The tip of the iceberg: telework during the pandemic

A ponta do iceberg: o teletrabalho durante a pandemia

Evelise Dias Antunes[a,b]
https://orcid.org/0000-0002-1875-5538
Email: eveantunes@gmail.com

Bruno Chapadeiro Ribeiro[c]
https://orcid.org/0000-0003-0167-0164
Email: brunochapadeiro@id.uff.br

Marta Santos[d]
https://orcid.org/0000-0003-1132-1814
Email: marta@fpce.up.pt

Frida Marina Fischer[e]
https://orcid.org/0000-0001-9403-6300
Email: fmfische@usp.br

[a]Instituto Federal do Paraná. Curitiba, PR, Brasil.

[b]Universidade de São Paulo. Faculdade de Saúde Pública. Programa de Pós-Graduação em Saúde Pública. São Paulo, SP, Brasil.

[c]Universidade Federal Fluminense. Departamento de Psicologia de Volta Redonda. Volta Redonda, RJ, Brasil.

[d]Centro de Psicologia da Universidade do Porto, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, PT.

[e]Universidade de São Paulo. Departamento de Saúde Ambiental. Faculdade de Saúde Pública. São Paulo, SP, Brasil.

Abstract

The new coronavirus pandemic compulsorily brought work into the homes of thousands of workers worldwide. Therefore, this essay aims to highlight the psychosocial factors of health risks and telework's panorama in the first year of the COVID-19 pandemic and, in this context, to analyze the telework policy in Brazil. We presented the different concepts of telework and discuss how and why it is not a risk-free modality. The literature highlights psychosocial factors, such as social and professional isolation, work intensification and overlapping of professional and family activities. Secondary data obtained from the National Household Sample Survey and analyses by the Institute of Applied Economic Research during the pandemic revealed a panorama of inequality in the profile of those who have access to telework, in addition to the accentuation of regional differences. Finally, we identified a mismatch between the regulation of telework and the workers' needs, impacted by the COVID-19 pandemic. Thus, it is necessary to elaborate, reformulate and implement policies, aiming to guarantee the rights and health of teleworkers.

Keywords: Telework; Occupational health; COVID-19; Cost of illness; Public policies.

Correspondence
Evelise Dias Antunes
Rua João Negrão, 1285, Curitiba, PR, Brasil. CEP 80230-150

Resumo

A pandemia do novo coronavírus levou o trabalho para a residência de milhares de trabalhadores no mundo, de maneira compulsória. Portanto, este ensaio objetiva evidenciar os fatores psicossociais de riscos à saúde e o panorama do teletrabalho no primeiro ano da pandemia de covid-19 e, neste contexto, analisar a política do teletrabalho no Brasil. Apresentamos os diferentes conceitos do teletrabalho e discutimos sobre como não é uma modalidade ausente de riscos. Fatores psicossociais, como o isolamento social e profissional, a intensificação do trabalho e sobreposição de atividades profissionais e familiares são alguns dos destacados na literatura. A partir de dados secundários obtidos da Pesquisa Nacional por Amostra de Domicílios e análises do Instituto de Pesquisa Econômica Aplicada durante a pandemia, revelou-se um panorama de desigualdade no perfil daqueles que tem acesso ao teletrabalho, além da acentuação das diferenças regionais. Por fim, identificamos um descompasso entre a regulamentação do teletrabalho e as necessidades dos trabalhadores, impactadas pela pandemia de covid-19. Assim, é necessária a elaboração, reformulação e implementação de políticas, visando garantir os direitos e saúde dos teletrabalhadores.

Palavras-chave: Teletrabalho; Saúde do trabalhador; Covid-19; Efeitos psicossociais da doença; Políticas públicas.

Introduction

After two years of restrictions, the consequences of the new SARS-CoV-2 coronavirus pandemic are, first of all, sanitary, but also economic, social and severely impact the populations' physical and mental health. In 2020, Brazil's labor indicators showed that the pandemic reduced employment rate and aggravated social problems, such as the aggravation of poverty and inequality. Nevertheless, the crisis caused by the COVID-19 pandemic tests a profound restructuring of the productive space, which has built new rules in the working world.

In 2020, Zoom Meetings, a videoconferencing software platform, surpassed ExxonMobil, the largest American oil company, on the stock exchange, with 139 billion dollars in market value, which is equivalent to a 100 million dollar difference (Zoom..., 2021). This result refers to the great leap of teleworking, a modality encouraged by the International Labour Organization (ILO), and adopted by public and private organizations worldwide to face the socioeconomic crisis. Thus, remote work became more visible, as a solution that, initially, was thought of as temporary for the maintenance of jobs – but over time, considering the financial cost-benefit it offered organizations, was proclaimed as "here to stay," by consensus.

Working remotely or from home are not new phenomena, but the relevance of studying them has increased, especially due to the pandemic. In traditional workplaces, one must pay attention to the several aspects that influence workers' health among different type of activities, as a starting point or as a reference to analyze knowledge and to perceive the tasks adequacy. However, how the necessary attention is given to health issues in home-based telework?

This change in the workplace may have a long-term impact on different aspects due to its specificities, thus increasingly arousing the attention of those who analyze the worker's health, converting its discussion based on the emerging national and international political agenda. Given this scenario, this essay aims to gather and highlight the psychosocial risk factors and the panorama of telework during the COVID-19 pandemic and, starting from this context, to analyze

Brazil's telework policy. The article is organized into four sections.

First, we present the definitions of telework and evidenced its psychosocial risk factors to the workers' health. Therefore, we contextualized Brazil's telework panorama during the pandemic based on secondary data obtained from the National Household Sample Survey (PNAD COVID19), conducted by the Brazilian Institute of Geography and Statistics (IBGE), and from analyses by the Institute of Applied Economic Research (IPEA). Finally, using documentary analysis, we temporally discussed Brazil's telework regulation in the past, present, and future. In view of this, this critical essay aims to contribute to the interpretation of concepts in the public domain, offering a look at a scientific issue of current interest and guiding the agenda of public policies on telework.

From telework to "Smart Working"

Several terms are used to designate the work mediated by Information and Communication Technologies (ICTs) and performed in the household, such as: remote work, work at home and telework. These constitute flexible work forms, a multidimensional umbrella concept, however, in the legal aspect, their distinctions become evident. Telework consists of another labor modality, since there is not only a change in the place in which it occurs, but also in its organization (Antunes; Fischer, 2020).

