



## THE INCREASE IN TELEWORKING AND ITS IMPACTS ON WORKERS 'HEALTH

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### Abstract

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Approach to the advancement of teleworking, mainly due to the pandemic brought about by the new Coronavirus, where the consequences of this advancement, without proper planning, and without knowing for certain what will happen in terms of impacts on health, safety, well-being and quality of life workers, deserve special attention. Objective - To understand what teleworking is and what are the impacts on workers' health. Methods - Qualitative research, exploratory, with analytical-descriptive guidance, through bibliographic research from various sources in the "Preventionist World", which address the issue of teleworking. Results - Understand what are the possible risks brought by the sudden increase in telework, so that the preventive agents of the working world, both government, companies and workers, can develop preventive actions, to control the risks and reduce the impacts and their consequences on health, safety, well-being and quality of life for workers.

Keywords: Impacts. Teleworking. Workers.

### 1. INTRODUCTION

The entirety of humanity, the world as a whole, is constantly undergoing change. In current times, these transformations are becoming increasingly accelerated, and the world of work is no different, as these changes bring about significant transformations and impacts.

With the pandemic brought by the new Coronavirus (COVID-19) in late 2019, several of these transformations were accelerated and have already become a reality, such as remote work, also known as telecommuting.

The so-called telecommuting can be considered any work that can be performed outside the traditional workplace environment, using technology that enables it, as it does not require the physical presence of the worker at the company. Thus, telecommuting can be understood not only as work done from home but from anywhere the worker can perform their activities, even through a smartphone, tablet, or laptop. The so-called Home office is, in fact, a form of telecommuting, as it is carried out from home.

Unfortunately, the speed of technological changes surpasses the speed of updating the necessary regulations for the safe use of new transformations in the world of work, and this can have serious consequences for the health of workers.

In a recent survey conducted by the Brazilian Federal Senate, it was found that currently, approximately 21 million Brazilians have worked or are working remotely. Of this total, about two-thirds state that they engaged in remote work due to the social isolation caused by the new Coronavirus pandemic. This number corresponds to an estimate of 14 million Brazilians (SENATE AGENCY, 2020). According to the results of this research, telecommuting has also brought benefits to personal life. The majority of remote workers perceived an increase in their personal well-being (49%). For 23%, it remained the same, while another 26% reported a decrease in well-being due to telecommuting. The research also pointed out benefits for families. For 48%, the family environment improved. For 39%, nothing changed. Only 12% responded that remote work worsened the family environment. The survey also highlights some advantages reported by workers, such as increased productivity, flexible hours (28%), followed by having more time for the family (24%). The lack of commuting to work (24%) and reduced expenses (12%) were also mentioned. However, this same research already indicates some difficulties in this type of work, such as a lack of quality internet (22%), followed by the difficulty of balancing work with household chores (20%). The lack of suitable computer equipment (16%) and the absence of contact with colleagues (15%) were also mentioned as challenges when starting remote work.

The consequences of these difficulties directly impact ergonomic issues, that is, posture-related problems, and the mental health of workers due to this new form of work.

Many of these consequences are addressed in this research because, as this type of work was implemented abruptly for many workers without proper planning, the consequences for their health, especially mental health, will only be realized in the medium and long term. This is the focus of this research, to try to understand this new form of work so that safety and health professionals can anticipate the problems that are emerging and will continue to arise, proposing control measures from now on.

## **2. OBJECTIVE**

The main objective of this research is to understand how telecommuting is being implemented in Brazil and worldwide, discuss its impacts on the health of workers, in order to highlight the harm caused by the implementation of telecommuting.

## **3. METHOD**

Based on published texts and specific scientific articles, a bibliographic search was conducted, along with the investigation of other materials available on websites that address the subject and are accessible for research on the internet. This allowed for the foundation of the proposed topic. The research is current and purely qualitative, without involving research on individuals or any disclosure of restricted or confidential data.

#### 4. TELECOMMUTING

As previously discussed, telecommuting is a type of work that can be performed from anywhere, not necessarily from home, with the worker not physically present at the company's premises.

Telecommuting offers significant possibilities for flexibility and virtual group communication, as highlighted in the research conducted by the Senate Agency. However, on the other hand, it blurs the line between personal and professional life, making the worker a slave to connectivity devices. This can lead both employees and companies to mistake increased productivity for an increase in working hours.

