

# Teleworking in Portuguese communities during the COVID-19 pandemic

Fernando Tavares

*Higher Institute of Business and Tourism Sciences, Porto, Portugal*

Eulália Santos

*Polytechnic Institute of Leiria, Leiria, Portugal*

Ana Diogo

*Higher Institute of Management and Administration of Leiria, Leiria, Portugal, and*

Vanessa Ratten

*La Trobe University, Melbourne, Australia*

Teleworking  
in Portuguese  
communities

---

Received 16 June 2020  
Revised 15 July 2020  
Accepted 15 July 2020

## Abstract

**Purpose** – Human beings spend about a third of their day working, so it is very important that they are integrated into a good community work environment. When the setting is teleworking in a family and housing context, it is important to keep a good environment and also a good physical, psychological and ergonomic aspects to attain job performance. The purpose of this paper is to characterize teleworking carried out in Portuguese communities in the context of the state of emergency caused by the COVID-19 pandemic.

**Design/methodology/approach** – A survey questionnaire was used, which analyzed general information about teleworking and the individual's adaptation process and the difficulties they faced during the teleworking period. The sample consists of 359 individuals aged 18 years or over, who were teleworking in their homes and in a family environment.

**Findings** – The results show that adapting to teleworking was easy or very easy and that it happened very quickly. The main difficulties encountered by the individuals were the lack of professional interaction/communication with coworkers, the lack of resources related to support infrastructures, such as the internet or a printer, and the reconciliation of teleworking with family life/household chores/dedication to children and time/schedule management.

**Originality/value** – This study hopes to contribute to the increase of the scientific knowledge in the teleworking field and to allow companies to rethink the teleworking strategies to optimize resources and costs and to improve the organization's productivity without harming the quality of life and well-being of their workers.

**Keywords** Communities, Teleworking, Work management, Remote work, Flexible forms of work, Professional confinement, Crisis, Community, Covid-19, Flexible work practices

**Paper type** Research paper

## Introduction

The COVID-19 pandemic began in Wuhan, China, on December 1, 2019 and was caused by the SARS-CoV-2 virus (Huang *et al.*, 2020). According to the Portuguese Directorate-General for Health (DGS, 2020), in Portugal, the first cases were registered on March 2, 2020, when two Portuguese people tested positive for SARS-CoV-2 in Northern Portugal. Then, an



---

outbreak of subsequent infections was detected, and the first death was reported on March 7, 2020, when there were already 448 confirmed cases and three recovered.

On March 11, 2020, the World Health Organization (WHO) qualified the public health emergency caused by the disease COVID-19 as an international pandemic, constituting a public calamity (World Health Organization, 2020). Against this backdrop, Portugal and the vast majority of countries in the world decided to adopt quarantine as a containment measure caused by the SARS-CoV-2 virus. On March 13, 2020, the Portuguese Government declared the state of alert, which forced the closure of schools, bars, clubs and restaurants and restricted the movement of people (Order No. 3298-B/2020 of March 13 of the Internal Administration and Health – Offices of the Minister of Internal Administration and the Minister of Health). On March 18, 2020, the president of the Republic declared the state of emergency, which forced the closure of all businesses except supermarkets, pharmacies, gas stations and restaurants operating in takeaway (Resolution of the Assembly of the Republic of March 18, 2020). As Portugal is part of the European Union, it provides a good context for understanding the effects of societal change on communities (Dana, 2017). Owing to the time-dependent nature of this study, Portugal was also chosen for its quick and effective strategy by government officials in dealing with the COVID-19 pandemic that resulted in fewer casualties compared to neighboring countries.

The COVID-19 pandemic has significantly transformed the work environment and work demands of many individuals, who have started to work from home, in teleworking. In addition to teleworking, many families were faced with the situation of helping their children, who, being equally confined at home, started to take distance learning classes (Order No. 3427-B/2020 of March 18 of the Internal Administration – Minister's Office, 2020). According to Thulin *et al.* (2019), there is little empirical research in the literature on how workers organize their daily work. In teleworking, the employee is available anywhere and at any time, and this need meets the demand on the part of the organization (Baruch, 2000). When teleworking, distance is ignored, and the technical profile and self-discipline of the employee are important in the profile of the employee so that he or she can develop the work efficiently and effectively (Gálvez *et al.*, 2020). This work system makes intensive use of virtual means of communication to maintain contact between the work teams and to keep the focus on good management of people and projects (Mann and Holdsworth, 2003; Ramadani *et al.*, 2020).

As a result of the lack of literature and understanding about teleworking in times of a pandemic, this paper seeks to understand in more detail its effect on communities both in social and economic terms. In this sense, the present study aims to characterize teleworking carried out in Portugal in the context of the COVID-19 pandemic. To fulfill this objective, after the introduction, the literature review on telework and the positive and negative aspects that characterize it are presented. Then, in the method section, the population is defined, the sample is characterized and the instrument used and the procedures performed are described. The results are presented together with a brief discussion. Finally, the conclusions of the work developed are presented that include a focus on theoretical, managerial and policy implications.

## Literature review

### *Teleworking features*

Teleworking has shown a strong trend in the current job market owing to its technological and geographic advantage in enabling individuals to work from multiple locations (Rocha and Amador, 2018). This has meant more organizations are using teleworking for its cost advantages and also greater flexibility. For Bucater (2016), teleworking e-leadership

transposes personal leadership in person to a virtual environment, but with a new type of leadership, where it is necessary to strengthen the interdependence between leader and technology, as both are affected and are transformed. Another study by [Maciel \*et al.\* \(2017\)](#) states that the practice of teleworking seeks, on the one hand, to minimize the distance between the organization and its employees and, on the other hand, to bring the organization and customers closer together using telematics and the internet as the main tools. This means the basis of teleworking is having access to technology that can enable more freedom in where a person works. The internet is at the base of the high growth of teleworking, but other aspects are important, such as the evolution and reduction of prices of technological tools, the availability and quality of the internet connection, the improvement of the quality of life and global connectivity ([Agarwal \*et al.\*, 2020](#)).