In the Consolidation of Labor Laws (CLT), telework was defined as the service provision that occurs predominantly outside the employer's premises, with the use of ICTs that, by their nature, do not constitute external work (Art. 75-B, Law No. 13,467/2017). Telework can be categorized according to the different workplaces (home, office, and other locations), and to the intensity or frequency of ICT work outside the employer's premises (Antunes; Fischer, 2020).

Teleworking is not normally defined to include those working in the platform economy or gig economy; for example, a freelancer who works primarily from home may not be classified as a teleworker, but rather as a homeworker, under ILO Convention No. 177 terms on homeworking, not ratified by Brazil.

Other definitions of flexible work have originated, for example, from Italy, such as the "smart work." This type of work differs from telework because of its flexible arrangement, happening partly in the company's facilities and partly outside of them, without restrictions of location or working time, going beyond the limits of maximum working hours established in legislation or collective bargaining (Di Tecco et al., 2021).

Telework organization occurs in several ways – for example, a worker may be working from home on a pre-determined day, time and place; fulfilling their shift or goals; following the planned activity, while interacting and discussing when necessary to stop or modify activity plans; recording activities on the same day as they are performed, obtaining feedback from a supervisor; working more than the maximum working hours; working with flexible schedules; or fully or partially teleworking.

Because of the various modalities of telework implementation, of the lack of defined statistical standards, and of the different concepts countries are using interchangeably (slightly different and sometimes overlapping definitions), scientific studies are hampered in monitoring and systematizing the impacts of telework on workers' health, especially in longitudinal researches.

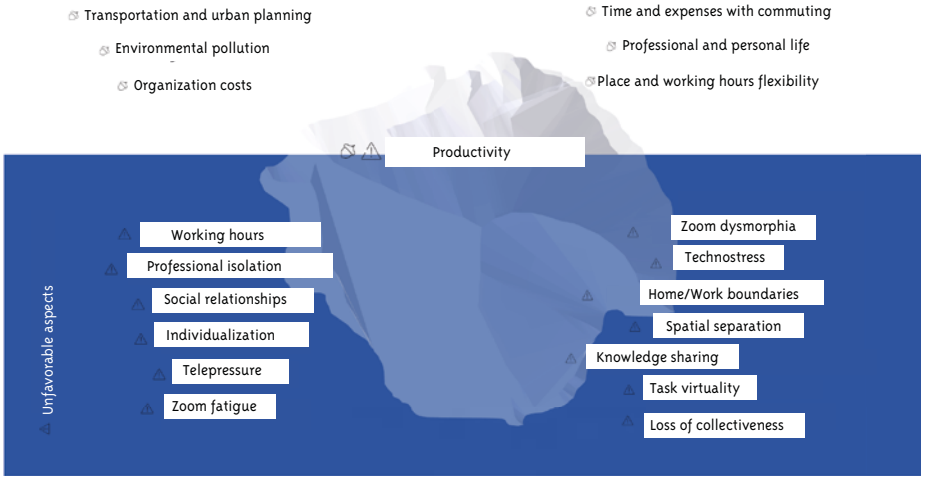
What is submerged: psychosocial risk factors in telework

When we compare telework to an iceberg, the positive aspects would represent its most visible and valued tip (Figure 1). The favoring of transportation and urban planning stands out, even if it is not really an innovative or motivating factor, since the issue of mobility in cities was already precarious before the pandemic telework and was even a driving aspect of studies of remote work. Still, the literature identifies as favorable factors the organization cost reduction, the environmental pollution reduction, the greater balance between professional and personal life, the flexibility of schedules and the reduction of time and cost with commuting. Some authors also indicate an increase in productivity, which has received special

attention in the literature and stood out during the pandemic, especially in the Brazilian public sector (Antunes; Fischer, 2020; Bridi, 2020).

However, a closer and deeper look reveals that there is more to be observed and discussed regarding the unfavorable aspects of teleworking (Figure 1). Increased productivity can have ambiguous outcomes, depending on working conditions and arrangements, employer-set goals, worker individuality, family context, social class, skin-color, and gender (OECD, 2020). Higher productivity is usually related to an accelerated pace and to an increase in daily and weekly working hours, that is, to a scenario of work intensification driven by the use of ICTs (Bathini; Kandathil, 2019). Given the multiplicity and complexity of interactions between the related factors, to date there is no consensus in the literature on the impact of productivity on remote work (Samek Lodovici et al., 2021).

Figure 1 – The telework iceberg: favorable and unfavorable aspects



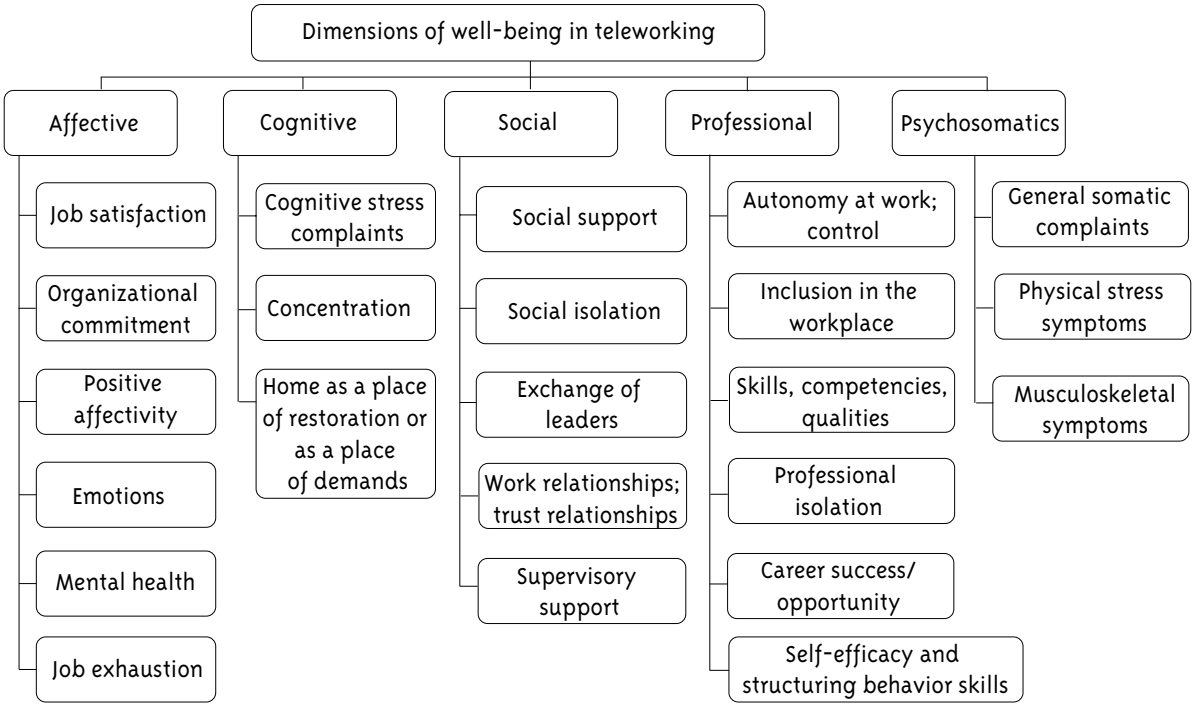
Source: prepared by the authors.

