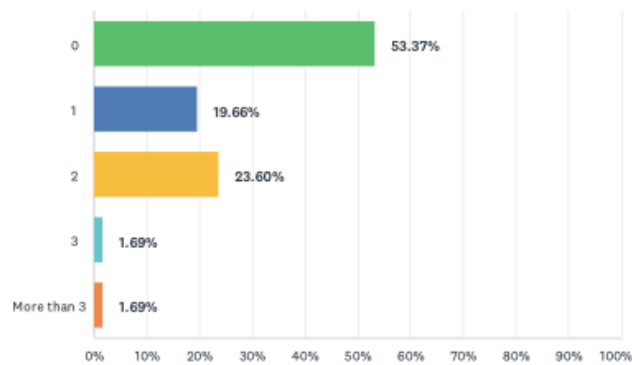


OPÇÕES DE RESPOSTA	RESPOSTAS	
18-25 years (1)	19.66%	35
26-35 years (2)	25.28%	45
36-45 years (3)	14.61%	26
46-55 years (4)	21.35%	38
56-65 years (5)	18.54%	33
More than 65 years (6)	0.56%	1
TOTAL		178

Figure 4.2: Graph of the second question of the survey. “What is your age?”

P3 How many children do you have?

Responderam: 178 Ignoraram: 0

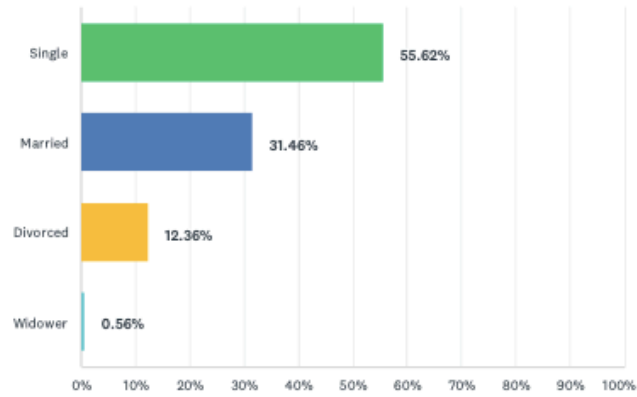


OPÇÕES DE RESPOSTA	RESPOSTAS	
0 (1)	53.37%	95
1 (2)	19.66%	35
2 (3)	23.60%	42
3 (4)	1.69%	3
More than 3 (5)	1.69%	3
TOTAL		178

Figure 4.3: Graph of the third question of the survey. “How many children do you have?”

P4 What is your marital status?

Responderam: 178 Ignoraram: 0

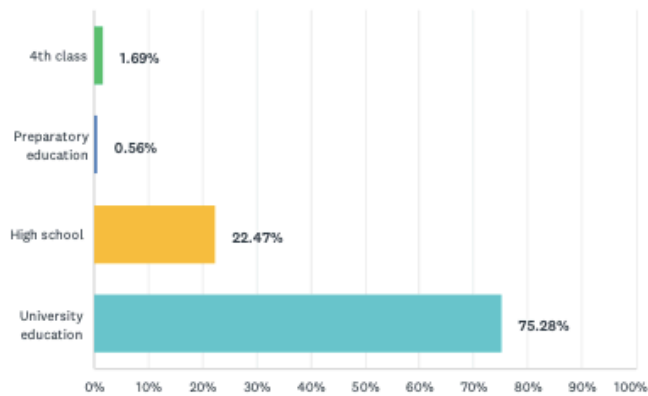


OPÇÕES DE RESPOSTA	RESPOSTAS	
Single (1)	55.62%	99
Married (2)	31.46%	56
Divorced (3)	12.36%	22
Widower (4)	0.56%	1
TOTAL		178

Figure 4.4: Graph of the fourth question of the survey. “What is your marital status?”

P5 What is your level of education?

Responderam: 178 Ignoraram: 0



OPÇÕES DE RESPOSTA	RESPOSTAS	
4th class (1)	1.69%	3
Preparatory education (2)	0.56%	1
High school (3)	22.47%	40
University education (4)	75.28%	134
TOTAL		178

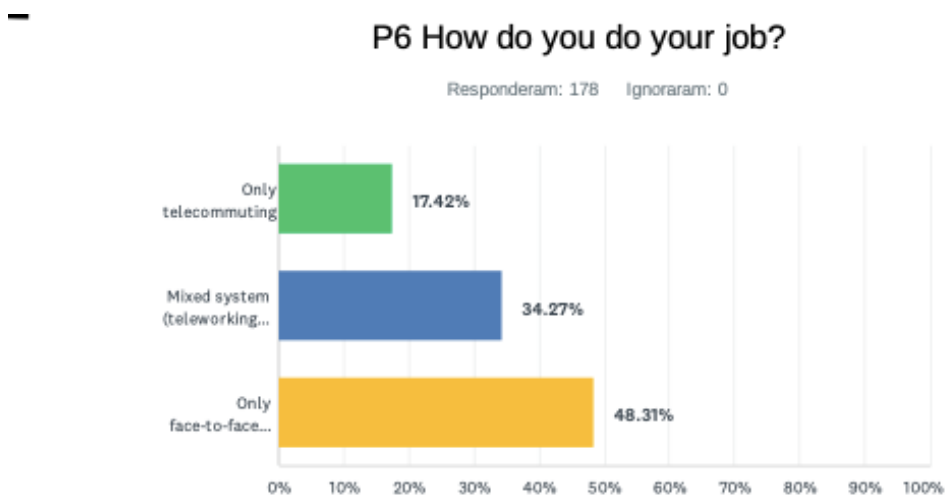
Figure 4.5: Graph of the fifth question of the survey. “What is your level of education?”

4.2. Analysis to the question that defines the rest of the data

Question 6

In addition to the first 5 sociodemographic questions, there was still 1 question that was answered by everyone that outlined the rest of the survey. The question is: How do you practice your profession? For this question there were 3 possible answers, the first is only teleworking and if the respondent chose that option the survey would immediately end, as this dissertation is a comparative study on satisfaction in the mixed system and work only in person. The other two options are mixed system work and face-to-face work. If the person answered a mixed system, he had a series of questions to answer (another 18 questions) and if the person answered only face-to-face work, he had other questions to answer (another 10 questions). In this way the analysis of the study of the rest of the survey questions became clearer and more perceptible.

Of the 178 people who responded to the survey, 31 people said that they only used teleworking to exercise their profession, that is, 17.42%. Regarding the answers that were of interest to the dissertation, 61 people (34.27%) answered that they used the mixed system and 86 people (48.31%) only work in person. With these values we can say that most workers in Portugal have telework as a way of exercising their job. This percentage is quite relevant, as it shows that after the confinement, companies continue to invest in using telework as a way of working.



OPÇÕES DE RESPOSTA	RESPOSTAS
Only telecommuting (1)	17.42% 31
Mixed system (teleworking and face-to-face work) (2)	34.27% 61
Only face-to-face work (3)	48.31% 86
TOTAL	178

Figure 4.6: Graph of the sixth question of the survey. “How do you do your job?”

4.3. Analysis of mixed system questions

The first studied part of the comparative study was the mixed system. As shown in the previous question, there were 61 people who answered that they worked in a mixed system, however only 55 completed the following questions about this system.

Question 7

The first question on the part of the mixed system asks how long the respondent has been teleworking. The vast majority responded that they have been teleworking between 1 and 2 years, more precisely 61.82%, which is equivalent to 34 people. There was 14,55% (8 people) that only started teleworking between 1 to 12 months. We still have the answers that show the number of inquired people that started teleworking for between 2 and 3 years or more than 3 years, there were 13 people that means a percentage of 23,64%. This number is almost the percentage of people that were doing teleworking before the pandemic situation started.

We can draw a great conclusion from these values in this question, because practically all workers in a mixed system only started using telework when the pandemic started or later, we can confirm that even after the confinement has ended there is still a large percentage that continued to work remotely.