To achieve success in quality of life, it is crucial to maintain a balance between personal and professional life. This balance allows individuals to attain a state of well-being, becoming more productive without compromising their health, safety, well-being, and overall quality of life.

On one hand, this type of work provides more freedom to workers to better manage their time, but on the other hand, it can create non-compliant working conditions because many places, such as homes, are not prepared or suitable for a worker to labor for eight hours a day. Workers were sent to work remotely due to the new Coronavirus pandemic without allowing time for proper planning, and many workers' homes lack the necessary infrastructure for telecommuting, especially ergonomic structure, such as appropriate furniture.

Some of the activities carried out in companies are difficult to adapt to remote work, such as a production line where the presence of workers is necessary. However, other tasks, such as order analysis, sales, client visits, and cost spreadsheet preparation, are perfectly adaptable to this new work model.

In this new scenario, there is a reduction in expenses due to the employer no longer needing to cover the employee's commute, which is beneficial for the employer. It also brings advantages for the employee, as they no longer have to commute to work, saving time lost in traffic, especially in large urban centers. However, the issue of the worker's health and safety, particularly their mental health, must be considered.

In Brazil, in 2017, according to the Ministry of Economy, Repetitive Strain Injuries (RSI) and/or Work-Related Musculoskeletal Disorders were responsible for the absence of 22,000 workers." (Brazil, 2019)<sup>2</sup>

According to the latest Statistical Yearbook of Social Security (AEPS, 2020), in 2018, 41,904 Accidental Sick Leave benefits were granted, related to diseases of the musculoskeletal system and connective tissue. This benefit is provided to a worker covered by Social Security who is temporarily incapacitated for work for more than 15 days due to a work-related accident (INSS, 2017).

Society as a whole can benefit from telecommuting. For example, by reducing the number of vehicles on the streets, we can also reduce pollution and noise caused by vehicles, as well as improve the already congested traffic in large urban centers, thus enhancing urban mobility.

Telecommuting is already a rapidly expanding reality, especially in developed countries. However, its expansion should be carefully discussed and monitored, applying the principles of occupational health and safety. Workers should be supported by the health and safety system,

and their labor rights should not be compromised, to ensure that this new form of work does not become a new source of work-related health issues.

## **5. TELECOMMUTING AND ITS CONSEQUENCES FOR THE LABOR WORLD**

Like any new form of work, there are advantages and disadvantages for the worker, and we will only truly understand the consequences in a few years. In the case of telecommuting, one emerging issue is overwork, where the worker is virtually connected to work 24/7. The idea of workers always being connected and able to work from anywhere has raised concerns in many places, including France. France was compelled to enact a law known as the Right to Disconnect (le droit à la déconnexion). This law introduced the premise that companies with more than 50 employees must negotiate with unions to define better hours during which workers can disconnect from work. In other words, workers can ignore messages sent by the company, typically outside regular working hours, such as weekends and holidays, without facing punishment for doing so." (OCCUPATIONAL HEALTH, 2017)5.

In Germany, Volkswagen has been imposing restrictions on email access since 2011, with no email access allowed between 6:15 PM and 7:00 AM." (EXAME, 2014)6.

As many companies had not yet implemented telecommuting systems, they had to do so abruptly, and few guidelines for such implementation can be found in the literature. To address this, the Brazilian Association of Business Communication - ABERJE, published 8 topics for the urgent implementation of a Home Office. They recommend that over the course of several days, the entire cycle involving this new work routine be communicated, covering both professional and personal aspects of the worker." (ABERJE, 2020)7:

Initiation of the transition process (or expansion for those who already have it).

Infrastructure.

Work routines.

Adaptation of routines to the new reality.

Health.

Security.

Quality of life - Amidst this chaos.

Support.

The problem that is already beginning to emerge is the issue of increased stress caused or exacerbated by excessive work at home, especially cognitive work, where the mind is pushed to the extreme without time to recover, leading to the mental illness of the worker, directly related to work. When it comes to mental illness, it becomes challenging to quantify because there are no pre-established quantified exposure limits. This condition of professional exhaustion has been given the name Burnout Syndrome, which is characterized by three classic signs (ANAMT, 2019)<sup>8</sup>:

Physical and Psychological Exhaustion (the feeling of not being able to handle tasks);

Indifference and Loss of Personal Identity (not caring anymore about one's own professional performance, cynicism, and apathy);

Low Job Satisfaction.