In addition to the intensification of work, other characteristics deserve attention. We systematized the evidence of a multidimensional approach through the systematic review elaborated by Charalampous et al. (2019), who constructed five macro dimensions to understand the association between telework (with the use of ICTs) and work-related well-being. The dimensions presented are: affective, cognitive, social, professional and psychosomatic, and can positively or negatively influence the workers' health (Figure 2) (Charalampous et al., 2019). Each dimension comprises several aspects that were researched, some individually and others combined, which favors our debate.

The study results indicate that we know more about affective, social, and professional factors than about cognitive functioning and psychosomatic well-being, and points out the need for more longitudinal research and a greater understanding of telework culture and organizational climate (Charalampous et al., 2019). We noticed that the long-term health effects on teleworkers are not fully known, as they depend on multidimensional impact factors and underexplored aspects that, therefore, need further clarification. Sometimes, positive factors can be perceived by workers as strategies to promote work-life balance, but in the medium and long term, the consequence of unfavorable aspects can impact the worker's health and well-being, decreasing productivity. We know that work is a social determinant of health and disease, so we must be aware of the negative psychosocial factors of on-site work that can be broadened in remote work (Giacomello et al., 2022).

According to the ILO, the dimensions of psychosocial factors are based on interactions with the work environment; work content; organizational climate; capacities; needs and experiences of workers; habits and culture; personal considerations outside the work environment; among other factors that can influence the workers' performance, satisfaction, and health.

Figure 2 – Multidimensional impact features of remote work on well-being at work.



Source: prepared by the authors, based on Charalampous et al. (2019).

As for telework, work-life imbalances have been exhaustively highlighted. The overlapping of professional and family activities is favored by factors related to family; presence of children; work performed outside of working hours; and use of technology, which are associated with subjectivity in time control. When reflecting on the telework experienced during the pandemic, it becomes evident that, among families with children or relatives who require care, there was an intensification of compulsory and non-subjective work (Durães; Bridi; Dutra, 2021). The "work self" immediately became intertwined with lives inside and outside work.

We infer that, due to greater work demands, even if workers theoretically have "greater control of their time," they have no other way than to prolong their telework hours to achieve their goals and requirements. Prior to the pandemic, studies had already indicated that the experience of temporal and spatial reorganization of remote work commonly leads to its intensification, since command and control over time are passed to workers (Alemão; Barroso, 2012). Therefore, flexible working hours and telework have become a synthesis of work intensification, which contradict the search for work-life balance for workers (Messenger, 2017).

The literature highlights professional and social isolation, which can favor individualization and negatively affect social interactions. In turn, the spatial separation hampers the sharing of knowledge added to the virtuality of the tasks, which influence the feelings, perceptions and individual attitudes in organizations. This aspect is nothing new. Nilles, the forerunner of telework studies in the United States in the 1980s, defined in his comments the possible "barriers to acceptance" of telework: "When I started studying telework in 1971[...] and during the following years of research on the subject, I believed that there were a number of possible barriers to the acceptance of telework" (Nilles, 1985, p. 136).

However, what Nilles calls barriers, we understand as psychosocial risk factors. Isolation cannot be eliminated, considering that it is associate with several variables, such as: living conditions,

housing and work, social and political relations of the company, managers, and co-workers. During the pandemic, a Microsoft survey (Spataro, 2020) conducted in six countries suggested that this factor was mitigated, since most workers experienced telework simultaneously, resulting in a sense of collective empathy. However, in the medium and long term, with the return of face-to-face activities and with teams working in partial or total remote work, will it be possible to avoid isolation? There are other issues, such as: how to mitigate the vulnerability of collective representation due to the lack of interaction? How to prevent the devaluation of the 'know-how,' the individualization, the fragmentation of activity and the loss of meaning at work?

Workplace telepressure and technostress are other factors recently identified and intensified by the pandemic. Even when workers are not on their regular work schedule but are at home, they may feel the need to respond to work-related messages. Workplace telepressure conceptually represents the combination of concern and urgency to respond immediately to work-related ICT-mediated messages. The temporal disorganization and the extension of working hours lead to an expectation of workers "always being available," promoted by the invasion of online communication and interaction tools.

There is also technostress, which – due to the presence of technological environmental conditions – promotes a chronic activation of the human stress system, resulting in the proximal risk factor for various diseases, including mental issues (technology as a stressor). Many people have experienced technostress during the pandemic, as they were suddenly forced to connect computers in their homes, learn to install software programs, and use new work and communication platforms (Molino et al., 2020). Devices that were present in our workplace "invaded" homes, becoming standard.

The change in communication between co-workers began to take place in the formal space, in platforms, calls, messages, tools that were not thought for collective cooperation and learning process, leading to a sense of dehumanization of work. The informal space ceases to exist, as does the face-to-face interaction. For example, "coffee breaks," moments that allowed the relief of organizational tensions, sharing of knowledge, and socialization, necessary when working, ended.

A new phenomenon, called "Zoom fatigue," appears. It refers to the exhaustion associated with using videoconferencing platforms (such as the Zoom program). Researchers at the University of Stanford in the United States found that fatigue is higher in women, likely due to the "self-centered attention" triggered by the view of oneself in video conferences and to the need to be physically "stuck," centered in the camera's field of view (Fauville et al., 2021). Possibly, long and repeated meetings (often unnecessary) increase the anxiety and exhaustion of both women and men.