[Rosenfield and Alves \(2011\)](#) systematized six main categories of telework: work at home, work in satellite offices, telecentre work, mobile work, work in remote locations and informal work. Work at home refers to work performed at the worker's home. Work in satellite offices – work carried out in offices outside the company's headquarters ([Jardon and Martinez-Cobas, 2020](#)). Telecentre work is carried out in establishments that offer jobs to employees or various organizations or telematics services to remote customers ([Ravalet and Rérat, 2019](#)). Mobile work is carried out outside the main work center or home and can be carried out at the client's premises, business trips or field work ([Madsen, 2003](#)). Work in remote or offshore companies involves call centers or teleservices in various areas of the globe, subcontracted by the company, seeking to take advantage of cheaper labor ([Palacios \*et al.\*, 2017](#)). Informal work or mixed teleworking – negotiation between the company and the worker so that they work a few hours outside the company ([Pratt, 1984](#)). Each of these different types of teleworking is important in providing a more global workforce that is not restricted by geographical position. This is emphasized by [Araújo \*et al.\* \(2019\)](#) who conclude that, in the current and globalized world, organizations are looking for viable alternatives to optimize work, so that companies can gain by saving resources in quality, efficiency and effectiveness of services performed.

Teleworking involves focusing on the flexibility in work practices enabled by working at any location. [Beauregard \*et al.\* \(2019\)](#) consider that flexible working practices have the following characteristics: are mutual agreements between the employer and the employee ranging in working hours and at the workplace, usually with the dual aim of improving the balance between work life and personal life, meeting the organization's needs. This means it is an arrangement that involves working outside the company for part of the week, maintaining contact through information and communication technologies ([Sullivan, 2003](#)). Telework can be used with other jobs and flexible agreements and part-time work. This type of work is usually carried out from the employee's chosen location ([Ramadani \*et al.\*, 2015](#)). Many management leaders are defenders of telework because it is an easy job to be quantified and for today the information and communication technologies are supports of telework ([Haddon and Lewis, 1994](#)). Therefore, the company must promote formal and informal communications with the teleworker and conduct regular assessments about the teleworking conditions ([Fairweather, 1999](#)). Regarding the employee, for [Beauregard \*et al.\* \(2019\)](#) the following must be taken into account: to work from home, employees must have a space that meets health and safety regulations, and the tasks assigned must be able to be performed without negatively affecting the company's image. This means that the employee must have communication skills, self-motivation, the ability to work independently and prefer to work in telework ([Daniels \*et al.\*, 2001](#)). In addition, employees must have a trial and training period to be able to do telework and subsequently must adapt to the employment contract and pay attention to the internet connection and the communication and

information technologies (Ratten, 2017). Teleworkers must be guided and involved through formal and informal communications with managers and coworkers, making use of good time management practices (Belzunegui-Eraso and Erro-Garcés, 2020).

More companies worldwide are adopting teleworking as a way to increase efficiencies. Tavares (2017) argues that telecommuting is a flexible working arrangement, increasingly adopted worldwide. Workers are receptive to this form of work, as it improves their performance and their social life, relieving work restrictions and generating plans for autonomy. Teleworking can be a solution for different stages of life; it can be done while studying, raising a family, aging or it can correspond to your individual preferences allowing the worker to decide when and where to work (Baruch, 2001). This means that teleworking tasks have particular characteristics and require that those who perform them have the appropriate personality traits for the tasks to be successful (Salamzadeh and Kawamorita, 2017). Workers make a tradeoff exchange when doing telework. Thulin *et al.* (2019) observed that teleworking among skilled workers is a voluntary choice, whereas for the less qualified, the choice is already less voluntary and more in line with the employer's interests. Work at home is a more dominant practice in analytical jobs, as they represent autonomous and highly qualified jobs, where, often, workers perform their duties outside working hours, which may be the result of an individual strategy chosen voluntarily. Table 1 summarizes the main characteristics of teleworking.

#### *Positive and negative aspects of teleworking*

In their work, Rocha and Amador (2018) understand that if, on the one hand, there are benefits for companies, employees and society, on the other hand, there are also risks involved in individualizing work, namely, the risks of social, professional and political isolation to the workers. Araújo *et al.* (2019) conclude that alternative as companies seek to optimize the work, aim at improving the quality of life and reducing stress on the way home from work. In this line of thought, Tavares (2017) also considers that the worker may have positive effects on health because it reduces stress and improves the balance between work and family. This check and balance in the use of time between telework and everyday life is vital to the quality of life and social sustainability (Thulin *et al.*, 2019). Ferreira and Oliveira (2018) studied teleworking in the context of distance learning and concluded that it is intrinsic to the teaching/learning process, as the breaking of distance barriers and the democratization of teaching requires available and flexible professionals.

Authors/year	Characteristics
Bucater (2016)	It changes the type of leadership, making it necessary to strengthen the interdependence between the leader and the technology
Maciel <i>et al.</i> (2017)	Seeks to minimize the distance between the organization and the employees and between the organization and customers
Araújo <i>et al.</i> (2019)	It seeks to optimize the work in efficiency and effectiveness of the services performed
Beauregard <i>et al.</i> (2019)	Agreements (arrangements) between the employer and the worker, which vary in working hours (full or part-time) and in the workplace. Employee must have communication skills, self-motivation and the ability to work independently
Tavares (2017)	Flexible working arrangement. Teleworking tasks have particular characteristics and require suitable people