The issue of work-related mental illness was already a cause for concern worldwide before the pandemic brought by the new Coronavirus. Taking Brazil as an example, statistics show that Brazilians are increasingly suffering from mental health issues due to their work environment, following a global trend. According to a study by the International Stress Management Association (ISMA), in 2018, one in three Brazilian workers was affected by the negative effects of stress, and only Japan had a higher number of affected workers, reaching 70% of the economically active population (ISMA, 2019).<sup>9</sup>

According to the Brazilian Social Security Administration (considering 2010 data), there are approximately 70,000 sick leaves per year due to depression. In 2016, these represented 37.8% of all sick leaves motivated by mental and behavioral disorders, which include not only depression but also stress, anxiety, bipolar disorders, among others. Between 2009 and 2015, nearly 97,000 people were granted disability pensions due to mental and behavioral disorders, with a focus on depression, anxiety disorders, and post-traumatic stress disorder. In total, these new benefits currently amount to an annual cost of R\$ 113.3 million (Brazilian Reais) to public coffers (ÉPOCA, 2017). In the latest Statistical Yearbook of Social Security (AEPS, 2020), it is reported that 10,537 Accidental Sick Leaves were granted in 2018 for mental and behavioral disorders, compared to 9,161 granted in 2017.

Over time, telecommuting workers may become increasingly distant from the company's environment, no longer feeling like a part of the organization. This can lead to issues such as the fear of losing their job. According to ISMA (2019), the biggest cause of stress among Brazilians is the fear of job loss. It is estimated that 3.5% of the Brazilian Gross Domestic Product (GDP) is lost due to the harmful effects of work-related stress.

What organizations need to understand is that, in the face of this new form of work, especially the mental health of workers, must be monitored, and companies should eliminate the premise of blaming workers for illness. Workers with mental illness should, after treatment, be reintegrated into work and not be exposed to situations that trigger further illness, as it could worsen their condition, particularly with telecommuting.

## **6. THE REGULATION OF TELECOMMUTING**

In Brazil, telecommuting was regulated by Law No. 13,467, dated July 13, 2017, amending the Consolidation of Labor Laws (CLT), including Chapter II-A - Telecommuting, to align Brazilian legislation with this new form of work (CLT, 2020).

## CHAPTER II-A

### TELECOMMUTING

Article 75-A. The provision of services by the employee in a telecommuting regime shall comply with the provisions of this Chapter.

Article 75-B. Telecommuting is considered the provision of services predominantly outside the employer's premises, using information and communication technologies that, by their nature, do not constitute external work.

Sole Paragraph. Attendance at the employer's premises for the performance of specific activities that require the employee's presence in the establishment does not invalidate the telecommuting regime.

Article 75-C. The provision of services in the telecommuting mode shall be expressly stated in the individual employment contract, which shall specify the activities to be carried out by the employee.

§ 1. The transition between in-person and telecommuting regimes may be made, provided there is mutual agreement between the parties, recorded in an addendum to the contract.

§ 2. The transition from telecommuting to in-person work may be made at the employer's discretion, with a minimum transition period of fifteen days, with corresponding registration in an addendum to the contract.

Article 75-D. The provisions regarding responsibility for the acquisition, maintenance, or provision of technological equipment and the necessary and adequate infrastructure for remote work, as well as the reimbursement of expenses incurred by the employee, shall be stipulated in a written contract.

Sole Paragraph. The utilities mentioned in the caput of this article do not form part of the employee's remuneration.

Article 75-E. The employer must provide employees with explicit and conspicuous instructions on precautions to be taken to prevent work-related illnesses and accidents.

Sole Paragraph. The employee must sign a liability statement committing to follow the instructions provided by the employer.

Many companies in Brazil, as they had to adopt telecommuting abruptly, are not faithfully complying with what is stated in the CLT. First and foremost, telecommuting should be included in the individual employment contract of the employee, specifying the activities carried out by the employee. Few companies have fulfilled this requirement.

One point that deserves considerable attention is Article 75-E, which states that the responsibility lies with the employer to provide guidance to the employee on preventing occupational accidents and illnesses. Many workers are working from home without such guidance, which will contribute to the future increase in work-related musculoskeletal disorders (LER/DORT) and mental health-related absenteeism.

Another major concern is in the event of an accident involving a worker who performs their activities at home, in the so-called Home Office. In this case, how to determine if it was a work-related accident or not? For each such accident case, there will be a legal battle, where the worker will try to prove that they were in the course of their work when the accident occurred, while the company will try to disqualify the accident as work-related.