Studies from the Harvard Medical School identified another phenomenon called "Zoom dysmorphia." People may be staring at a distorted image of themselves on the screen for hours and consequently developing a negative self-perception, triggering or aggravating a body dysmorphic disorder (Rice et al., 2021).

We identified that the use of online communication tools demands additional efforts, changes workspaces, the form and flows of information, making us think about what our future life will be like. Should we live in a technocentric way or find ways to regulate it? The temporal disorganization, the extension of working hours, the work intensification, the increase in workloads, the invasion of communication tools and the online interaction at home, in addition to compulsory participation (always being available), leads us to ask if we are heading towards a greater precariousness of work.

In Brazil, the precariousness may also be associated with the removal of working hours' protection in telework (item III, Art. 62, Law No. 13,467/2017). By disregarding the technological advances that allow employers to control the location of the worker, the activities they are performing and the start and end times of the workday, the legislator removes the right to the protection of the 8-hour workday and 44-hour working week provided for in the Article 7 of the Brazilian Constitution.

The replacement of the workday has happened through goals and results, for example, in the federal judicial sector (Antunes; Fischer, 2020). Schedule flexibility does not mean freedom, since public servants must meet a goal to have equivalence of the working day and their goals are higher (by up to

30%) than of those who perform the same activity in the agency's premises (Antunes; Fischer, 2020).

In some cases, there may be monitoring of the activity during working hours, depending on what is defined with the managers. Normative Instruction No. 65/2020, which provides for guidelines, criteria and general procedures for telework in the Federal Administration, establishes the obligation of the public servant "to remain in constant availability for contact by landline or mobile telephone for the period agreed, without extrapolating the operating hours of the unit," without, however, specifying how this regulation occurs in practice.

In the private sector, wages can be associated with productivity, which commonly leads to work overload (Reis, 2019). In telework, achieving goals is used as a "bargaining chip." The Bank Workers Union of São Paulo, Osasco and Vicinity received complaints that "workers of the group at risk for COVID-19 in remote work were called upon to meet goals, otherwise telework would be cancelled. In addition, the employee would be included in a negative hours bank" (Bater..., 2020).

This draws our attention to proposals for the continuing of exclusive telework, in which it is necessary to analyze under which conditions the workers deal with conflicts and work to achieve goals. The increase in goals for competition inserted through market competitiveness is leading to the total exhaustion and illness of employees, which reflects unfavorably on the working-class way of living and falling ill.

We also consider that remote work during the COVID-19 pandemic is different from remote work under normal conditions, since working from home at that time took place for a prolonged period, compulsorily and in difficult external circumstances. This situation by itself caused higher levels of anxiety than usual in workers, as it is associated with anxiety due to the health, social, and economic implications of the pandemic (Barros et al., 2020).

Thus, one of the guarantees to workers' health, provided for in labor legislation, deals with the limits between moments of rest and production (Alemão; Barroso, 2012). The right to illness, to privacy protection, the right to disconnection, technical guidance and training are necessary.

Around the world, changes due to the situation of workers, of time and of available resources can intensify the negative psychosocial factors related to telework (Ahrendt, 2020; Messenger, 2017). Therefore, freedom has become a two-way street: it can allow for a greater balance between life and work, but it can also lead to overload and intensification of the working day (German; Barroso, 2012).

The first year of the COVID-19 pandemic in Brazil: Telework for whom?

Among the pandemic impacts, we have seen an increase in structural unemployment and, consequently, in social inequalities. The employed population in the quarter from November 2020 to January 2021 totaled 86 million, but the unemployment rate reached 14.2% (14.2 million people) according to PNAD data (IBGE, 2021). This is the highest unemployment rate ever recorded for the period since the survey began in the quarter. Thousands of people have been furloughed from work due to social distancing, with women making up a higher percentage than men (IBGE, 2020a). For millions of other workers, work has moved home.

Most experienced telework for the first time. The number of people employed and not furloughed from work working remotely in the first week of May 2020 was 8.5 million, experiencing a peak – which did not sustain itself – of 8.9 million people in the first week of June. In the second week of July of the same year, the number of employed people working remotely decreased to 8.2 million. Such reduction possibly reflected, along with the relaxation of social distancing measures, the return of part of these people to their workplaces. It was a decreasing average, reaching 7.3 million by November (IBGE, 2020a) (Graph 1). The PNAD COVID19 was carried out and released by the IBGE in May 2020, and discontinued in November 2020. After this period, there are no official statistics on telework in Brazil.

By the last available estimate, we noticed that telework was not sustained, on the other hand, it was gradually reduced. Such fact would contrast at that time with the idea that telework was a permanent trend. The results of the practice of remote work were decreasing in Brazil, starting

in 13.3% of the total employed population, on average in May, to 9.1% in November (Graph 1). However, we highlight the gap between formal (84.3%) and informal (15.6%) workers in remote work. Formal employment becomes a privilege in a country where informal workers represents 38.3% of the employed population, according to the ILO [1](ILO, 2021). Informal jobs are generally unstable, with low wages and lacking rights or social protection.

The absence of official data on the number of companies that adopted telework during the pandemic hampers analyses, which become limited to data from the PNAD COVID-19 (discontinued in 2020). Through research, it was possible to identify a cluster by subgroups of people according to economic activity. The service sector is dominant, with an average of 43.8%, followed by the public sector, with an average of 36.24%, with an upward trend; the industrial sector was stable at around 7.1%, similar to sales and agriculture, with 5.0% and 0.6%, respectively, from May to November, 2020 (Góes; Martins; Nascimento, 2021).

Thus, we highlight that remote work is not available to everyone: it is a privilege for a smaller portion of the population in formal work in the public and service sectors. Other dimensions also help us to understand who had access or not to telework, such as educational level, skin-color, age group, income, and gender. The COVID19 PNAD found that the higher the educational level, the greater the number of people in remote work. Among the employed population, 33.6% had complete higher education, on average. Conversely, 6.1% had complete high school but not higher education, 1.2% had complete elementary school but not high school, and only 0.4% had incomplete elementary education (IBGE, 2020c).