**Table 1.**  
Summary of telework features

**Source:** Own elaboration

The literature review work carried out by [Leite \*et al.\* \(2019\)](#) states that the impacts of telework are related to three aspects: telework, organization and society. Regarding the worker, the positive impacts are observed in the absence of travel to the workplace, in greater family life and in improving performance. Regarding the impacts on the organization, the benefits with regard to improving recruitment, selection and retention of people and increasing productivity are referred to as positive. For society, a reduction in the emission of pollutants and a reduction in the use of printed paper is presented as a positive aspect because of teleworking. [Felippe \(2018\)](#) notes that distance working is an alternative to some current problems, with positive impacts, such as the reduction of urban chaos, pollution owing to reduced travel, greater flexibility of hours for those who need it, and the employee can better manage your working time. [Kwon and Jeon \(2017\)](#), in a study carried out in California (USA), say that a way to reduce pollution in their cities will be to allow local governments to do telework. A disadvantage pointed out by these authors is the fact that it reduces the contact between the employees and the citizens, which can be harmful, because one way of showing commitment between the governments and the citizens is through personal contact. For these authors, despite everything, in the management of cities in California, there is a notable and pioneering incorporation in the increase of teleworking, and they present a strong leadership over cities in other States.

With all countries in the world focused on combating the COVID-19 pandemic, pollution and greenhouse gas emissions have dropped considerably as a result of the decrease in economic activity and the number of flights, from public transport to the amount of vehicles circulating. According to the study by [Myllyvirta and Thieriot \(2020\)](#), and as a result of emergency measures, Portugal is no exception and emerges as the country in Europe where the reduction in pollution is greater, with less than 58% in nitrogen dioxide and minus 55% in fine particles (toxic particles suspended in the air). Air pollution is linked to respiratory infections and increases the risk of asthma, heart disease, hypertension and lung cancer, conditions that aggravate symptoms and the clinical condition caused by the SARS-CoV-2 virus. In 2016, in Portugal, 4,900 deaths were attributed to fine particles and 610 deaths to nitrogen dioxide ([EEA, 2019](#)).

In their work, [Beauregard \*et al.\* \(2019\)](#) refer to several studies where there is a positive association between productivity and teleworking. This can happen because workers can work longer hours (not wasting time traveling) and choose to use that extra time to work but also because there is less involvement in organizational policy. These authors also report that, in jobs that require high concentration, better performance is obtained at home/teleworking. Teleworking can provide employees with the flexibility to better manage their private lives and become more productive. [Melo and Silva \(2017\)](#) note that it is possible to have an intrafamily effect of teleworking at home, as it can encourage a decrease in teleworker's travels, but it can also decrease family travel. In his opinion, it should be facilitated the residential move to places where the supply of housing is greater and with greater natural and environmental amenities thus also decreasing the displacements over time. As for the intensity of the work, [Beauregard \*et al.\* \(2019\)](#) understand that working at home should be a maximum of two to three days a week. The best organizational practices refer to the existence of a culture of trust and openness, the installation of appropriate systems, the equipment of supporting information technologies, a performance management system based on objectives and the physical workplace adapted to allow employees to interact with their colleagues when they are in the office. [Table 2](#) summarizes the main positive aspects of teleworking.

[Rocha and Amador \(2018\)](#) state that the most optimistic readings endeavor to emphasize the positive aspects, but, in their opinion, it is far from being taken as unequivocally

Authors/year	Positive aspects
<a href="#">Araújo et al. (2019)</a>	Improving the quality of life and the decrease of the stress of traveling to work
<a href="#">Ferreira and Oliveira (2018)</a> <a href="#">Leite et al. (2019)</a>	In the teaching sector, it is intrinsic to the teaching/learning process No need to travel to get to the workplace, greater family life, improved performance. Improved recruitment and selection of people and increased productivity. Reduction in the emission of pollutants
<a href="#">Felippe (2018)</a>	Reduction of urban chaos, pollution and movements and greater flexibility in working hours
<a href="#">Beauregard et al. (2019)</a>	Positive association between productivity and teleworking. It is an easy job to be quantified
<a href="#">Tavares (2017)</a>	Workers improve their work and their social life. It is a solution for different stages of life. Less stress and improved balance between work and family
<a href="#">Kwon and Jeon (2017)</a> <a href="#">Thulin et al. (2019)</a>	Way of reducing pollution in the cities Control and balance in the use of time between telecommuting and everyday life, which is vital for quality of life and social sustainability

**Source:** Own elaboration

**Table 2.**  
Positive aspects of  
teleworking

advantageous and entails some risks for both the worker and for the society in general. In terms of risks, the form of sociability of workers stands out. In particular, these authors addressed issues related to the difficulty of separating the space and time of work, personal and family life because with the use of digital and mobile devices, there is a risk that the work may go on indefinitely, as well as a decrease in the possibilities of professional advancement. They also conclude that there is a tendency in teleworking to over individualize work, which can have consequences for the worker, namely, for their professional, social and political isolation. Ultimately, the individualization of teleworking can transform society, making work relationships more vulnerable, encouraging the loss of the collective dimension of work and increasing the individualization of society.

[Ferreira and Oliveira \(2018\)](#), in their study in the context of distance learning, emphasize the excess of activities, insufficient remuneration and new occupational diseases and understand that this type of professionals must be recognized and supported. They also refer that institutions must pay attention to the peculiarities of teleworking and the legislation related to it. According to [Leite et al. \(2019\)](#), social isolation and individualization of work are considered negative aspects for the worker, and the difficulties in developing team work and in achieving performance control are negative aspects for the organization. On the other hand, [Felippe \(2018\)](#) points out some disadvantages, such as the lack of coaching, the loss of social relationships, the loss of corporate identity and the fear of career development for being further away from the company. An important aspect in teleworking is the risk that the person will not be able to disconnect from work, or during their rest and leisure time, because, being online, they can be contacted at any time. This author concludes that, in this globalized world, employees have greater autonomy and for employees to be able to stand out, companies need to motivate them to perform creative and qualified tasks. In addition, it is necessary to create a new culture where teleworking is surrounded by some precautions, such as the use of a specific location, with well-defined working hours so that the worker's intimacy and his disconnection from work are respected.