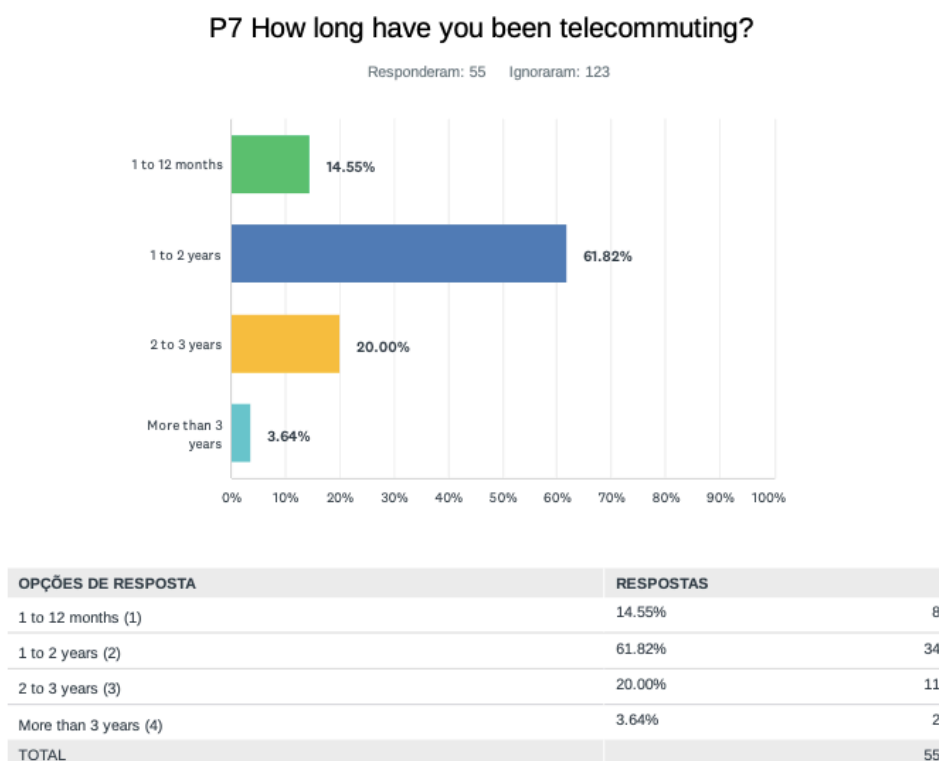
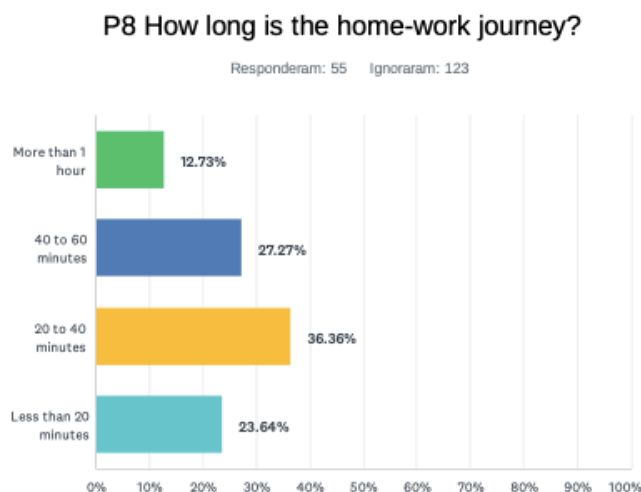


Figure 4.7: Graph of the seventh question of the survey. “How long have you been telecommuting?”

Question 8

The following question is about the duration of the respondents' home-work journey. The most answered option was between 20 and 40 minutes with 36.36%, which is equivalent to 20 people. Then we have the option 40 to 60 minutes with 15 people, so 27.27% of respondents. Then we have the people who answered less than 20 minutes with 23.64%, which gives 13 people and finally the people who answered more than 1 hour that were only 7, that is, 12.73%.

Just by analyzing this question, there are not many conclusions that can be drawn, but with the comparison with the analysis of other questions, there may be interesting conclusions about this specific issue. This question is also present in the part of the questions for people who answered that they only work in person, in this case it will be possible to compare the answers of people who work in a mixed system and those who work only in person.



OPÇÕES DE RESPOSTA	RESPOSTAS
More than 1 hour (1)	12.73% 7
40 to 60 minutes (2)	27.27% 15
20 to 40 minutes (3)	36.36% 20
Less than 20 minutes (4)	23.64% 13
TOTAL	55

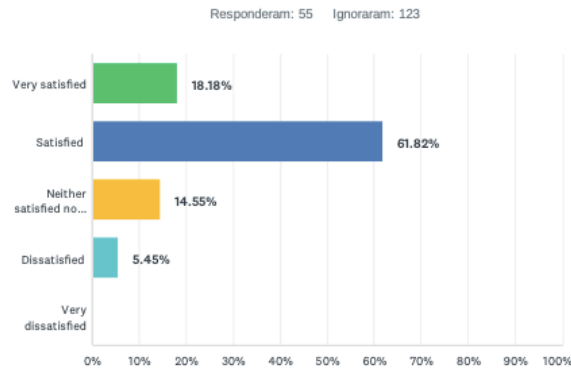
Figure 4.8: Graph of the eighth question of the survey. “How long is the home-work journey?”

Question 9

Question 9 asks how the respondent feels about their personal life after work. The vast majority responded that they felt at least satisfied with 44 people (81%). There were 8 people who felt neither satisfied nor dissatisfied (15.55%) and finally 3 people responded that they felt dissatisfied with their life after work (5.45%).

As in question 8, there will be more conclusions when other questions are analyzed or compared with the same question asked for respondents who only work face-to-face, but even so we can see that almost all respondents felt at least satisfied with their personal life. Analyzing the answers to this question and the previous question, it was able to verify that 2 of the 3 people who responded that they felt dissatisfied with their personal life took more than 1 hour to commute from home to work.

P9 How do you feel about your personal life after work?



OPÇÕES DE RESPOSTA	RESPOSTAS
Very satisfied (1)	18.18% 10
Satisfied (2)	61.82% 34
Neither satisfied nor dissatisfied (3)	14.55% 8
Dissatisfied (4)	5.45% 3
Very dissatisfied (5)	0.00% 0
TOTAL	55

ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	4.00	2.00	2.07	0.73

Figure 4.9: Graph of the ninth question of the survey. “How do you feel about your personal life after work?”

Question 10

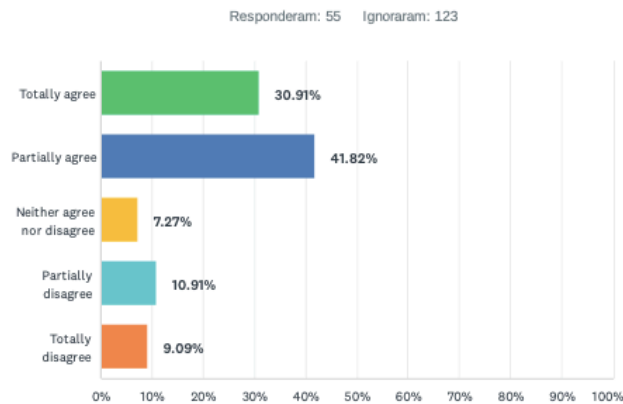
The next question number 10 asks if the respondent agrees that they work more hours in telework than in person work. Most respondents answered that they at least agree that they work more teleworking. With 30.91% (17 people) totally agreeing that they work more in telework, 41.82% (23 people) partially agree, which gives a total of 72.73% of respondents who think they have at least more work when they work at home.

Then, 7.27% (4 people) say that they do not feel any difference in working hours, and finally 20% (11 people) at least partially disagree that they work more in telework than in present work.

With these values, we can see that, on average, workers are working more hours at home than in face-to-face work. Based on other studies, it is confirmed that the vast majority work more in teleworking, reaching an average of two hours more work than face-to-face work. This is due to the risk that workers are unable to disconnect from work and consequently work more hours (Barros, 2021). Although the big percentage that thinks they work more in telework we can see in the previous

question that almost everyone is satisfied with their personal life after work, so the advantages of working at home surpass the disadvantages for almost all the inquired.

P10 Do you agree that you work more hours in telework than in person work?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Totally agree (1)	30.91%	17
Partially agree (2)	41.82%	23
Neither agree nor disagree (3)	7.27%	4
Partially disagree (4)	10.91%	6
Totally disagree (5)	9.09%	5
TOTAL		55

Figure 4.10: Graph of the tenth question of the survey. “Do you agree that you work more hours in telework than in person work?”

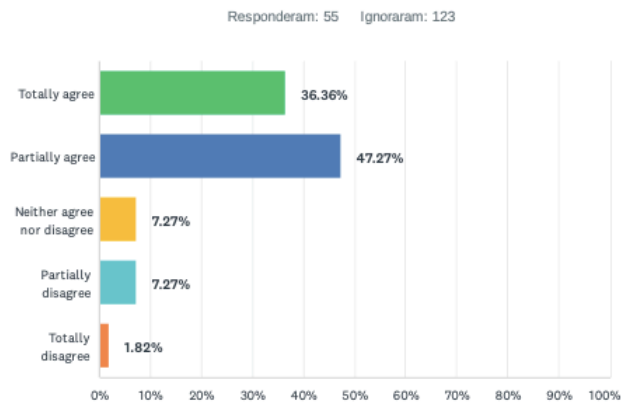
Question 11

The next question asks whether teleworking has increased the quality of life. With the answers given to this question, we can already get the idea that, in fact, in most cases, teleworking has brought several benefits to the personal life of workers. There were 36.36% (20 people) of the respondents who fully agree that teleworking has increased their quality of life and there were also 47.27% (26 people) who partially agree, that is, 78.63% of the respondents think that at least there was an increase in their quality of life with teleworking.

Of the remaining 9 people, 4 neither agree nor disagree with an increase in the quality of life in telework, 4 partially disagree and only one person totally disagrees.

Comparing the answers to the question 10 with question 11, it was possible to verify that respondents who say that they work more hours in telework than in person-to-person work are those who say that telework has not increased their quality of life and vice versa.