When it comes to regulation through Regulatory Norms (NRs) published by the former Ministry of Labor (currently under the Ministry of Economy), there's NR 17 – Ergonomics, which was introduced in 1990 when telecommuting was practically non-existent. This norm does not directly address the issue of telecommuting at any point, leaving safety professionals without an official reference for implementing preventive measures against the risks associated with telecommuting. What's interesting is that, since its drafting in 1990, NR 17 has required that working conditions be adapted to the psychophysiological conditions of workers to provide maximum comfort, safety, and efficient performance (NR 17, 2018). In this aspect, NR 17 was quite forward-thinking, as it drew attention not only to the physical well-being of workers but also to their psychological conditions, which are now beginning to significantly affect the world of work.

Many of today's questions will only be answered in the future because there isn't yet sufficient time for a consistent set of data regarding telecommuting.

## **7. THE PANDEMIC, TELECOMMUTING, AND PREVENTION**

As mentioned in this article, the pandemic accelerated various processes and forms of work that already existed but were still in a nascent stage, such as telecommuting. The Safety & Health Practitioner (SHP, 2020)<sup>13</sup> already emphasizes the importance of health and safety protection measures demonstrated by the new Coronavirus. If some companies viewed preventive measures in the workplace as a waste of time before, now the adoption of preventive measures can make the difference between a company's survival or failure. It highlights that these measures must be taken seriously.

As expected, an increase in musculoskeletal problems related to work is anticipated due to telecommuting. The European Agency for Safety and Health at Work (OSHA-EU, 2020)<sup>14</sup> has launched the Healthy Workplaces Campaign 2020-2022 with the theme "Musculoskeletal Disorders," emphasizing the need to ensure the best possible work environment to safeguard the health and well-being of workers, which is an obligation for all companies. It also highlights that the pandemic has affected the way we live and work, and that we can all benefit from the guidance and resources provided.

The pandemic is also giving rise to types of offices of the future, both at home and in companies. In a recent study published by the British Broadcasting Corporation (BBC, 2020)<sup>15</sup>, five types of future offices and their ways of functioning are listed, which are emerging due to the pandemic:

**Fully Remote Office:** You don't need to go to the company.

**Hybrid Model:** Work one or two days a week in the office and the rest remotely.

**Remote Plus Model:** One week in the office, followed by three weeks of remote work.

**Hub and Spoke:** Involves expanding the company with remote offices in other cities or countries to leverage local expertise.

**Quality Time:** Companies that prioritize the quality of production without closely monitoring working hours.

In this same publication, it is discussed not being physically present at the company to work:

Certainly, for some professions, location is essential. But office workers are facing a blank page. We have an incredible opportunity to redefine how we work and rewrite the rules.

As the pandemic accelerated telecommuting, workers are starting to realize that they are working more, which raises the question of whether productivity has improved or not. Some predictions of reduced working hours are not materializing, especially for activities involving cognitive work. Jack Ma, former chairman of Alibaba, a major Chinese technology company, said at an artificial intelligence conference in Shanghai that he believes in the future, humans will work only 12 hours a week (EL PAÍS, 2020)<sup>16</sup>.

## 8. RESULTS

As a likely outcome of the adoption of telecommuting, there will be a decrease in workers exposed to unhealthy and hazardous agents, leading to a reduction in typical workplace accidents.

Commute accidents, those that occur when workers commute from their homes to their workplaces and vice versa, are also expected to decrease because fewer workers will need to commute to work.

Other types of accidents that may decrease directly related to telecommuting, along with increased automation, are accidents involving limb amputations, especially upper limbs. According to the Anuário Estatístico da Previdência Social (AEPS, 2020)<sup>3</sup>, in 2018, there were 23,201 cases of upper limb fractures, with 3,645 cases resulting in amputations at the wrist and hand level.

Negative consequences expected include an increase in worker illnesses directly related to work, especially mental health issues, as well as illnesses related to posture and repetitive tasks, known as WRMSDs (Work-Related Musculoskeletal Disorders).