IPEA researchers (Góes et al., 2020b) analyzed the effective PNAD COVID19 telework data in relation to people's self-reported skin-color, and compared it with the potential calculation. The potential calculation refers to the possible occupations (jobs) in the country in which remote work can be performed (Góes; Martins; Nascimento, 2020a). We noticed that pre-existing inequalities increased during the pandemic. As for skin-color and gender, shown in Graph 2, those who declared themselves as White represent the highest percentage, despite most of the Brazilian population being Black or Mixed-race (56%) (Síntese..., 2019). The potential for telework is reversed, evincing a heritage of slavery in the country's inequality regarding access to education, living and working conditions.

We consider that the small progress in gender equality made in recent decades could be threatened. This is probably because working women do not have access to adequate leave in case of illness or they disproportionately assume caretaking responsibilities, consequently having to reduce their activities or even quit their jobs (Brussevich; Dabla-Norris; Khalid, 2020). In addition, they interrupt studies due to household chores and caring for relatives, 13 times more than men. This situation is more common in the group of Black or Mixed-race women, who represent 39.8% of extremely poor people (Síntese..., 2019). Therefore, thinking about access to telework by Black or Mixed-race women seems a long way off and, although estimates indicate that women occupy the largest amount of jobs that can be performed remotely, it is men who do it the most (Góes et al., 2020a) (Graph 1).

It is up to us to reflect on the factors that were already known, such as: people with less education occupy the least qualified job positions and end up not working remotely. Perhaps what is new is the fact that some of these jobs, occupied by women, could have more resources for telework than those of men, but did not. In addition to the structural precariousness that existed before the pandemic, there are historical and systemic inequalities that are reinforced even with telework. Compensatory or affirmative policies that consider the specificities of the country are necessary. It is urgent to rethink how we can respond to the social demand and transform it, since the effects of the pandemic (controlled or not) will be permanent.

Nevertheless, regional and state differences became clear, since the highest percentage of teleworkers were concentrated in the Southeast region (59%), followed by the Northeast (16.1%), South

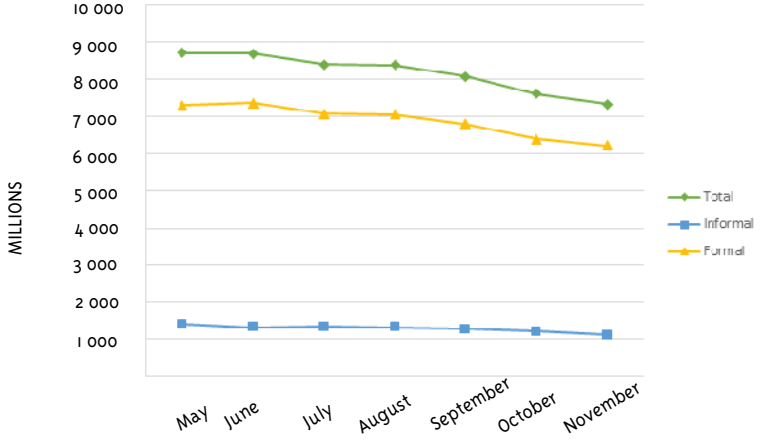
1 *Informal employment accounts for 70% of new jobs in Latin America | UN News*. Global Perspective Human Stories. Available at: <https://news.un.org/pt/story/2021/09/1762572> Access on: Nov. 11, 2021

(13.9%), Midwest (7.3%) and, in a tiny percentage (3.7%), in the North region of Brazil (IBGE, 2020c). The North region is affected by lower incomes, as well as by the higher proportion of informal jobs – performed especially by Black or Mixed-race women (IBGE, 2019). Despite the considerable figure of 13.3% of workers having experienced remote work in Brazil during the pandemic, the estimated potential, which exceeds 20 million people, that is, approximately 25% of workers and 22.7% of jobs does not seem feasible (Góes et al., 2020a).

Considering only people in telework, calculating the indicator of inequality in the distribution of income from all jobs regarding household *per capita*, the data showed that the states in the Northeast, Southeast and South regions, added to the states of Amapá and Pará, have a higher rate of inequality (Góes et al., 2021). These data are not surprising, since Brazil remains one of the countries with the highest social and income inequality in the world - according to the World Inequality Lab, which is part of the Paris School of Economics (Piketty et al., 2022). The United Nations' Human Development Report (HDR) placed Brazil in second place when ranking the countries with the highest concentration of income, following Qatar (UNDP, 2019). Therefore, the possibility of expanding telework is a complex problem that permeates the reduction of social, economic, cultural and ethnic/racial inequality in Brazil.

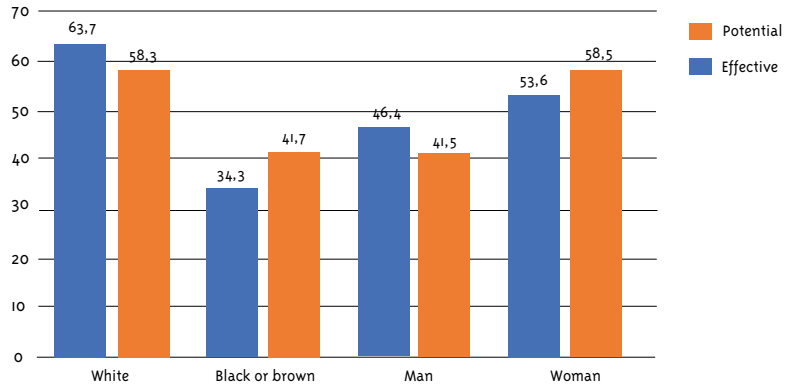
The economic and social crisis aggravated by the pandemic will leave profound consequences for the world. The panorama presented here highlights the contrasts of telework in Brazil, which should be observed and discussed in the formulation and implementation of public policies. It is also necessary to discuss a macro-level model of work-related psychosocial factors (Oakman et al., 2014). This model should consider national and international influences, social protection policies that affect employment conditions, working conditions within organizations, income inequality and individual worker health outcomes, as well as factors related to age, gender, race, accessibility and inclusion.

Graph 1 – Thousands of people working remotely in 2020.



Source: prepared by the authors, based on IBGE's microdata (2020b).

Graph 2 – Distribution of people in effective remote work versus potential telework, by self-reported skin-color and gender, as a percentage.