[De Vries et al. \(2019\)](#) analyzed teleworking for civil servants and concluded that those who telework at home have greater professional isolation and less organizational commitment. These authors also report that hierarchical forms of leadership are less

appropriate in teams and organizations characterized by a high degree of virtuality. This is because communication is less formal and less hierarchical. Furthermore, because of the lack of personal contact and geographical dispersion, it is also more difficult for leaders to adopt traditional hierarchical leadership behaviors. Having quality of work and trust between the leader and the employee, there is a reduction of professional isolation of civil servants when they only work from home. De Vries *et al.* (2019) understand that, in a telecommuting environment, the support and empathy of coworkers may not be available, and subordinates may have a greater need to monitor and consider their leaders. On the other hand, although civil servants may feel quite committed to the organization, their sense of commitment can drop significantly on the days they work from home.

Tavares (2017) also considers that there may be disadvantages in teleworking, when the worker does not have his own office to do it, or when he does not have the skills to work with the sophisticated communication technology that is available today. Thulin *et al.* (2019) conclude that the pressure perceived in teleworking practice is associated with social factors. Thus, women and workers with dependent children experience greater time pressure in everyday life, regardless of the practice of teleworking. For these authors, mobile information and communication technologies and flexible work make people feel pressured, for example, expanding and meddling in people's free time, with negative implications for family life. In summary, Table 3 presents the main negative aspects of teleworking.

### Methodology

The present study is characterized by being a nonexperimental, simple descriptive type, as it allows describing and perceiving the characteristics inherent to the phenomenon of teleworking without establishing relationships among variables (Quivy and Campenhoudt, 2013).

#### *Population and sample*

The target population of the present study were individuals aged 18 years or over, who were telecommuting, in their family and home environment, during the state of emergency caused by the situation of the COVID-19 pandemic caused by the SARS-CoV-2. In the collection of data to support this study, the nonprobabilistic snowball sampling method was used, given the ease of operationalization of the process, as it was intended to include in the sample individuals who were in teleworking context (Marôco, 2018). The sample is composed of 359 individuals belonging to the study population, aged between 18 and 70 years, with an average of approximately 39 years ( $SD = 11.18$ ). Most people are of the female gender

Authors/year	Negative aspects
Rocha and Amador (2018)	Difficulty in separating space and working life, from personal and family life. Decreased possibilities for professional advancement. Super individualization of work, with professional, social and political isolation. Most vulnerable work relationships
Ferreira and Oliveira (2018) Leite <i>et al.</i> (2019)	Excessive activities, insufficient remuneration, new occupational diseases Social isolation and individualization of the work. Difficulty in developing teamwork
Felippe (2018), De Vries <i>et al.</i> (2019)	Absence of coaching, loss of corporate identity relationship. Difficulty disconnecting from work

Source: Own elaboration

**Table 3.**  
Negative aspects of  
teleworking

( $n = 211$ , 58.8%) and 44% have children ( $n = 158$ ). With regard to academic qualifications, 80.2% ( $n = 288$ ) have higher education, 18.9% ( $n = 68$ ) have secondary or vocational education and 0.8% ( $n = 3$ ) have basic education. Regarding the marital status, 56.8% ( $n = 204$ ) of the individuals are married or live in cohabitation arrangements, 35.1% ( $n = 126$ ) are single, 7% ( $n = 25$ ) are divorced or separated and 1.1% ( $n = 4$ ) are widowed, and the average number of household members about three ( $SD = 1.16$ ).

#### *Data collection instruments*

In the present study, a quantitative methodological approach was used, and the instrument used was a questionnaire survey composed of closed and open answer questions. The instrument used consists of four parts. The first part is formed by the question “*Are you currently telecommuting or have you been during this state of emergency?*” If the participant answers affirmatively, he/she will be included in the sample and answer the questions of the remaining three parts; otherwise, the individual will not be included in the sample and will abandon filling in the questionnaire. The second part is related to the characterization of the telework, in which the general information, adaptation and difficulties faced are analyzed. The third part analyzes the professional data of individuals in teleworking (how many years have they worked in the current organization, whether they are working in the public or private sector, activity sector and typology of the dimension of the organization) and, finally, the fourth part analyzes the sociodemographic data characteristics of the individuals (gender, age, education, marital status, if they have children and the number of the family members).

Regarding the characterization of teleworking, general information was requested, such as if it was their first experience, the number of hours dedicated to teleworking per day, the number of days per week dedicated to teleworking and the number of household members who they were in teleworking. Regarding adaptation to teleworking, an open-ended question was asked, asking participants to describe how their adaptation went and how long it took (one day, two–five days, one week, two weeks and more than two weeks). In relation to the difficulties experienced, it was intended to ascertain whether the participants, to compensate for the losses in productivity, worked until late at night, if they worked during the weekends and if they had difficulty in maintaining the focus on teleworking or if the fact being at home made them disperse their attention to other activities. These questions were assessed on a five-point Likert frequency scale (1 – *never* to 5 – *very often*). It was also analyzed the activities that, being at home, can lead to productivity losses during teleworking. Individuals were also questioned on a five-point Likert agreement scale (1 – *strongly disagree* to 5 – *strongly agree*) if they felt they worked more at this stage by teleworking than they previously worked at their usual workplaces. To analyze other difficulties related to teleworking, participants were asked about the main difficulties they encountered (open-ended question).

Finally, in view of the COVID-19 pandemic situation, it was intended to ascertain whether the involvement in teleworking made individuals forget about the current situation, and this question was assessed using a five-point Likert agreement scale (1 – *totally disagree* to 5 – *totally agree*).

#### *Procedures*

To facilitate the data collection process, taking into account the pandemic situation, the questionnaire was created using Google Forms tools, with the questionnaire link being shared on the social network Facebook (there were 15 shares) and also sent via email to some Portuguese companies whose employees were teleworking. Data collection took place



between April 14 and May 14, 2020. The questionnaire was presented to the participants, accompanied by a small introductory summary that defined the objectives of the study and which also guaranteed the anonymity and confidentiality of the information provided. To perform the data processing, the IBM SPSS Statistics 25 software was used and the techniques of descriptive statistics were used to describe the sample and to perform the descriptive analysis of the variables that characterize telework.