According to the Ministry of Health, in a survey released in April 2019, well before the pandemic, WRMSDs were the most common diseases affecting Brazilian workers. Over a 10-year period, these two diseases accounted for 67,599 cases among workers in the country, representing a 184% increase during that period (Ministry of Health, 2019). In the same release, the Ministry of Health recommended preventive actions to prevent these health issues among workers and emphasized that employers should adhere to Regulatory Norm 17. This norm establishes parameters to allow for the adaptation of working conditions to the psychophysiological characteristics of workers in order to provide maximum comfort, safety, and efficient performance.

The issue of telecommuting is here to stay and is already a major trend for the future of work. In an interview with scholars published by El País from Spain (EL PAÍS, 2020), ten trends for the post-pandemic world of work were outlined, including distance education, new restaurant models, and also the issue of telecommuting.

Home office was already a reality for many people, from freelancers and self-employed professionals to employees of companies that had already adopted the model. However, this modality will grow even further. With the pandemic, more companies of various sizes started to organize themselves to work with this model. Furthermore, remote work eliminates the need to be in crowded spaces, such as buses and subways, especially during peak hours.

Another point that already deserves attention is the aging population, and the furniture for the development of telecommuting should take this into consideration for the "Home Offices of the Future." The Health & Safety Executive (HSE, 2020)<sup>19</sup>, in its report on the future of the world



of work and worker health in workplaces, draws attention to the aging population in the United Kingdom:

In terms of demographic change, the population of the United Kingdom is aging, and for the first time, the elderly outnumber children. More people are likely to work in old age and with pre-existing health issues.

In another point of this report, concern is raised regarding the adoption of preventive measures:

An understanding of the changing environment and how it impacts the workplace, as well as the implications for occupational health, is vital to inform future preventive measures, regulatory approaches, and the provision of occupational health services.

A major concern regarding the adverse health effects on workers is not only the crisis affecting companies but also how to deal with the issues that telecommuting is bringing about.

## 9. CONCLUSION

Telecommuting is another of the changes happening in the world of work, and it must be thoroughly understood so that preventive measures can be developed as quickly as possible to minimize the negative impacts on the health, safety, well-being, and quality of life of workers. New ways of working, particularly with the advancement of technology, will have a significant impact on the world of work, with consequences still unknown. In a recent report from OSHA-EU – European Agency for Safety and Health at Work, titled "Foresight on new and emerging occupational safety and health risks associated with digitalization by 2025 European Risk Observatory Report" (OSHA-EU, 2019), in its conclusion, it states:

The workforce will be more diverse and dispersed, frequently changing jobs and working online rather than being physically present. All of this will give rise to challenges and opportunities, including those related to occupational health and safety (OHS). Predicting these changes is difficult; therefore, future scenarios, such as those produced during this forecasting project, are a valuable tool to help inform policymakers.

It is the responsibility of companies to ensure a safe and healthy working environment for their workers. The European Agency for Safety and Health at Work (OSHA-EU, 2017), through the European Pillar of Social Rights, published by the European Parliament on November 17, 2017, already draws attention to the fact that workers have the right to a work environment adapted to their needs, allowing them to prolong their participation in the labor market. These pillars consist of 20 principles to which workers are entitled, such as access to essential services, healthcare, social protection, information about working conditions, among others. The question is: How to ensure this healthy working environment in the face of telecommuting, with increasingly informal employment relationships?

And if this environment no longer exists physically? How can we ensure healthy and sustainable working conditions? What about Social Security?

Other evolutions are still taking place, and they are already beginning to change the working relationship with telecommuting, such as strict control over working hours. This control will probably be a thing of the past.

A major advantage of telecommuting is greater inclusion of People with Disabilities (PWDs) because if the worker doesn't need to be in the office all day, dealing with all the accessibility challenges, including public transportation, and can perform their work from home where there are already adaptations for their disability, this can also be a new positive trend.

Should prevention agents focus their efforts to prevent mental exhaustion among workers in telecommuting from becoming a common ailment? We face a significant challenge with new forms of work, including telecommuting, and governments, companies, and workers must work together to find innovative solutions that ensure the health, safety, well-being, and quality of life of those who work.

It's crucial for the government and businesses to develop methods for analyzing future scenarios of telecommuting, establish policies, and strategies to anticipate the impacts on workers' health caused by this new form of work, especially at a time when these impacts were essentially imposed on the labor world without any kind of planning due to the pandemic.

That we can provide dignified, high-quality telecommuting options for both young and older workers, preempting the issues caused by this new form of work by proposing preventive measures that ensure the health, safety, well-being, and quality of life of workers.

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