P11 Do you agree that your quality of life has increased with telecommuting?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Totally agree (1)	36.36%	20
Partially agree (2)	47.27%	26
Neither agree nor disagree (3)	7.27%	4
Partially disagree (4)	7.27%	4
Totally disagree (5)	1.82%	1
TOTAL		55

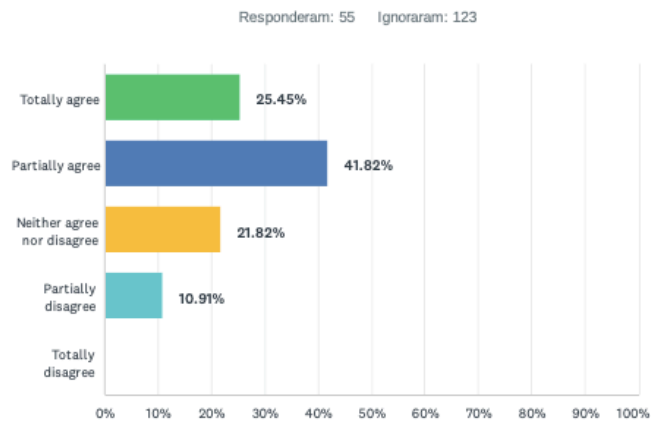
Figure 4.11: Graph of the eleventh quest of the survey. “Do you agree that your quality of life has increased with telecommuting?”

Question 12

The next question is whether the respondent agrees that teleworking makes them more productive. Most respondents responded that they at least feel that their productivity has partially increased. More precisely, 67,32% (37 people) responded that at least they are partially agreeing with the increase in productivity in telework. There were also 12 people (21.82%) who did not notice any difference between working face-to-face and teleworking and 6 people (10.91%) who partially disagreed. There was no one who totally disagreed about teleworking improving productivity.

These values are good indications that the option of having telework should be imposed whenever it is possible by companies because the productivity has higher chances to increase for the workers in the telework.

P12 Do you agree that your telecommuting productivity has increased?



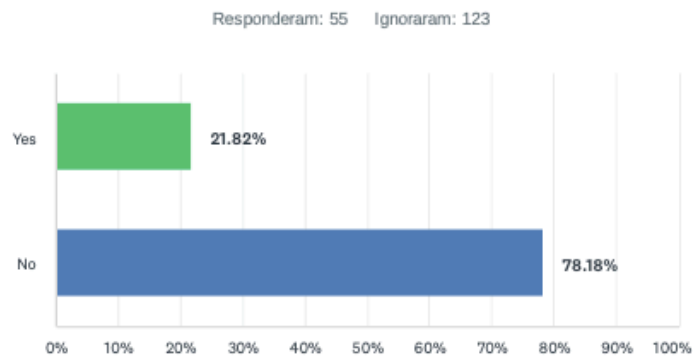
OPÇÕES DE RESPOSTA	RESPOSTAS
Totally agree (1)	25.45% 14
Partially agree (2)	41.82% 23
Neither agree nor disagree (3)	21.82% 12
Partially disagree (4)	10.91% 6
Totally disagree (5)	0.00% 0
TOTAL	55

Figure 4.12: Graph of the twelfth question of the survey. “Do you agree that your telecommuting productivity has increased?”

Question 13

Question number 13 asks whether, before the confinement caused by the pandemic, respondents had already carried out telework. The vast majority said they had never been in telework, more precisely 78.18% (43 people). The remaining respondents answered that they had already been teleworking, 21.82% (12 people). The results obtained from this question demonstrate the effects of the pandemic on the way companies work. Something that was previously seen as impossible or unlikely, became something essential and increasingly used by companies whenever possible in a short space of time.

P13 Before the confinement, had you already carried out telework?



OPÇÕES DE RESPOSTA		RESPOSTAS	
Yes (1)		21.82%	12
No (2)		78.18%	43
TOTAL			55
ESTATÍSTICAS BÁSICAS			
Mínimo	Máximo	Mediana	Média
1.00	2.00	2.00	1.78
			Desvio padrão
			0.41

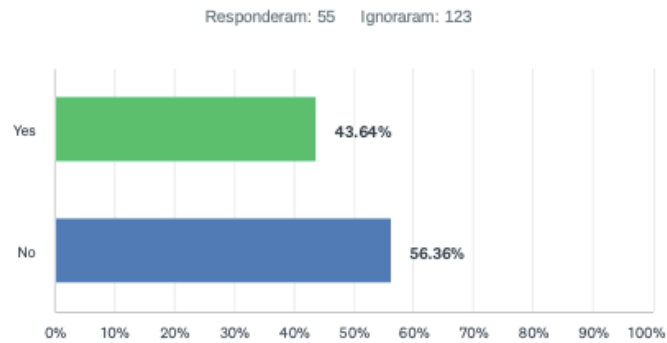
Figure 4.13: Graph of the thirteenth question of the survey. “Before the confinement, had you already carried out telework?”

Question 14

The next question also has only two possible answers. The question asks if the respondents had the option to choose between face-to-face work and telework. Precisely 56.36% (31 people) said they had no choice, and the remaining 43.64% (24 people) had a choice between teleworking and face-to-face work.

We can obtain the information with this question that most workers in a mixed system do not have the option to choose between telework and face-to-face work, and that despite the vast majority never having been in telework before the confinement, they are now forced to work from home. The main causes for this situation may be the fact that the pandemic in 2022 was not yet fully controlled and in this way telework reduces the risk of contagion within the company, or also, during the time in confinement that was mandatory there were evaluations that concluded that the teleworking was something that benefited workers and companies.

P14 Did you have the option to choose between face-to-face work and telework?



OPÇÕES DE RESPOSTA		RESPOSTAS		
Yes (1)		43.64%	24	
No (2)		56.36%	31	
TOTAL			55	
ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	2.00	2.00	1.56	0.50

Figure 4.14: Graph of the fourteenth question of the survey. “Did you have the option to choose between face-t-face work and telework?”

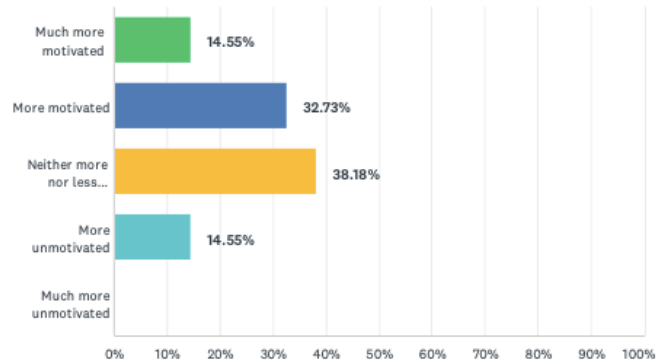
Question 15

Question 15 asks whether telework makes you more motivated compared to face-to-face work. More precisely, 38.18% (21 people) responded that teleworking does not make them feel more motivated or unmotivated, so there is no change in most respondents in motivation between teleworking and face-to-face work. There were still 8 people (14.55%) who responded that they feel less motivated. On the other hand, there are also 26 people (47,28%) that feel at least more motivated. None of the respondents answered that they feel much more unmotivated.

Analyzing the answers for this question we can see that for most of the respondents they don't feel more motivated by working at home. Although the telework makes the workers more satisfied with their personal life, we can see that is not connected with the work motivation in their job.

P15 How does the telework leaves you compared to face-to-face work?

Responderam: 55 Ignoraram: 123



OPÇÕES DE RESPOSTA	RESPOSTAS	
Much more motivated (1)	14.55%	8
More motivated (2)	32.73%	18
Neither more nor less motivated (3)	38.18%	21
More unmotivated (4)	14.55%	8
Much more unmotivated (5)	0.00%	0
TOTAL		55

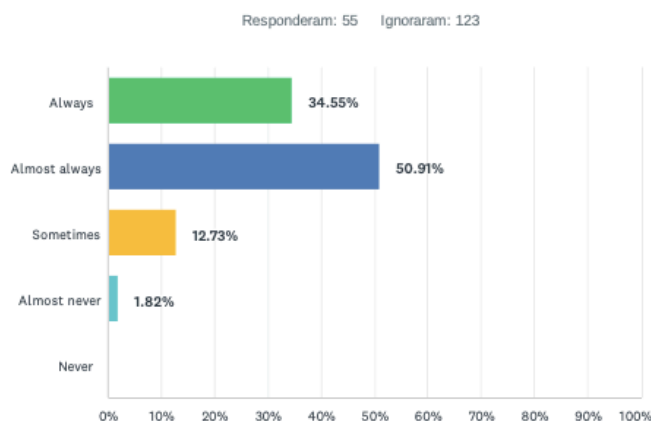
Figure 4.15: Graph of the fifteenth question of the survey. “How does the telework leaves you compared to face-to-face work?”

Question 16

The next question is whether the respondent's employment can be exercised outside the place of employment. As you would expect, for someone who works in a mixed system, there is a large percentage who say that at least almost always their work can be carried out in teleworking. More precisely, 34.55% (19 people) said that they could always be teleworking which would not influence their work, also with a very high percentage, 50.91% (28 people) responded that they can almost always be teleworking. Only 7 people (12.73%) said they can only telework sometimes, and 1 person (1.82%) responded that they can almost never telework. Of course, no one replied that they can never be teleworking.

Comparing this question with the previous question, we can see that whenever a respondent answered that they only sometimes or almost never can exercise their profession in telework, their motivation during telework is equal to or less than in face-to-face work.

P16 Can your professional activity be carried out outside the workplace?