Source: prepared by the authors, based on the data of Góes, Martins and Nascimento (2020b).

The telework policy: past, present and future

Faced with the need to confront the effects of the economic and social crises resulting from the pandemic, the Brazilian government signed the Provisional Decree No. 927/2020, which relaxed labor rules and allowed the employer to unilaterally determine the change of the work regime, from face-to-face to remote, that is, to telework. This measure was in force from March 22 to July 19, 2020.

In Brazil, 'telework' was included in the CLT as a chapter (II-A) in the last labor counter-reform in 2017. In principle, it should take place in a voluntary agreement between the worker and the employer. However, Law No. 13,467/2017 (Brasil, 2017) establishes the possibility of changing the face-to-face and telework regime by determination of the employer (registration in a contractual addendum), with the guarantee of a minimum transition period of 15 days (Art. 75-C, Law No. 13,467/2017).

This legislation leads us to understand that the employer has the prerogative over the worker as to the definition of the work modality. It also provides that the employment contract must include the activities to be carried out and who will be responsible for the costs of acquisition, maintenance, or supply of technological equipment and infrastructure (Art. 75-D, Law No. 13,467/2017).

By not defining the responsibility for the costs of installation and maintenance of elements associated with the provision of professional activity at home (increased consumption of water, LP gas, electricity, and internet) from the employer to the worker, telework can favor companies by reducing costs of consumption, energy, employee's commuting and facility rental, transferring the expenses to the workers.

Several other aspects lack clarification in the regulations. For example, how is the agreement on the location where activities are carried out, in the worker's residence or in another place? What are the working hours, the means of communication to be used, the supervisory mechanisms and the modalities of presentation of deliverables about the work done? How will the communication of occupational accidents take place? Who will do the physical and psychosocial risk assessment and, in addition, how and when can they be done?

When it comes to the risks of telework, the legislation states that "the employer must instruct the employees, expressly and ostensibly, as to the precautions to be taken in order to avoid diseases and accidents at work." In this way, the employee must sign a term of responsibility, committing to follow the instructions provided by the employer (CLT, Art. 75-E, Law No. 13,467/2017). However, what are the risk factors to be observed in telework? Who evaluates and rates such risks in the home environment under the use of ICTs?

Given the factors that should be included in the telework policy, we must be aware of Bills under consideration for the development of this modality

in the Chamber of Deputies, such as: Bill 2251/2020 (attached to Bill 8501/2017); and in the Federal Senate (Bill No. 3,512/2020; Bill No. 4.006/2020, and Bill No. 266/2017), so that they guarantee regulation and also consider the health of workers.

The proposals provide for the obligation of the employer to provide and maintain the equipment and infrastructure necessary and adequate for the work's performance in remote work, except for the provisions of collective agreement, and to reimburse the employee for the expenses of electricity, telephone, and internet.

However, the imprecise recommendation that the company must provide infrastructure does not guarantee that the worker has the space and the appropriate conditions to carry out their work activities, nor does it solve the psychosocial risks. Furthermore, the legislation, after the labor reform, ceased to recognize the worker as an integral part of a collective with regard to what is agreed upon the legislated, contributing to weaken feelings of belonging to a social group.

The Bills also provide for the establishment of working hours and regulation of occupational accidents. Regarding health issues for teleworkers, the most commonly recognized challenges relate to the psychosocial risk factors discussed in this study, which are part of work organization aspects, known as cognitive and not physical ergonomics. We should be vigilant, since policies can be influenced for the benefits of some groups, and labor legislation can be uneven, depending on corporate interests (Oakman et al., 2014).

Final considerations

By mapping 'the telework iceberg,' we reveal that there is more to be discussed, at the risk of colliding with what is submerged, but not totally unknown. The absence of official data on telework in Brazil for 2021 prevents us from describing the current situation and, consequently, subsidizing the planning and discussion of political agendas in the face of the many questions raised here.

In this essay three aspects associated with telework were discussed: telework can take different forms; it has not been possible for everyone and it is not exempt from health risks for those who perform it. Among the latter, the following stand out: psychosocial risks, working time, environmental and physical risks. All of those cited are difficult to assess. To date, we do not have data that allows us to examine all short-, medium-, and long-term effects for the teleworker's health.

It is necessary to resume the update of the List of Work-Related Diseases in the agenda of public health policies, published and revoked by the Ministry of Health in 2020. Such list already considers the major transformations that have occurred in the productive processes and their consequences for workers' health, including aspects of risks related to the biomechanics of work and the psychosocial factors present before the pandemic.

The analysis of the panorama in the first year of the pandemic demonstrates a "supposed" potential of the telework modality. We say "supposed" since – in addition to reflecting the inequality of the country – digital inclusion and other factors discussed here can hinder its implementation. This raises the possibility of a new division between those who can accomplish it and those who cannot. This greater vulnerability overlaps with the current inequalities in the working world. Most low-skilled and low-paid work activities, also because of their essence, are not viable for telework, increasing social distances and hindering social cohesion.

Organizations, both public and private, that have used telework for the first time, may consider its adoption as a modern work practice and maintain it in the long term. Therefore, we must be careful and avoid accepting telework as an archetype of flexibility of rights and regulation, directed towards increasingly precarious forms of labor relations.

The experience gained in Brazil during the COVID-19 pandemic exposes the fragility of the labor legislation regarding worker protection. Thus, the need for debates on the reformulation of public policies that guarantee social rights emerges, inhibiting scenarios of deregulation associated with social returns and helplessness for workers, as well as contributing to the regulation of telework with a view to a post-pandemic scenario.

References

AHRENDT, D. et al. Living, working and COVID-19. Luxembourg: Publications Office of the European Union, 2020. DOI: 10.2806/76040

ALEMÃO, I.; BARROSO, M. R. C. O teletrabalho e o repensar das categorias tempo e espaço. *Enfoques*, Rio de Janeiro, v. 11, n. 1, p. 73-88, 2012.