## Results and discussion

### *Professional sample characterization*

Table 4 shows the professional characterization of the individuals who are undertaking teleworking. As it can be seen, regarding the length of service in the organization, most individuals (50.4%,  $n = 181$ ) are working in the organization for less than five years. The predominant sector is the private (72.4%,  $n = 260$ ), and the activity sector with the highest percentage of teleworking individuals is the services sector (76.3%,  $n = 274$ ). As for the size of the organization, it appears that individuals are distributed among the four types of size of the organization, with the largest percentage belonging to large companies (40.9%,  $n = 147$ ).

### *Characterization of the telework*

*General information.* For 76% ( $n = 273$ ) of the individuals, this was the first experience in teleworking. The number of hours that individuals dedicate to teleworking per day varies from 1 to 15 h, with an average of approximately 8 h ( $SD = 2.28$ ), and in more precise terms we have that 68.4% ( $n = 245$ ) are teleworking for eight or more hours. The average number of weekly teleworking days is 5.34 ( $SD = 0.87$ ) and 94.7% ( $n = 340$ ) of the people are teleworking form more than four days a week. On average, individuals indicate that they

Professional characterization	<i>n</i>	(%)
<i>Length of service in the current organization</i>		
Less than five years	181	50.4
From five to ten years	67	18.7
More than ten years	111	30.9
<i>Sector</i>		
Public	99	27.6
Private	260	72.4
<i>Activity sector</i>		
Industry	38	10.6
Construction	11	3.1
Trade	33	9.2
Services	274	76.3
Agriculture, livestock, fisheries	3	0.8
<i>Size of the organization</i>		
Micro company	58	16.2
Small company	69	19.2
Medium company	85	23.7
Big company	147	40.9

Source: Own elaboration

**Table 4.**  
Professional  
characterization of  
individuals in  
teleworking

have two ( $SD = 0.69$ ) elements of their household in teleworking, with the majority of individuals (59.3%,  $n = 213$ ), the only member of the household in teleworking. However, there are 115 (32 %) individuals with two elements and 31 (8.6%) with three or more household members performing telework.

*Adaptation to teleworking.* Table 5 shows the classification made by the individuals of the description of how it went the teleworking adaptation. In general, individuals consider that adaptation to the telework was easy or very easy ( $n = 193$ , 53.7%) although 10.3% ( $n = 37$ ) described as normal and 19.2% ( $n = 69$ ) as having been difficult or very difficult.

With regard to the duration of the adaptation, 42.3% ( $n = 152$ ) of the individuals did get adapted in one day, 31.5% ( $n = 113$ ) adapted between two and five days, 13.1% ( $n = 47$ ) took one week to adapt and 13.1% ( $n = 47$ ) took two weeks to adapt.

*Difficulties in teleworking.* In Table 6, it can be seen that 44% ( $n = 158$ ) of the individuals work often or very often late on professional duties to offset productivity losses during the day, and some individuals (29.8%,  $n = 107$ ) work frequently or very often during the weekend on professional tasks to compensate for productivity losses during the week. The importance of concentration and time/schedule management is emphasized to carry out teleworking during working hours. These observations are consistent with Tavares (2017) and Rocha and Amador (2018). Regarding the difficulties in maintaining the focus on teleworking, in general, individuals remain focused ( $M = 2.86$ ,  $SD = 1.22$ ), 15.6% never disperse their attention in other activities, 56.9% (22.6% rarely and 34.3% sometimes)

**Table 5.**  
Classification of the telework adaptation description

Telework adaptation	<i>n</i>	(%)
Very difficult adaptation	20	5.6
Difficult adaptation	49	13.6
Normal adaptation	37	10.3
Easy adaptation	147	40.9
Very easy adaptation	46	12.8
Did not answer	60	16.7

**Source:** Own elaboration

**Table 6.**  
Compensation for productivity losses

Compensations	<i>n</i>	(%)	<i>M (SD)</i>
<i>To compensate for productivity losses during the day, I work late in my professional duties</i>			
1 – Never	42	11.7	3.22 (1.26)
2 – Rarely	62	17.3	
3 – Sometimes	97	27.0	
4 – Often	91	25.3	
5 – Very often	67	18.7	
<i>To compensate for productivity losses during the week, I work during the weekend on my professional chores</i>			
1 – Never	92	25.6	2.67 (1.33)
2 – Rarely	79	22.0	
3 – Sometimes	81	22.6	
4 – Often	68	18.9	
5 – Very often	39	10.9	

**Source:** Own elaboration

disperse attention in other activities with some frequency, whereas 27.5% (15% often and 12.5% very often) disperse attention in other activities more often.

Table 7 shows the activities (ordered in descending order of frequencies) that the individuals say are dispersed while doing telework, being the household chores (51.5%), taking care of minor children (33.1%) and social networks (32.3%) the activities that remove them focus while they are conducting teleworking. The fact that it allows combining work with household chores and taking care of children and other family members children, is according to [Aratijo et al. \(2019\)](#), as it allows an improvement in the quality of life and with [Tavares \(2017\)](#) who considers that it improves the balance between work and family.

With regard to the statement “*I feel that I work more at this stage by teleworking than I previously worked,*” 49% ( $n = 176$ ) of the individuals are in agreement (18.9% agree and 30.1% totally agree) with the statement, whereas 29.5% ( $n = 106$ ) are in disagreement (14.5% disagree and 15% totally disagree). Of the 359 individuals, 244 (68 %) described the main difficulties they encountered in teleworking, which are presented in Table 8 (ordered in descending order of frequencies). It is emphasized that the lack of professional interaction/communication with coworkers ( $n = 39$ , 10.9%), the lack of support infrastructure resources, such as internet or printer ( $n = 37$ , 10.3%), reconciling teleworking with family life/household chores/dedication to children ( $n = 33$ , 9.2%) and time/schedule management ( $n = 32$ , 8.9%) are the ones that appear most prominently. These main difficulties in adapting to teleworking are in agreement with [Rocha and Amador \(2018\)](#), [Felippe \(2018\)](#) and with [Ferreira and Oliveira \(2018\)](#).