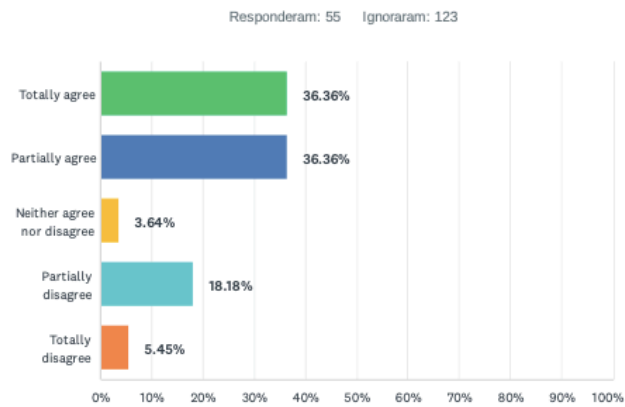
OPÇÕES DE RESPOSTA	RESPOSTAS	
Always (1)	34.55%	19
Almost always (2)	50.91%	28
Sometimes (3)	12.73%	7
Almost never (4)	1.82%	1
Never (5)	0.00%	0
TOTAL		55

Figure 4.16: Graph of the sixteenth question of the survey. “Can your professional activity be carried out outside the workplace?”

Question 17

Question 17 is about whether the company has provided all means for teleworking. The vast majority responded that they at least agree that all means for teleworking have been provided. There were 20 people who totally agree and another 20 people who partially agree (36.36%). Although there was a large percentage of respondents who had good conditions to telework, there were also several people who responded that they did not have all the conditions to be teleworking. More precisely, 3.64% (2 people) said they neither agreed nor disagreed, 3 people (5.45%) responded that they totally disagreed that the conditions had been provided and with a considerable percentage 18.18% (10 people) responded who partially disagree. We can see that there is still a large percentage of workers who do not have the perfect conditions to be teleworking, one of the possible reasons for that it is because of the little time that some companies had to provide all the means for teleworking. As more than three-quarters of respondents had never telecommuted before the pandemic, the process of keeping work at home and in the office the same can be more time-consuming for some companies.

P17 Do you agree that all means have been provided to carry out your teleworking functions?



OPÇÕES DE RESPOSTA	RESPOSTAS
Totally agree (1)	36.36% 20
Partially agree (2)	36.36% 20
Neither agree nor disagree (3)	3.64% 2
Partially disagree (4)	18.18% 10
Totally disagree (5)	5.45% 3
TOTAL	55

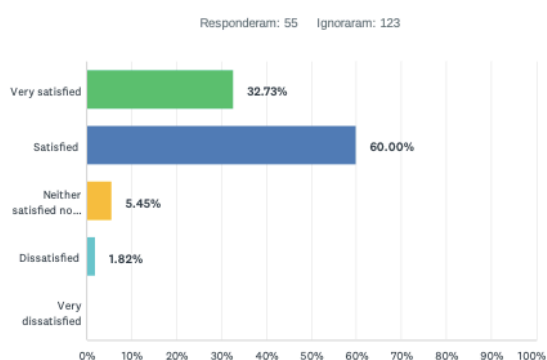
Figure 4.17: Graph of the seventeenth question of the survey. “Do you agree that all means have been provided to carry out your teleworking functions?”

Question 18

The following question asks how respondents feel about teleworking with their bosses. Virtually all respondents answered that they were at least satisfied with communicating with bosses while teleworking. More precisely, 18 people (32.73%) responded that they were very satisfied and 33 people (60%) responded that they were satisfied. Only 3 people (5.45%) said they were neither satisfied nor dissatisfied and 1 person (1.82%) responded that they were dissatisfied.

These values show that now there is an enormous capacity to communicate through the internet and that this communication is very efficient within companies. Services such as Zoom have grown immensely with the pandemic, thus making it possible for colleagues and bosses to communicate as if they were in a meeting at the workplace.

P18 How do you evaluate communication with the boss in telework situations?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Very satisfied (1)	32.73%	18
Satisfied (2)	60.00%	33
Neither satisfied nor dissatisfied (3)	5.45%	3
Dissatisfied (4)	1.82%	1
Very dissatisfied (5)	0.00%	0
TOTAL		55

ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	4.00	2.00	1.76	0.63

Figure 4.18: Graph of the eighteenth question of the survey. “How do you evaluate communication with the boss in telework situations?”

Questions 19 and 20

The next two questions ask about satisfaction in teleworking and face-to-face work. In both questions, very satisfied is equivalent to 1, satisfied is equivalent to 2, neither satisfied nor dissatisfied is equivalent to 3, dissatisfied is equivalent to 4 and finally very dissatisfied is equivalent to 5. With these values we can calculate the average of each question.

Question 19 asks about satisfaction in face-to-face work and has an average of 2.18. More precisely, 10.91% (6 people) responded that they feel very satisfied, the majority responded that they feel satisfied with 67.27% (37 people), there were still 14.55% (8 people) who responded that they neither feel satisfied nor dissatisfied and there were only 4 people (7.27%) who responded that they felt dissatisfied. There was no one to answer that they felt very dissatisfied with the face-to-face work.

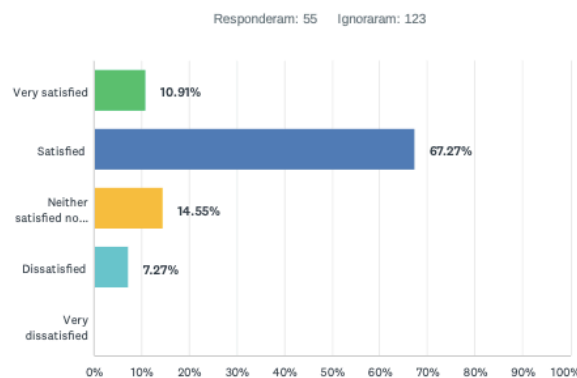
Question 20 questions satisfaction with teleworking and has an average of 1.87. There is a total of 25.45% (14 people) who feel very satisfied, 63.64% (35%) who feel satisfied, 9.09% (5 people) responded that they neither feel satisfied nor dissatisfied and finally there was 1 person (1.82%) who responded that they feel dissatisfied. There were also no respondents who responded that they felt very dissatisfied with teleworking.

Comparing question 19 with question 20, we can see that the average of question 19 (2.18) is higher than the average of question 20 (1.87) which we can conclude that, based on the respondents'

answers, the way of working that brings more satisfaction is teleworking. Of the 55 responses in the mixed system part of the survey, 19 respondents answered that they feel more satisfied in teleworking than in face-to-face work and only 7 respondents answered that they prefer face-to-face work to telework. There were also 29 people who responded that they do not feel any difference in satisfaction between teleworking and face-to-face work.

During the analysis of the questions only regarding face-to-face work, there will be a comparison between the satisfaction of respondents in face-to-face work only with those who work in a mixed system, thus being able to verify which way of working is seen as the one that brings more satisfaction. For now, we can conclude that more people prefer teleworking to face-to-face work. The explanation for the teleworking preference is not completely explicit in the answers to the other questions. For some, the fact that there are not the best conditions to be in telework influences satisfaction in telework, for others the environment where they are in telework also influences and motivation and productivity can also influence the results of satisfaction in face-to-face work and telework.

P19 How do you rate your satisfaction in face-to-face work?

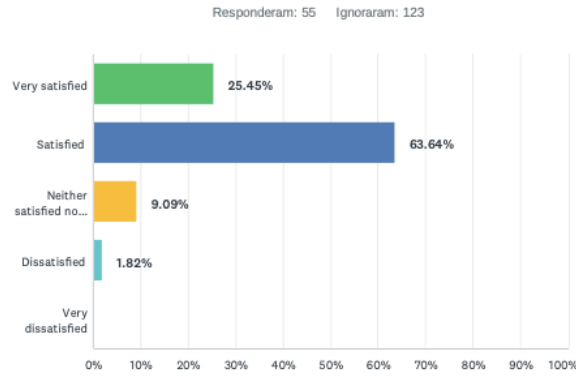


OPÇÕES DE RESPOSTA	RESPOSTAS
Very satisfied (1)	10.91% 6
Satisfied (2)	67.27% 37
Neither satisfied nor dissatisfied (3)	14.55% 8
Dissatisfied (4)	7.27% 4
Very dissatisfied (5)	0.00% 0
TOTAL	55

ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	4.00	2.00	2.18	0.72

Figure 4.19: Graph of the nineteenth question of the survey. “How do you rate your satisfaction in face-to-face work?”

P20 How do you rate your satisfaction with telecommuting?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Very satisfied (1)	25.45%	14
Satisfied (2)	63.64%	35
Neither satisfied nor dissatisfied (3)	9.09%	5
Dissatisfied (4)	1.82%	1
Very dissatisfied (5)	0.00%	0
TOTAL		55
ESTATÍSTICAS BÁSICAS		
Mínimo 1.00	Máximo 4.00	Mediana 2.00
		Média 1.87
		Desvio padrão 0.63

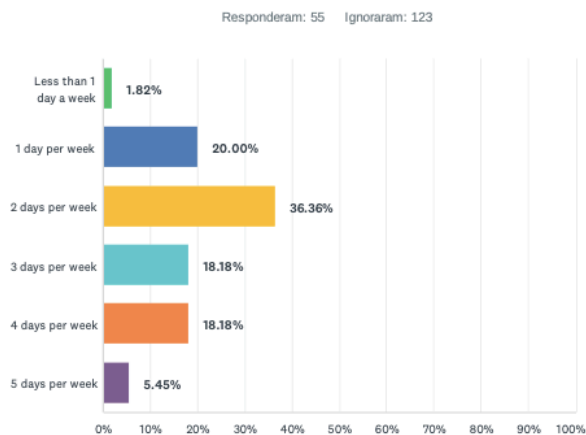
Figure 4.20: Graph of the twentieth question of the survey. “How do you rate your satisfaction with telecommuting?”