ANTUNES, E. D.; FISCHER, F. M. A justiça não pode parar?! Os impactos da COVID-19 na trajetória da política de teletrabalho do Judiciário Federal. *Revista Brasileira de Saúde Ocupacional*, São Paulo, v. 45, 2020. DOI: 10.1590/2317-6369000025920

BARROS, M. B. A. et al. Report on sadness/depression, nervousness/anxiety and sleep problems in the Brazilian adult population during the COVID-19 pandemic. *Epidemiologia e Serviços de Saúde*, Brasília, DF, v. 29, n. 4, 2020. DOI: 10.1590/S1679-49742020000400018

BATER meta não é "requisito" para permanecer no teletrabalho. Sindicato dos Bancários, São Paulo, 17 set. 2020. Disponível em: < https://spbancarios.com.br/09/2020/bater-meta-nao-e-requisito-para-permanecer-no-teletrabalho > Acesso em: 20 nov 2020.

BATHINI, D. R.; KANDATHIL, G. M. An orchestrated negotiated exchange: trading home-based telework for intensified work. *Journal of Business Ethics*, Berlin, v. 154, n. 2, p. 411-423, 2019. DOI:10.1007/s10551-017-3449-y

BRASIL. Lei nº 13.467, de 13 de julho de 2017. Altera a consolidação das leis do trabalho (CLT), aprovada pelo Decreto-Lei nº 5.452, de 1º de maio de 1943, e as Leis nºs 6.019, de 3 de janeiro de 1974, 8.036, de 11 de maio de 1990, e 8.212, de 24 de julho de 1991, a fim de adequar a legislação às novas relações de trabalho. Vigência Brasília, DF: Ministério do Trabalho, 2017. Disponível em: <https://legislacao.presidencia.gov.br/atos/?tipo=LEI&numero=13467&ano=2017&ato=91eUTTU5EeZpWTaca>. Acesso em 31 ago 2020.

BRASIL. *Medida Provisória n° 927, de 2020* (Medidas trabalhistas para enfrentamento da emergência de saúde pública decorrente do Coronavírus). Brasília, DF: Presidência da República, 2020. Disponível em: <https://www.congressonacional.leg.br/materias/medidas-provisorias/-/mpv/141145>. Acesso em 31 ago 2020.

BRASIL. Instrução Normativa nº 65, de 30 de julho de 2020. Estabelece orientações, critérios e procedimentos gerais a serem observados pelos órgãos e entidades integrantes do Sistema de Pessoal Civil da Administração Federal - SIPEC relativos à implementação de Programa de Gestão. *Diário Oficial da União.* Brasília, DF, edição 146, seção 1, p. 21, 31 jul. 2020. Disponível em: <https://www.gov.br/produtividade-e-comercio-exterior/pt-br/acesso-a-informacao/acoes-e-programas/programa-de-gestao-secint/legislacao/instrucao-normativa-no-65-de-30-de-julho-de-2020/view>. Acesso em: 31 ago 2020.

BRIDI, M. A. (Coord.). *Relatório técnico-científico da pesquisa:* o trabalho remoto/home-office no contexto da pandemia Covid-19: trabalho docente, setores público e privado e questões de gênero. Curitiba: Universidade Federal do Paraná, 2020. Disponível em: <https://www.researchgate.net/publication/343263679_RELATORIO_TECNICO_DA_PESQUISA_O_TRABALHO_REMOTOHOME-OFFICE_NO_CONTEXTO_DA_PANDEMIA_COVID-19_PARTE_I_CURITIBA_2020> Acesso em: 31 mar 2021.

BRUSSEVICH, M.; DABLA-NORRIS, E.; KHALID, S. Who will Bear the Brunt of Lockdown Policies? Evidence from Tele-workability Measures Across Countries. *IMF Working Papers*, Washington, DC, v. 20, n. 88, 2020. DOI: 10.5089/9781513546285.001

CHARALAMPOUS, M. et al. Systematically reviewing remote e-workers' well-being at work: a multidimensional approach. *European Journal of Work and Organizational Psychology*, Abingdon, v. 28, n. 1, p. 51-73, 2019. DOI: 10.1080/1359432X.2018.1541886

CONSOLIDAÇÃO DAS LEIS DO TRABALHO- CLT e normas correlatas. Atualizada até dezembro de 2017. Senado Federal. Disponível em: https://www2.senado.leg.br/bdsf/bitstream/handle/id/535468/clt_e_normas_correlatas_1ed.pdf. Acesso em 31 ago 2020.

DI TECCO, C. et al. Implementing smart working in public administration: a follow up study. *Medicina del Lavoro*, Milan, v. 112, n. 2, p. 141-152, 2021. DOI: 10.23749/mdl.v112i2.10595

DURÃES, B.; BRIDI, M. A. C.; DUTRA, R. Q. O teletrabalho na pandemia da covid-19: uma nova armadilha do capital? *Sociedade e Estado*, Brasília, DF, v. 36, n. 3, p. 945-966, 2021. DOI: 10.1590/S0102-6992-202136030005

MESSENGER, J. *Working anytime, anywhere*: the effects on the world of work. Luxembourg: Publications Office of the European Union; Geneva: International Labour Office, 2017. DOI: 10.2806/372726

FAUVILLE, G. et al (2021). *Nonverbal mechanisms predict zoom fatigue and explain why women experience higher levels than men*. Rochester: SSRN, 2021. DOI: 10.2139/ssrn.3820035

GIACOMELLO, L. B. A.; GIONGO, C. R.; RIBEIRO, B. C.; PEREZ, K. V. Teletrabalho na Pandemia de Covid-19: Impactos na Saúde Mental de Trabalhadores. Trabalho (En)Cena, [S. l.], v. 7, p. e022029, 2022. DOI: 10.20873/2526-1487e022029.

GÓES, G. S.; MARTINS, F. S.; NASCIMENTO, J. A. S. *Carta de conjuntura:* potencial de teletrabalho na pandemia: um retrato no Brasil e no mundo. Brasília, DF: IPEA, 2020a. n. 47. Disponível em: < https://www.ipea.gov.br/cartadeconjuntura/index.php/2020/06/potencial-de-teletrabalho-na-pandemia-um-retrato-no-brasil-e-no-mundo/> Acesso em: 15 dez 2020.

GÓES, G. S.; MARTINS, F. S.; NASCIMENTO, J. A. S. *Carta de conjuntura:* teletrabalho na pandemia: efetivo versus potencial. Brasília, DF: IPEA, 2020b. n. 48. Disponível em: <https://www.ipea.gov.br/cartadeconjuntura/index.php/2020/06/potencial-de-teletrabalho-na-pandemia-um-retrato-> Acesso em: 10 set 2020.