In view of the situation experienced in the country and in the world, in general, opinions differ, with no agreement or disagreement regarding the statement “*My involvement in teleworking makes me forget the current situation*” ( $M = 3.01$ ,  $SD = 1.26$ ). It is observed that 39.3% ( $n = 141$ ) of the individuals indicate that their involvement in teleworking made them forget about the current situation (27.3% agree and 12% totally agree), in contrast 35.1% ( $n = 126$ ) who refer that teleworking did not make them forget the current situation (15.6% totally disagree and 19.5% disagree) and 25.6% neither agree nor disagree.

*Theoretical implications.* There has been much research on teleworking during times of economic and social stability but less is known about how psychological conditions affect teleworking especially in times of crisis. This paper is amongst the first to study during the start of the crisis the ways individuals in Portugal adjusted to the restrictions necessitated by COVID-19. Thereby, the paper makes an important contribution to the theory of why

Activities	<i>n</i>	(%)
Household chores	185	51.5
Taking care of minor children	119	33.1
Social networks	116	32.3
Watching TV	63	17.5
Dealing with other family members who live with me	50	13.9
Walking the dog/taking care of other animals	30	8.4
Play games	28	7.8
Reading/music/YouTube	5	1.4
Physical activity	2	0.6
Agriculture	2	0.6
Phone calls	2	0.6

Source: Own elaboration

**Table 7.**  
Activities carried out  
during teleworking

Difficulties found in teleworking	<i>n</i>	(%)
Lack of professional interaction/communication with coworkers	39	10.9
Lack of support infrastructure resources: internet or printer	37	10.3
Reconciling teleworking with family life/housework/dedication to children	33	9.2
Time management/schedules	32	8.9
Lack of social interaction	29	8.1
Difficulty adapting to technologies	28	7.8
Difficulty concentrating	22	6.1
Access to physical service documents	22	6.1
Overload/workload	15	4.2
Lack of standardization of procedures	13	3.6
Difficulty adapting to new routines in view of the emergence of the current situation	13	3.6
Ergonomic conditions	10	2.8
Lack of a suitable place to work in the home	8	2.2
Need for greater self-discipline	7	1.9
Too many emails	6	1.7
Lack of motivation/intellectual availability	5	1.4
Too many meetings	5	1.4
Lack of productivity	3	0.8

**Table 8.**  
Main difficulties  
found in teleworking

Source: Own elaboration

individuals move to teleworking and the conditions they face in making this decision. As the move to teleworking was not a choice but mandated by the government, the current theories on teleworking need to take into account new environmental conditions. This means the results of this study in terms of the impact on communities can contribute to a new theory on teleworking in times of a crisis. This helps to connect the existing literature on teleworking with community studies thereby taking a more holistic approach.

*Practical contributions.* As the COVID-19 crisis is continuing and there does not, at the time of writing this paper, seem to be a vaccine or cure, there are many practical contributions arising from the findings of this study. Practically managers of businesses of all sizes need to invest in developing more communication mechanisms with employees to lower levels of stress and to make them more productive. To do this might involve fostering a culture of openness with communication emphasized as a priority. This is important as a way of making sure that the mental and physical well-being of employees is prioritized at a time of crisis. This can include having online morning tea, lunch and afternoon tea sessions that mimic the real environment but occur in an online format. This will help individuals to communicate any issues that they are facing and to suggest ways to overcome them. Thereby encouraging a community of practice that encourages the sharing of knowledge and information on a frequent basis.

*Policy implications.* As most governments around the world not just in Portugal have mandated working from home, there are a number of policy implications stemming from the results of this study. Most important is that teleworking is a good way to manage health risks in the community. By providing employees the ability to work from home, this enables a better overall benefit to society in times of crisis. Thus, policies need to be developed about the external environmental factors evident in the community that might help or hinder individuals in their teleworking performance. This can include developing policies related to family integration in the community and in particularly any gender differences that might be evident in teleworkers. As there has been much emphasis on women in particular finding,

it difficult to telework in the COVID-19 environment because of the need to also balance childcare duties in terms of home schooling it is important that government policy focuses on this issue. This means providing help and advice for teleworkers of both male and female gender manage multiple and concurrent duties. This would enable more productive teleworkers and help provide innovative solutions. By focusing on the role of communities in this endeavor, it can also enable better social cohesion. This can help communities develop their collaborative spirit and enable more collaborative activities to emerge.

*Limitations and suggestions for future research.* This study is amongst the first to focus on how the pandemic COVID-19 has changed communities. By taking a teleworking perspective and analyzing changes during the pandemic, it provides a unique way to understand the advantages and disadvantages to teleworking. Although there are many benefits from this approach, there are also some limitations that need to be acknowledged. This includes the single geographic context of Portugal that means although in-depth knowledge can be derived, there also is some limitations in the overall international applicability. Therefore, more comparative international studies are needed to verify and support the findings of this study. This would enable more knowledge to be accumulated about how the COVID-19 pandemic has changed communities and whether there are any cultural differences. To do this might mean a joint international collaborative effort among research centers thereby facilitating the sharing of information about the COVID-19 effects. This would support a global policy of trying to find a solution to the pandemic that manages cultural and social conditions. The other major limitation is that the study took a cross-sectional format, and a more longitudinal sample would be more beneficial. As this was not possible because of the newness of the crisis, in the future it is hoped that the questions asked in this study are followed up in future research work. This would provide a better way to analyze the long term and temporal effects of the COVID-19 pandemic on communities.