Question 21

Question 21 asks the number of days those respondents are teleworking. The number of days that has the highest percentage is 2 days a week with 36.36% (20 people). The next answer with the most people is 1 day a week with 20% (11 people). Then the 3 days and 4 days responses both had 18.18% of the respondents' responses (10 people). Still with few answers, there were those who answered less than 1 day a week 1.82% (1 person) and 5 days a week 5.45% (3 people).

With this question, we can analyze that most respondents are teleworking for more than 1 day. Comparing this question with the next one, it will be possible to draw more conclusions about whether the days those respondents teleworking are sufficient or insufficient, as the next question asks the ideal number of days to be teleworking.

P21 On average, how many days a week are you telecommuting?



OPÇÕES DE RESPOSTA	RESPOSTAS
Less than 1 day a week (1)	1.82% 1
1 day per week (2)	20.00% 11
2 days per week (3)	36.36% 20
3 days per week (4)	18.18% 10
4 days per week (5)	18.18% 10
5 days per week (6)	5.45% 3
TOTAL	55

Figure 4.21: Graph of the twenty-first question of the survey. “On average, how many days a week are you telecommuting?”

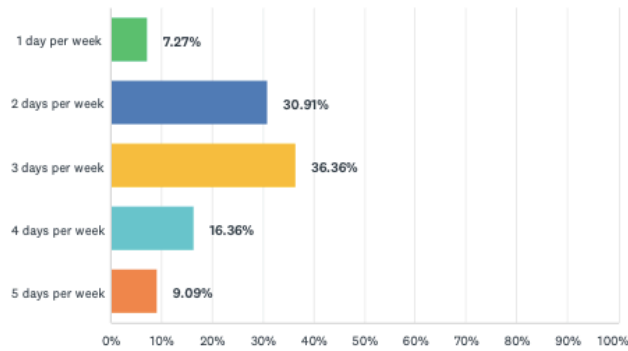
Question 22

As already mentioned in the previous question, the next question asks the ideal number of days to be teleworking. According to the answers to the survey, a large part of the respondents answered that they prefer to be teleworking 3 days a week with 36.36% (20 people), also with a large percentage 2 days a week has 30.91% (17 people), or that is, more than half of the respondents prefer to spend on average, half of the days teleworking and the other half working face-to-face. Then 4 days a week has 16.36% (9 people). There were only 4 people (7.27%) who preferred to telework 1 day a week. Finally, there were 5 people (9.09%) who preferred to be teleworking 5 working days a week.

Analyzing the 55 answers to this question and the previous one, 24 responded that they would rather spend more days teleworking than they are. We can conclude that there are a considerable percentage of people that like to be teleworking and would even prefer to increase the days they are teleworking. There were also 20 people who responded that they feel good about the number of days they are teleworking, so they prefer not to have any change in teleworking time. Only 11 people preferred to lower the number of days they telework.

P22 What would be, in your opinion, the ideal number of days a week to telework?

Responderam: 55 Ignoraram: 123



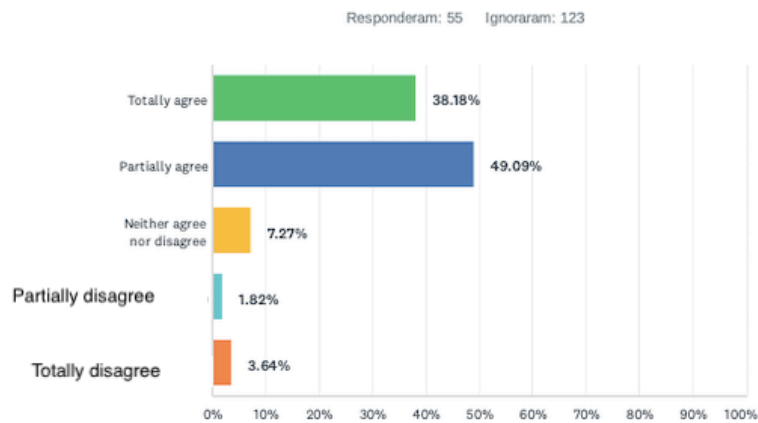
OPÇÕES DE RESPOSTA	RESPOSTAS
1 day per week (1)	7.27% 4
2 days per week (2)	30.91% 17
3 days per week (3)	36.36% 20
4 days per week (4)	16.36% 9
5 days per week (5)	9.09% 5
TOTAL	55

Figure 4.22: Graph of the twenty-second question of the survey. “What would be, in your opinion, the ideal number of days a week to telework?”

Question 23

Question 23 is about whether respondents have a good environment for teleworking. The vast majority responded that they at least partially agree that they have a good environment for their work. More precisely, 49.09% (27 people) responded that they partially agree and 38.18% (21 people) totally agree. With fewer responses, 7.27% (4 people) responded that they neither agree nor disagree. Only 1 person (1.82%) responded that they partially disagree and 2 people (3.64%) totally disagree. This means that the environment (usually your home) has the ideal conditions for the practice of your work.

P23 Do you agree that you have an environment suitable for teleworking?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Totally agree (1)	38.18%	21
Partially agree (2)	49.09%	27
Neither agree nor disagree (3)	7.27%	4
Partially disagree (4)	1.82%	1
Totally disagree (5)	3.64%	2
TOTAL		55

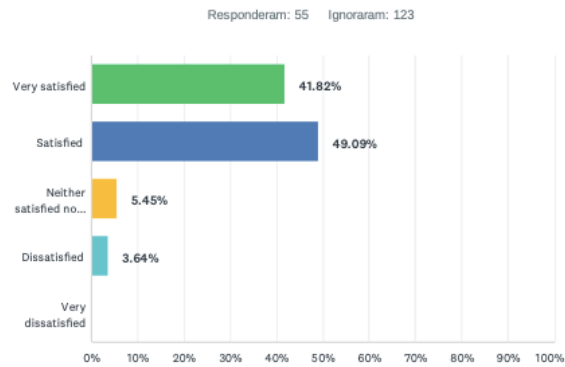
Figure 4.23: Graph of the twenty-third question of the survey. “Do you agree that you have an environment suitable for teleworking?”

Question 24

The last question about respondents who work in a mixed system asks how the respondent’s relationship with his co-workers is. The vast majority responded that at least they feel satisfied with the relationship with their colleagues. More precisely, 90,91% (50 people) are at least satisfied. Therefore, we can conclude that satisfaction is not being greatly affected by the days those respondents are teleworking.

The remaining percentage is distributed by those who answered that they neither feel satisfied nor dissatisfied, which are 5.45% (3 people) and by those who feel dissatisfied with 3.64% (2 people). There was no one to answer that they felt very dissatisfied with the relationship with their colleagues.

P24 How do you rate your relationship with your colleagues?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Very satisfied (1)	41.82%	23
Satisfied (2)	49.09%	27
Neither satisfied nor dissatisfied (3)	5.45%	3
Dissatisfied (4)	3.64%	2
Very dissatisfied (5)	0.00%	0
TOTAL		55
ESTATÍSTICAS BÁSICAS		
Mínimo 1.00	Máximo 4.00	Mediana 2.00
		Média 1.71
		Desvio padrão 0.73

Figure 4.24: Graph of the twenty-fourth question of the survey. “How do you rate relationship with your colleagues?”

4.4 Analysis of questions from face-to-face work only

The last 10 questions were exclusively answered by those who in question number 6 answered that they only worked in person. In total, 86 people responded that they only worked face-to-face, but only 76 of the respondents completed the survey.

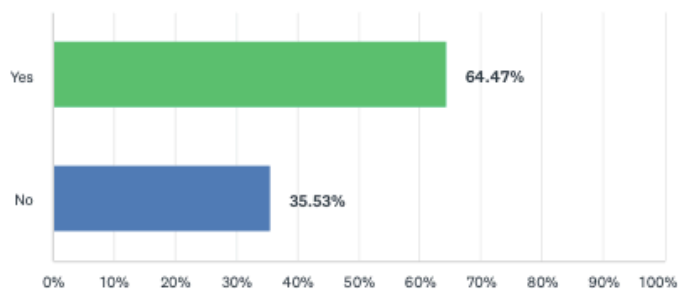
Comparing the responses of mixed work with only face-to-face work, it will be possible to draw several conclusions, thus solving several doubts about which way of working brings more satisfaction.

Question 25

The first question about respondents who only work face-to-face asks whether they have already exercised their profession in telework in the past. There were 64.47% (49 people) who responded that they had been teleworking in the past and the remaining 35.53% (27 people) said they had never been teleworking. That is, the majority have already been teleworking. The pandemic had a major impact on the large percentage of respondents who were once teleworking but are now no longer. All this because of the state of emergency that happened in Portugal that made the Portuguese go into quarantine and the only solution whenever possible was to start using telework as a way of working. In this way, it was possible to minimize the effects of the quarantine as much as possible.

P25 Have you ever exercised your profession in telework?

Responderam: 76 Ignoraram: 102



OPÇÕES DE RESPOSTA	RESPOSTAS	
Yes (1)	64.47%	49
No (2)	35.53%	27
TOTAL		76

ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	2.00	1.00	1.36	0.48

Figure 4.25: Graph of the twenty-fifth question of the survey. “Have you ever exercised your profession in telework?”