GÓES, G. S.; MARTINS, F. S.; NASCIMENTO, J. A. S. (2021). *Carta de Conjuntura:* O trabalho remoto e a pandemia. Brasília, DF: IPEA, 2021. n. 50. Disponível em: <https://www.ipea.gov.br/portal/images/stories/PDFs/conjuntura/201118_nota_teletrabalho.pdf> Acesso em: 10 mar 2021.

SÍNTESE de Indicadores Sociais: em 2019, proporção de pobres cai para 24,7% e extrema pobreza se mantém em 6,5% da população. *Agência IBGE de Notícias*, Rio de Janeiro, 2019. Disponível em: <https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/29431-sintese-de-indicadores-sociais-em-2019-proporcao-de-pobres-cai-para-24-7-e-extrema-pobreza-se-mantem-em-6-5-da-populacao> Acesso em: 21 de out 2020.

IBGE – INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. *Pesquisa Nacional por Amostra de Domicílios PNAD COVID19 Julho/2020*. Resultado mensal. Rio de Janeiro, 2020a. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101745.pdf> Acesso em: 10 set 2020.

IBGE – INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. (2020b*). O IBGE apoiando o combate à COVID-19*. Rio de Janeiro, 2020b. Disponível em: <https://covid19.ibge.gov.br/pnad-covid/> Acesso em: 10 nov 2020.

IBGE – INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA -. (2020c). *O IBGE apoiando o combate à COVID-19*. Trabalho: desocupação, renda, afastamentos, trabalho remoto e outros efeitos da pandemia no trabalho. Rio de Janeiro, 2020c. Disponível em: <https://covid19.ibge.gov.br/pnad-covid/trabalho.php> Acesso em: 01 dez 2020.

IBGE – INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. *Indicadores IBGE*: Pesquisa Nacional por Amostra de Domicílios Contínua. Rio de Janeiro, 2021. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/periodicos/3086/pnacm_2021_jan.pdf> Acesso em: 31 mar 2021.

ILO. Convenções não ratificadas. C177- Home Work Convention, 1996 (No. 177). Disponível em: https://www.ilo.org/brasilia/convencoes/WCMS_242947/lang--pt/index.htm. Acesso: 31 ago 2020.

ILO – INTERNATIONAL LABOUR ORGANIZATION. *World Social Protection Data Dashboards*. Geneva, 2021. Disponível em: <https://www.social-protection.org/gimi/WSPDB.action?id=13> Acesso em: 11 nov 2021.

MOLINO, M. et al. Wellbeing costs of technology use during Covid-19 remote working: an

investigation using the italian translation of the technostress creators scale. *Sustainability.* Basel, v. 12, n. 15, p. 5911, 2020. DOI: 10.3390/SU12155911

NILLES, J. M. (1985). Commentary. In: NILLES, J. M. *Office Workstations in the Home* (pp. 133-144). Washington, DC: The National Academies Press, 1985. p. 133-144. DOI: 10.17226/168

OAKMAN, M. et al. (2014). State of the art: the context of psychosocial factors at work in the Asia Pacific. In: SHIMAZU, A. Psychosocial factors at work in the Asia Pacific. Amsterdam: Springer Netherlands, 2014. p. 3-26. DOI: 10.1007/978-3-319-44400-0

OECD - ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT. *Productivity gains from teleworking in the post COVID-19 era:* How can public policies make it happen?. Paris, 2020. Disponível em: <https://read.oecd-ilibrary.org/view/?ref=135_135250-u15liwp4jd&title=Productivity-gains-from-teleworking-in-the-post-COVID-19-era&_ga=2.70639699.2108351814.1634556242-260360379.1634556242> Acesso em: 18 out 2021.

PIKETTY, T. et al. *World inequality report 2022.* Paris: World Inequality Lab, 2022. Disponível em: <https://wir2022.wid.world/> Acesso em: 24 Jan 2022.

REIS, O. P. A organização do trabalho, o risco psicossocial e o adoecimento. *Laborare*, Salvador, v. 2, n. 3, p. 106-138, 2019. DOI: 10.33637/2595-847X.2019-35

RICE, S. M. et al. Zooming into cosmetic procedures during the COVID-19 pandemic: The provider's perspective. *International Journal of Women's Dermatology*, Amsterdam, v. 7, n. 2, p. 213-216, 2021. DOI: 10.1016/J.IJWD.2021.01.012

SAMEK LODOVICI, M. (2021). *The impact of teleworking and digital work on workers and society*. Geneva: European Parliament, 2021. Disponível em: < https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2021)662904> Acesso em: 13 set 2021.

SPATARO, J. *The future of work—the good, the challenging & the unknown.* Redmond: Microsoft, 2020. Disponível em: <https://www.microsoft.com/en-us/microsoft-365/blog/2020/07/08/future-work-good-challenging-unknown/> Acesso em: 12 nov 2021.

UNDP - UNITED NATIONS DEVELOPMENT PROGRAMME. *Human Development Report 2019*: Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century. Geneva, 2019. Disponível em: <http://hdr.undp.org/sites/default/files/hdr2019.pdf> Acesso em: 24 Jan 2022.

ZOOM divulga resultado: é hora de sair das ações do kit home office?. *Exame invest*, São Paulo, 22 nov. 2021. Mercados. Disponível em: <https://exame.com/invest/mercados/zoom-divulga-resultado-e-hora-de-sair-das-acoes-do-kit-home-office/> Acesso em: 29 Jan 2021

Acknowledgments

We thank the PhD Program in Public Health of the School of Public Health of USP and the CAPES, for supporting Evelise Dias Antunes; the CNPq, Productivity Grant 1A Process 306963/2021-3, for supporting Frida Marina Fischer; the Portuguese entity FCT — Foundation for Science and Technology, I.P, for supporting the UIDB/00050/2020 project.

Authors' contribution

Antunes: conceptualization, methodology, data analysis, writing, visualization, revision and editing. Ribeiro: conceptualization, data analysis, writing, revision. Saints: visualization, proofreading, and editing. Fischer: conceptualization, supervision, visualization, revision and editing.

Received: 01/29/2022
Resubmitted: 11/25/2022
Approved: 03/20/2023