## Conclusion

In view of the emergence of the situation experienced because of the pandemic COVID-19, in a very short period of time, Portuguese workers were forced to change a huge set of routines and have to have a working place in their homes with adequate conditions for them to work from their homes. For most of the interviewed individuals, this was the first experience in teleworking, working on average approximately 8 h a day and more than four days a week. In view of all the challenges imposed by teleworking; for some individuals, there is the fact that they have two or more elements in teleworking at home (40.6%). Most individuals considered that adapting to teleworking was easy or very easy and that it happened quickly (42.3% adapted in one day and 31.5% adapted between two and five days). To ensure teleworking during normal working hours, it is important to maintain focus, concentration and manage time/hours well so that there is no need to compensate for losses outside working hours and even during weekends. Household chores, taking care of younger children and social networks are the activities that most remove the focus of individuals while they are teleworking. In general, individuals feel that they work more at this stage in teleworking than they previously worked at the organization's physical workplace. The main difficulties encountered in teleworking were the lack of interaction/professional communication with coworkers, the lack of support infrastructure resources, such as internet or printer, reconciling teleworking with family life/household chores/dedication to children and the time/schedule management.

It is expected that this fact will contribute to many companies adopting a partial or total teleworking regime thus reducing the number of workers' trips and, consequently, pollution

levels. Ministries of education can also adopt a partial regime of distance learning in more theoretical subjects thus reducing the number of trips to school. The implementation of these measures will also reduce the number of diseases and deaths associated with high levels of pollution. Rethinking in partial or total teleworking strategies, companies can optimize resources and costs and improve productivity levels without harming the quality of life of their workers. In this scenario, there is a need for all prior and well-defined preparation to ensure the well-being of workers, that is, a space that meets health and safety regulations, with adequate equipment for workers to perform at home, efficiently and effectively, its functions, without harming the image of the organization. It also highlights the importance of providing workers with adequate training in the areas of technology and time/schedule management. It is expected that this study will also contribute to the increase of scientific knowledge in the area of telework. In the future, it is intended to relate teleworking to affections and experiences lived during the period of the national state of emergency.

## References

- Agarwal, S., Ramadani, V., Gerguri-Rashiti, S., Agrawal, V. and Dixit, J. (2020), "Inclusivity of entrepreneurship education on entrepreneurial attitude among young community: evidence from India", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 14 No. 2.
- Araújo, S.A. França, F.D.S. Cavalcante, G.F.F. Lima, I.F.D. and Medeiros, J.W.D.M. (2019), "Teletrabalho (telework): uma prospecção Para a editora universitária da UFPB", *Informação em Pauta Fortaleza*, CE v. 4 n. especial nov. 2019, 132-151, ISSN 2525-3468, available at: <https://doi.org/10.32810/2525-3468.ip.v4iEspecial.2019.42611.132-151>
- Baruch, Y. (2000), "Teleworking: benefits and pitfalls as perceived by professionals and managers", *New Technology, Work and Employment*, Vol. 15 No. 1, pp. 34-49.
- Baruch, Y. (2001), "The status of research on teleworking and an agenda for future research", *International Journal of Management Reviews*, Vol. 3 No. 2, pp. 113-129.
- Bauregard, T.A., Basile, K.A. and Canónico, E. (2019), "Telework: outcomes and facilitators for employees", in Landers, R.N. (Ed.), *The Cambridge Handbook of Technology and Employee Behavior*, Cambridge University Press, Cambridge, pp. 511-543. Disponibilizado em: <https://eprints.bbk.ac.uk/28079/>
- Belzunegui-Eraso, A. and Erro-Garcés, A. (2020), "Teleworking in the context of the covid-19", *Sustainability*, Vol. 12 No. 9, p. 3662.
- Bucater, A. (2016), "Liderança a distância: um estudo sobre os desafios de liderar equipes em um contexto de trabalho remoto", *Dissertação de Pós-Graduação*, Universidade Metodista de São Paulo.
- Dana, L.P. (2017), *Entrepreneurship in Western Europe: A Contextual Perspective*, World Scientific.
- Daniels, K., Lamond, D. and Standen, P. (2001), "Teleworking: frameworks for organizational research", *Journal of Management Studies*, Vol. 38 No. 8, pp. 1151-1185.
- de Vries, H., Tummars, L. and Bekkers, V. (2019), "The benefits of teleworking in the public sector: reality or rhetoric?", *Review of Public Personnel Administration*, Vol. 39 No. 4, pp. 570-593.
- Direção Geral de Saúde (DGS) (2020), "Covid-19", available at: <https://covid19.min-saude.pt/>
- European Environment Agency (EEA) (2019), "Air quality in Europe – 2019 report", Publications Office of the European Union, Luxembourg, available at: <https://www.eea.europa.eu/publications/air-quality-in-europe-2019>
- Fairweather, N.B. (1999), "Surveillance in employment: the case of teleworking", *Journal of Business Ethics*, Vol. 22 No. 1, pp. 39-49.