Question 26

Question 26 is the same as question 8, but this time the question is only for respondents who only have face-to-face work. The question is about the time the respondent takes on the home-work journey. The most answered answer was between 20 to 40 minutes with 43.42% (33 people). Then it was less than 20 minutes with 30.26% (23 people). There was still, but with fewer people responding, between 40 to 60 minutes and more than 1 hour. Between 40 and 60 minutes there were 17.11% (13 people) and more than 1 hour there were 9.21% (7 people).

Comparing this question for those who work in a mixed system and for those who are only in face-to-face work, it is possible to notice some logical differences. There is a very large difference in respondents who answered between 40 and 60 minutes. The mixed system has 27.27% and the face-to-face system has 17.11%, which is 10.16pp less. It stands to reason that the longer the commute, workers prefer to be teleworking days to save time and money. On the other hand, in the question to workers who are only in face-to-face work, there was a 7.06% increase in the percentage of respondents who took between 20 and 40 minutes and a 6.62% increase in those who answered in less than 20 minutes compared to those in a mixed system. With a smaller difference, the percentage of those who answered more than 1 hour fell by 3.52pp in face-to-face work only compared to the

mixed system. Many of the cases that answered more than 1 hour and are only in face-to-face work, their employment always or almost always implies their presence at the place of employment.

We can conclude that the distance between home and work influences the use or not of telework.

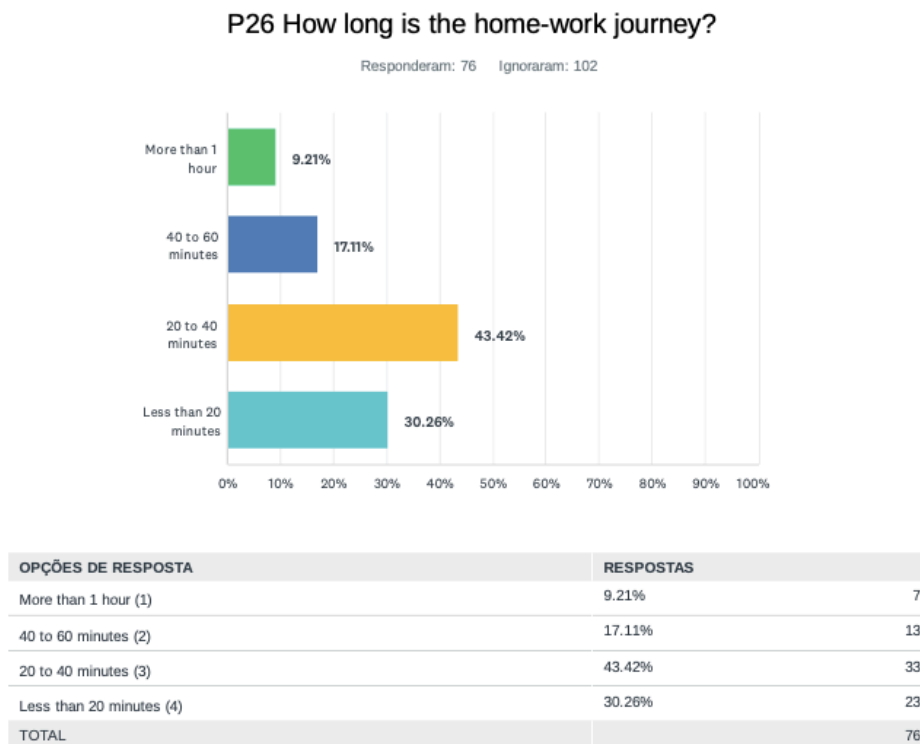


Figure 4.26: Graph of the twenty-sixth question of the survey. “How long is the home-work journey?”

Question 27

Question 27 asks the ideal number of days if workers had the possibility of teleworking. There were 17.11% (13 people) who responded that they do not intend to telework throughout the week. Most of the cases that answered 0 days a week their jobs do not allow teleworking so it would not make sense to have days in telework. There were also respondents who responded that they do not want to be teleworking and that they could be, in these cases all respondents responded that they were satisfied or very satisfied with their job, so the switch to teleworking is not something they want.

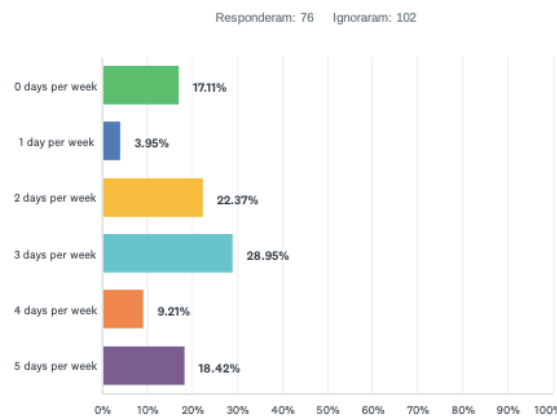
The number of days teleworking most desired by respondents are 2 and 3 days a week. There were 22.37% (17 people) who answered that they preferred to have 2 days of telework and 28.95% (22 people) answered that they prefer to have 3 days of telework a week, so more than half prefer to be half the days of the week in telework and the other half in face-to-face work.

Then with 9.21% (7 people) are respondents who answered 4 days a week in telework and with 3.95% (3 people) answered only 1 day of telework a week. Finally, we have respondents who responded that they preferred to telework all the time, 5 days a week. There were 18.42% (14 people)

who prefer to be teleworking 5 days a week. We can conclude that there are many people who work only face-to-face who would like to be teleworking.

Comparing the same question to those who are in a mixed system there is a big difference in the percentage of people who answered 5 days a week. This means that when a person works only in person, there is a greater probability of wanting to only be teleworking, instead of spending some days teleworking and other days working in person.

P27 If you had telecommuting, in your opinion, how many days a week of telecommuting would be ideal for you?



OPÇÕES DE RESPOSTA	RESPOSTAS	
0 days per week (1)	17.11%	13
1 day per week (2)	3.95%	3
2 days per week (3)	22.37%	17
3 days per week (4)	28.95%	22
4 days per week (5)	9.21%	7
5 days per week (6)	18.42%	14
TOTAL		76

Figure 4.27: Graph of the twenty-seventh question of the survey. “If you had telecommuting, in your opinion, how many days a week of telecommuting would be ideal for you?”

Question 28

Question 28 is about how the respondent feels about their personal life after work. The vast majority responded that at least they feel satisfied with their personal life. More precisely, 47.37% (36 people) responded that they feel satisfied and 18.42% (14 people) responded that they feel very satisfied.

Then we have the people who answered that they neither feel satisfied nor dissatisfied, which are 17.11% (13 people). There were also 15.79% (12 people) who responded that they feel dissatisfied with their personal life and only 1 person (1.32%) responded that they feel very dissatisfied.

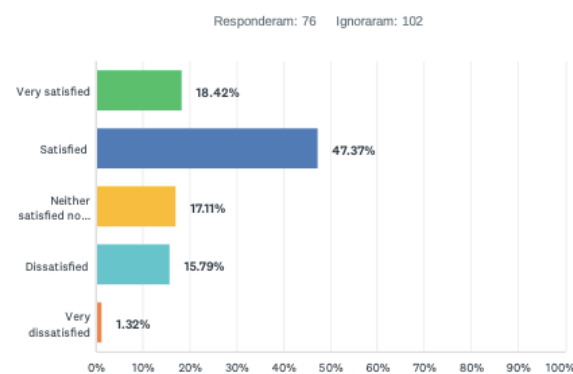
Comparing this question for those who work only face-to-face with the same question asked for those who work in a mixed system, we can see some differences. Analyzing the average, knowing that very satisfied is equivalent to 1, satisfied is equivalent to 2, neither satisfied nor dissatisfied is equivalent to 3, dissatisfied is equivalent to 4 and very dissatisfied is equivalent to 5, question 28 has

an average of 2.34. Question 9 about the mixed system has an average of 2.09, that is, there is greater satisfaction in general in personal life after work when workers work in a mixed system.

We can see that the very satisfied response rose very slightly (0.24pp) comparing only face-to-face work with the mixed system, but there was a very large drop in the percentage of those who responded that they only feel satisfied, which was (14.45pp). Then there was an increase in the percentage of those who answered that they neither feel satisfied nor dissatisfied (2.56pp), dissatisfied (10.34pp) and very dissatisfied (1.32pp).

From the data acquired with these questions, we can conclude that when the worker is in a mixed system, he is more likely to feel satisfied with his personal life and when the worker only works face-to-face, there is a greater probability of feeling dissatisfied. This can be explained by the advantages and disadvantages of teleworking exposed in the literature review, such as, for example, a better balance between professional and personal life, the time saved in the commute to work, which reduces stress and improves time management.

P28 How do you feel about your personal life after work?



OPÇÕES DE RESPOSTA		RESPOSTAS	
Very satisfied (1)	18.42%	14	
Satisfied (2)	47.37%	36	
Neither satisfied nor dissatisfied (3)	17.11%	13	
Dissatisfied (4)	15.79%	12	
Very dissatisfied (5)	1.32%	1	
TOTAL		76	
ESTATÍSTICAS BÁSICAS			
Mínimo	Máximo	Mediana	Média
1.00	5.00	2.00	2.34
			Desvio padrão
			0.99

Figure 4.28: Graph of the twenty-eighth question of the survey. “How do you feel about your personal life after work?”

Question 29

Question 29 is about how respondents rate satisfaction in face-to-face work. The vast majority feel at least satisfied with their work. There were 13.16% (10 people) who responded that they feel very satisfied and 55.26% (42 people) who only feel satisfied. There are also 17.11% (13 people) who feel neither satisfied nor dissatisfied. Finally, we have 9.21% (7 people) who feel dissatisfied and 5.26% (4 people) who feel very dissatisfied.

Of all the questions in this survey, this question is one of the most important, because by comparing this question with the same question in the mixed system, we can draw conclusions about which way of working brings more satisfaction. Knowing that the answer very satisfied is equivalent to 1, satisfied is equivalent to 2, neither satisfied nor dissatisfied is equivalent to 3, dissatisfied is equivalent to 4 and very dissatisfied is equivalent to 5, in the question about satisfaction with face-to-face work in respondents who only work face-to-face, the average of responses was 2.38. Already in the same question, but for respondents who are in a mixed system, the average was 2.18. Therefore, we can conclude that there is greater satisfaction in face-to-face work when the worker is in a mixed system. If we include telework in the average of the mixed system, then the average will still be lower, which means that there is greater satisfaction.

Comparing the percentages in the question for the mixed system and for only the face-to-face work we can see a big difference in the percentage of the satisfied answer. More precisely, there was a decrease of 12.01pp from the mixed system to only face-to-face work, which made it the main reason for the average to increase significantly. Then there was a slight increase of 2.25pp of respondents who responded very satisfied, which is positive for those who work only in person. On the other hand, the responses neither satisfied nor dissatisfied, dissatisfied and very dissatisfied all went up. The answer neither satisfied nor dissatisfied rose 2.56pp, the dissatisfied answer rose 1.94pp and finally, unlike the question for those who work in a mixed system, there were people who answered that they felt very dissatisfied with their work, the difference of 5.96pp responded that they feel very dissatisfied. Hence the big difference between the average of the question for the mixed system and the question for the face-to-face work only.

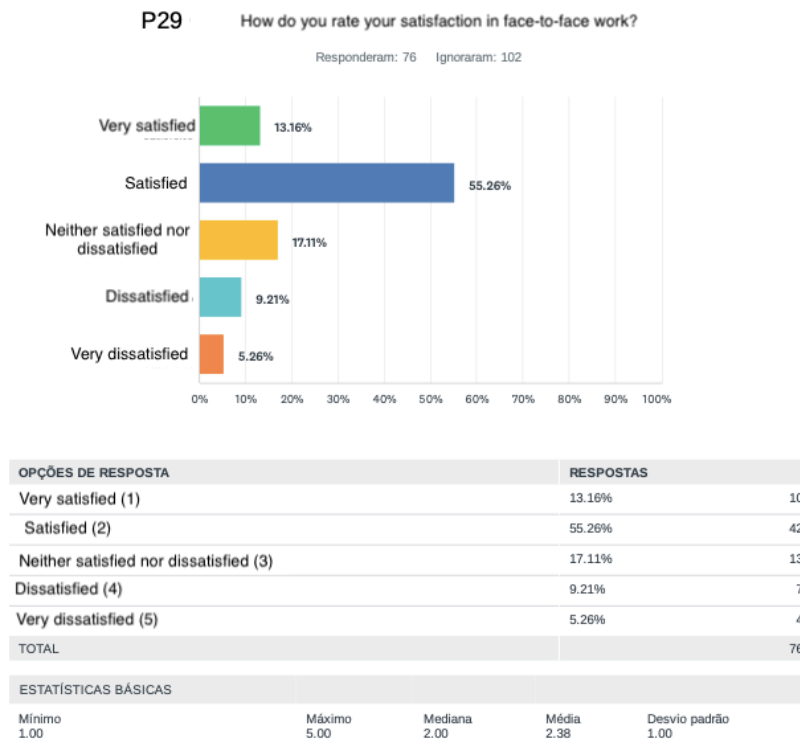


Figure 4.29: Graph of the twenty-ninth question of the survey. “How do you rate your satisfaction in face-to-face work?”

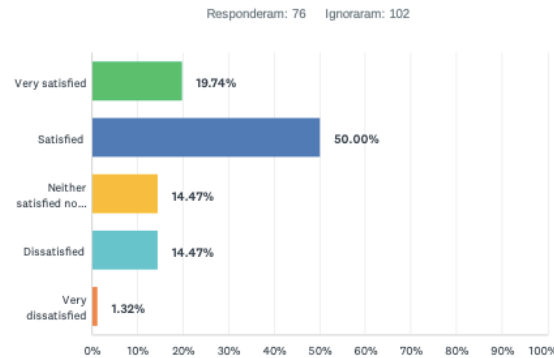
Question 30

Question 30 asks how the respondent evaluates communication with management in the company's office. Exactly 50% (38 people) responded that they feel satisfied. There were still 19.74% (15 people) who responded that they felt very satisfied. Then we have those who answered that they neither feel satisfied nor dissatisfied and dissatisfied and both had 14.47% (11 people). Finally, we have only 1 person (1.32%) who responded that they feel very dissatisfied with the communication with the management.

Giving the same values to the answers to the previous question, we were able to calculate the average of 2.38 which, comparing with the same question of the mixed system part, it is verified that it has risen a lot, since in the mixed system part the average was 1.76. This difference is very noticeable when comparing the percentages in the satisfied and very satisfied answer. From the mixed system to only face-to-face work, there was a 10pp decrease in the satisfied response and there was a 12.99pp decrease in the very satisfied response. On the other hand, there was an increase in the other responses, with the response neither satisfied nor dissatisfied there was an increase of 9.02pp and the dissatisfied response increased by 12.65pp. Unlike the mixed system in face-to-face work, there was someone who responded that they feel very dissatisfied, having then an increase of 1.32pp compared to the mixed system.

We can conclude that working in a mixed system leads to greater satisfaction in general and there is also better communication with management through telework compared to communication in person.

P30 How do you rate the communication with the management in the company's office?



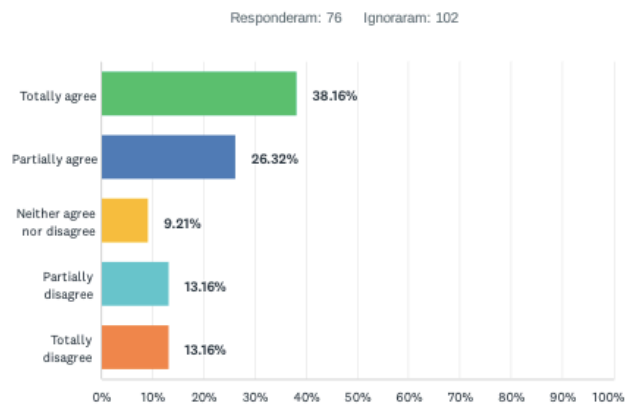
OPÇÕES DE RESPOSTA	RESPOSTAS
Very satisfied (1)	19.74% 15
Satisfied (2)	50.00% 38
Neither satisfied nor dissatisfied (3)	14.47% 11
Dissatisfied (4)	14.47% 11
Very dissatisfied (5)	1.32% 1
TOTAL	76
ESTATÍSTICAS BÁSICAS	
Mínimo 1.00	Máximo 5.00
Mediana 2.00	Média 2.28
	Desvio padrão 0.98

Figure 4.30: Graph of the thirtieth question of the survey. “How do you rate the communication with the management in the company’s office?”

Question 31

Question 31 is about whether respondents agree that teleworking should be implemented as a possibility to work in their company. The most frequent answer was that they totally agreed, exactly 38.16% (29 people) and 26.32% (20 people) answered that they only partially agreed. Therefore, most respondents who only work face-to-face agree that teleworking should be present in the way their companies work. Then we have the respondents who answered that they neither agreed nor disagreed, which were 9.21% (7 people), this was the answer with the fewest people responding. There were still 7 people (13.16%) who responded that they partially disagreed and 7 people who totally disagreed. Most of the people who did not totally or partially agree answered that their work either almost never or never can be carried out in telework, so almost all respondents think that telework is a way to feel more satisfied with their work.

P31 Do you agree that teleworking should be implemented as an option in your company?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Totally agree (1)	38.16%	29
Partially agree (2)	26.32%	20
Neither agree nor disagree (3)	9.21%	7
Partially disagree (4)	13.16%	10
Totally disagree (5)	13.16%	10
TOTAL		76

Figure 4.31: Graph of the thirty-first question of the survey. “Dow you agree that teleworking should be implemented as an option in your company?”

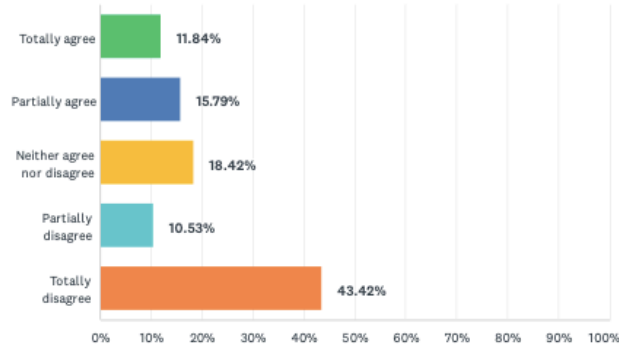
Question 32

Question 32 asks whether respondents who only work face-to-face had the option to choose between face-to-face work and telework. The vast majority responded that they at least partially disagree, more precisely 43.42% (33 people) responded that they totally disagree and 10.53% (8 people) partially disagree. With these percentages of this question and based on the previous question, we can conclude that there are many people who would like to be teleworking, but their companies do not allow them to do so. This is another factor that telework is seen as something that brings more satisfaction than simple face-to-face work.