- Felippe, G. (2018), "A internet e as novas tecnologias na relação de trabalho: teletrabalho/home office e a jornada de trabalho", Dissertação de Mestrado, Pontifícia Universidade Católica de São Paulo.
- Ferreira, J.P. and Oliveira, R.M.D.S.R. (2018), "O teletrabalho no contexto da educação a distância", *Multifaces: Revista de Ciência, Tecnologia e Educação*, Vol. 1 No. 1, pp. 90-100.
- Gálvez, A., Tirado, F. and Alcaraz, J.M. (2020), "'Oh! Teleworking!' Regimes of engagement and the lived experience of female Spanish teleworkers", *Business Ethics: A European Review*, Vol. 29 No. 1, pp. 180-192.
- Haddon, L. and Lewis, A. (1994), "The experience of teleworking: an annotated review", *The International Journal of Human Resource Management*, Vol. 5 No. 1, pp. 193-223.
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X. and Cheng, Z. (2020), "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China", *The Lancet*, Vol. 395 No. 10223, pp. 497-506.
- Jardon, C. and Martínez-Cobas, X. (2020), "Culture and competitiveness in small-scale Latin American forestry-based enterprising communities", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 14 No. 2.
- Kwon, M. and Jeon, S.H. (2017), "Why permit telework? Exploring the determinants of California city governments' decisions to permit telework", *Public Personnel Management*, Vol. 46 No. 3, pp. 239-262, doi: [10.1177/0091026017717240](https://doi.org/10.1177/0091026017717240).
- Leite, A.L., Lemos, D.D.C. and Schneider, W.A. (2019), "Teletrabalho: uma revisão integrativa da literatura internacional", *CONTEXTUS – Revista Contemporânea de Economia e Gestão*, Vol. 17 No. 3, pp. 187-210.
- Maciel, A.G., Carraro, N.C., de Sousa, M.A.B. and Sanches, A.C. (2017), "Análise do teletrabalho no Brasil", *Revista Gestão Empresarial-RGE*, Vol. 1 No. 1, pp. 20-33.
- Madsen, S.R. (2003), "The effects of home-based teleworking on work-family conflict", *Human Resource Development Quarterly*, Vol. 14 No. 1, pp. 35-58.
- Mann, S. and Holdsworth, L. (2003), "The psychological impact of teleworking: stress, emotions and health", *New Technology, Work and Employment*, Vol. 18 No. 3, pp. 196-211.
- Marôco, J. (2018), *Análise Estatística Com o SPSS Statistics 25*, 7th ed., ReportNumber, Lisboa.
- Melo, P.C. and Silva, J.D.A. (2017), "Home telework and household commuting patterns in Great Britain", *Transportation Research Part A: Policy and Practice*, Vol. 103, pp. 1-24, doi: [10.1016/j.tra.2017.05.011](https://doi.org/10.1016/j.tra.2017.05.011).
- Myllyvirta, L. and Thieriot, H. (2020), "11,000 Air pollution-related deaths avoided in Europe as coal, oil consumption plummet", *Centre for Research on Energy and Clean Air – CREA*, available at: <https://energyandcleanair.org/wp-content/uploads/2020/04/CREA-Europe-COVID-impacts.pdf>
- Palacic, R., Ramadani, V., Dilovic, A., Dizdarevic, A. and Ratten, V. (2017), "Entrepreneurial intentions of university students: a case-based study", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 11 No. 3.
- Pratt, J.H. (1984), "Home teleworking: a study of its pioneers", *Technological Forecasting and Social Change*, Vol. 25 No. 1, pp. 1-14.
- Quivy, R. and Campenhoudt, L. (2013), *Manual de Investigação em Ciências Sociais*, 6th ed., Gradiva, Lisboa.
- Ramadani, V., Palalić, R., Dana, L.P., Krueger, N. and Caputo, A. (2020), *Organizational Mindset of Entrepreneurship*, Springer.
- Ramadani, V., Rexhepi, G., Abazi-Alili, H., Beqiri, B. and Thaci, A. (2015), "A look at female entrepreneurship in Kosovo: an exploratory study", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 9 No. 3.
- Ratten, V. (2017), "Entrepreneurial universities: the role of communities, people and places", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 11 No. 3.

- 
- Ravalet, E. and R erat, P. (2019), "Teleworking: decreasing mobility or increasing tolerance of commuting distances?", *Built Environment*, Vol. 45 No. 4, pp. 582-602.
- Rocha, C.T.M.D. and Amador, F.S. (2018), "O teletrabalho: conceitu a o e quest es Para an lise", *Cadernos Ebape.Br*, Vol. 16 No. 1, pp. 152-162.
- Rosenfield, C.L. and Alves, D.A. (2011), "Teletrabalho", in Cattani, A. and Holzmann, L. (Orgs.), *Dicion rio de Trabalho e Tecnologia*, Zouk, Porto Alegre, pp. 414-418.
- Salamzadeh, A. and Kawamorita, H. (2017), "The enterprising communities and startup ecosystem in Iran", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 11 No. 4, pp. 456-479.
- Sullivan, C. (2003), "What's in a name? Definitions and conceptualisations of teleworking and homeworking", *New Technology, Work and Employment*, Vol. 18 No. 3, pp. 158-165.
- Tavares, A.I. (2017), "Telework and health effects review", *International Journal of Healthcare*, Vol. 3 No. 2, p. 30.
- Thulin, E., Vilhelmson, B. and Johansson, M. (2019), "New telework, time pressure, and time use control in everyday life", *Sustainability*, Vol. 11 No. 11, p. 3067, doi: [10.3390/su11113067](https://doi.org/10.3390/su11113067).
- World Health Organization (2020), "Coronavirus disease (COVID-19) pandemic", available at: <https://www.who.int/>

#### Further reading

- Despacho no 3298-B (2020), "Despacho no 3298-B/2020 de 13 de mar o da administra o interna e Sa de – Gabinetes do ministro da administra o interna e da ministra da Sa de", Di rio da Rep blica n.  52/2020, 1.  Suplemento, S rie II (2020), available at: [www.dre.pt](http://www.dre.pt)
- Despacho no 3427-B (2020), "Despacho no 3427-B/2020 de 18 de mar o da administra o Interna – Gabinete do ministro", Di rio da Rep blica n.  52/2020, 2.  Suplemento, S rie II (2020), available at: [www.dre.pt](http://www.dre.pt)
- Di rio da Rep blica (2020), "Resolu o da assembleia da rep blica de 18 de Mar o", Di rio da Rep blica n.  55/2020, 3.  Suplemento, S rie I (2020), available at: [www.dre.pt](http://www.dre.pt)

#### Corresponding author

Vanessa Ratten can be contacted at: [v.ratten@latrobe.edu.au](mailto:v.ratten@latrobe.edu.au)