Then we still have 18.42% (14 people) who responded that they neither agree nor disagree, and in relation to respondents who responded that they at least partially agree, 15.79% (12 people) responded that they partially agree and 11.84% (9 people) responded that they totally agree. People who responded that they agreed that they were given the possibility to be teleworking are those who prefer the traditional model of performing their profession, as they were given the option to be teleworking, but they preferred to stay in the work office. Also, many of the respondents who did not agree answered this way, as their profession does not allow them to telework.

P32 Do you agree that you had the option to choose between face-to-face work and telework?

Responderam: 76 Ignoraram: 102



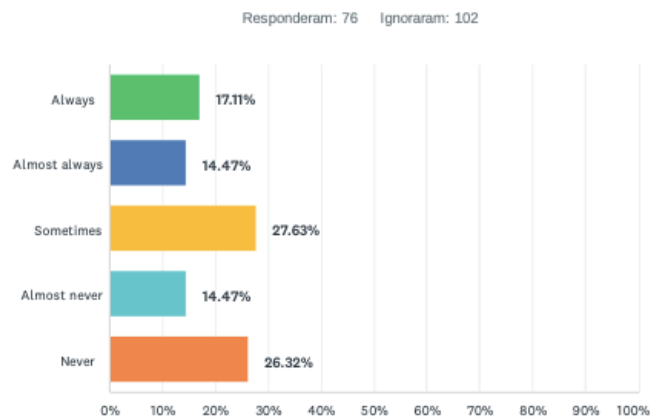
OPÇÕES DE RESPOSTA	RESPOSTAS
Totally agree (1)	11.84% 9
Partially agree (2)	15.79% 12
Neither agree nor disagree (3)	18.42% 14
Partially disagree (4)	10.53% 8
Totally disagree (5)	43.42% 33
TOTAL	76

Figure 4.32: Graph of the thirty-second question of the survey. “Do you agree that you had the option to choose between face-to-face work and telework?”

Question 33

Question 33 is about whether respondents who can exercise their profession outside the workplace. The possible answers to this question are always, almost always, sometimes, almost never and never. Analyzing the responses, we found that the most frequent response is never, with exactly 26.32% (20 people). The response almost never had 14.47% (11 people), so 40.79% of respondents at least can almost never exercise their profession in the company's office. Then there are 27.63% (21 people) who can only be teleworking sometimes, this was the most frequent answer to this question. There were 14.47% (11 people) who responded that they could almost always be teleworking and finally 17.11% (13 people) responded that they could always be teleworking and there would be no limitations in their work. We can see that one of biggest reasons for not existing more people in telework is because their jobs can not be done outside the workplace.

P33 Can your professional activity be carried out outside the workplace?



OPÇÕES DE RESPOSTA	RESPOSTAS	
Always (1)	17.11%	13
Almost always (2)	14.47%	11
Sometimes (3)	27.63%	21
Almost never (4)	14.47%	11
Never (5)	26.32%	20
TOTAL		76

Figure 4.33: Graph of the thirty-third question of the survey. “Can your professional activity be carried out outside the workplace?”

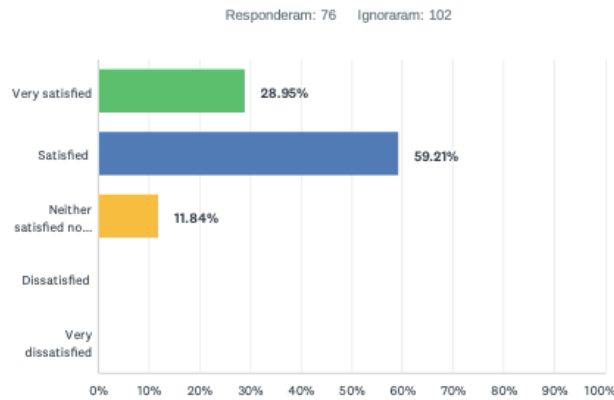
Question 34

The last question is the same as question 24, but for respondents who only work face-to-face. Almost all respondents answered that they at least feel satisfied. More precisely, 59.21% (45 people) responded that they feel satisfied and 28.95% (22 people) feel very satisfied, that is, a total of 88.16% of people feel at least satisfied. The remaining people answered that they neither feel satisfied nor dissatisfied, exactly 11.84% (9 people). In this question, no one answered that they feel dissatisfied or very dissatisfied.

Comparing this question with the same question for respondents who work in a mixed system, we see a small difference. Knowing that very satisfied is equivalent to 1, satisfied to 2, neither satisfied nor dissatisfied to 3, dissatisfied to 4 and very dissatisfied to 5, the average of the answers to question 34 gives 1.83. Comparing with the same question for the mixed system, we see that the average for only face-to-face work is slightly higher, as the average for the mixed system is 1.71, which we can conclude that, despite being a small difference, there is a greater relationship with colleagues when working in a mixed system of face-to-face work. The reason for this difference lies in the number of respondents who responded very satisfied. There was 12.87pp less of the mixed system for face-to-face work only. On the other hand, 10.12pp more responded that they felt only satisfied and 6.39pp more responded that they felt neither satisfied nor dissatisfied. Unlike respondents who only work

face-to-face in the answers to the question for the mixed system, there were those who responded that they felt dissatisfied, more precisely 3.64pp. In neither of the two questions was there anyone who felt very dissatisfied.

P34 How do you rate your relationship with your colleagues?



OPÇÕES DE RESPOSTA		RESPOSTAS	
Very satisfied (1)	28.95%	22	
Satisfied (2)	59.21%	45	
Neither satisfied nor dissatisfied (3)	11.84%	9	
Dissatisfied (4)	0.00%	0	
Very dissatisfied (5)	0.00%	0	
TOTAL		76	

ESTATÍSTICAS BÁSICAS				
Mínimo	Máximo	Mediana	Média	Desvio padrão
1.00	3.00	2.00	1.83	0.62

Figure 4.34: Graph of the thirty-fourth question of the survey. “How do you rate your relationship with your colleagues?”

5. Conclusion

Right now, after almost everyone is vaccinated, the pandemic is more under control. The use of mandatory mask has disappeared on almost all sides, which leads one to think that the pandemic is already over. Despite this, there are thousands of cases of covid-19 in Portugal every day, so there is still a way to go until all worries around the pandemic are over.

Something that became very common after the beginning of the pandemic was the use of teleworking as a way of working. Even after the pandemic is more controlled, many of the companies still have teleworking workers.

For the collection of data for the dissertation of the thesis, a survey with 34 questions was carried out, in which there was a sample of 178 individuals. The survey is divided into 3 parts, the first 6 questions being a sociodemographic study of the sample and the other two parts being a series of 18 questions for workers in a mixed system and the remaining 10 questions for those who only work face-to-face.

The main conclusion that can be obtained from the survey carried out is that, in general, working in a mixed system brings more satisfaction in all aspects compared to only face-to-face work. Personal life satisfaction after work is higher for those who work in a mixed system. Among those who answered that they work in a mixed system, there is greater satisfaction when they are teleworking than when they are in face-to-face work. It is also possible to verify that there is greater satisfaction in face-to-face work when the worker is in a mixed system, so those who are only in face-to-face work do not have as much satisfaction compared to those who are in a mixed system. In relation to productivity in the mixed system, it appears that it is higher when the worker is teleworking in general, so because all the terms of comparison between the mixed system and face-to-face work give greater satisfaction to the mixed system the continuation of the use of the teleworking after the pandemic is seen as something that must remain within companies.

Regarding the future of the mixed system, the future trends are that there will be many more people working in the mixed system compared to the pre-pandemic. Also, companies are having new models of human resources management that can bring benefits both for the company and for the workers.

There will be a continuous evolution of technologies in the coming years so that teleworking becomes more efficient. This leads to greater investment in technologies, but on the other hand there is a lower cost in physical spaces. With the greater number of people teleworking, it will be possible to verify changes in consumption patterns, such as the increase in online shopping or take away. There will also be a difference in real estate after the pandemic, as a large percentage of workers will use their housing to carry out their work, in this case the size of offices in housing will be rethought and

thus increase the conditions for working from home. Finally, the greater number of people in a mixed system causes reflections on the dynamics of cities, which in this way contributes to the sustainability of cities.

Regarding some limitations that this dissertation may have, we can mention the fact that the survey as an object of study was carried out at the end of March 2022, when the pandemic was starting to be controlled, but it had not yet ended. For a possible similar future study, there may be differences in some results due to greater adaptation to telework and there is no need for workers to telework anymore. Another limitation that we can find is that the number of the survey sample was not sufficient and thus reduced the explanatory power of the study, also due to most of the survey results not being completely random. We can also get another limitation, which is the fact that this dissertation did not include workers who are only teleworking. In a future work, the inclusion of workers only in telework may lead to other and different conclusions.

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