



FORECASTS FOR THE FUTURE OF WORK ANTICIPATED BY THE COVID-19 PANDEMIC AND ITS MAIN REPERCUSSIONS

PREVISIONES DE FUTURO DEL TRABAJO QUE LA PANDEMIA COVID-19 ANTICIPÓ Y SUS PRINCIPALES REPERCUSIONES

PREVISÕES PARA O FUTURO DO TRABALHO QUE A PANDEMIA DO COVID-19 ANTECIPOU E SUAS PRINCIPAIS REPERCUSSÕES

Aline Cavalcante Santana¹

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ABSTRACT

The pandemic of the COVID-19 virus brought several changes, including those that shook the world of work. Some transformations were already in progress and others were expected at a later time, leading us to believe that this health crisis would have had an impact on the estimated forecasts for the future of work. This article proposes to outline a reflection on the world of work in the future, considering as a reference the changes that are already in force and comparing them to the predictions highlighted for the decade from 2018 to 2028 through great theoretical references in the areas related to the management of people and technology. The conclusions expose a truth that, in practice, can be inconvenient: this global pandemic forced us to anticipate the agenda related to the future of work and the market - including companies, employees, government agencies and consumers - was not ready for this rupture.

KEYWORDS: COVID-19. Future of work. Innovation. Job. Technology. Futurism.

ABSTRACTO

La pandemia del virus COVID-19 trajo varios cambios, incluidos los que sacudieron el mundo laboral. Algunas transformaciones ya estaban en marcha y otras se esperaban en un momento posterior, lo que nos lleva a pensar que esta crisis de salud habría tenido un impacto en las previsiones estimadas para el futuro del trabajo. Este artículo propone esbozar una reflexión sobre el mundo del trabajo en el futuro, considerando como referencia los cambios que ya están vigentes y comparándolos con las predicciones destacadas para la década de 2018 a 2028 a través de grandes referencias teóricas en las áreas relacionadas con la gestión de personas y tecnología. Las conclusiones exponen una verdad que, en la práctica, puede resultar inconveniente: esta pandemia global nos obligó a adelantarnos a la agenda relacionada con el futuro del trabajo y el mercado -- incluyendo empresas, empleados, agencias gubernamentales y consumidores-- no estaba preparado para esta ruptura.

PALABRAS CLAVE: COVID-19. Futuro del trabajo. Innovación. Trabajo. Tecnología. Futurismo.

RESUMO

A pandemia do vírus COVID-19 trouxe diversas mudanças, incluindo as que chacoalharam o mundo do trabalho. Algumas transformações já estavam em progresso e outras eram esperadas para um momento posterior, nos levando a crer que esta crise sanitária teria promovido um impacto nas previsões estimadas para o futuro do trabalho. Este artigo se propõe a traçar uma reflexão sobre o mundo do trabalho no futuro, considerando como referência as mudanças que já estão em vigor e

¹ Concluinte na Graduação de Psicologia da Universidade Federal de Pernambuco - UFPE, interessada em investigar principalmente as temáticas ligadas ao Desenvolvimento de Carreira, à Psicologia Organizacional e do Trabalho e ao Futurismo.



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as comparando às previsões destacadas para o decênio de 2018 a 2028 por meio das grandes referências teóricas nas áreas correlatas à gestão de pessoas e à tecnologia. As conclusões expõem uma verdade que, na prática, pode ser inconveniente: esta pandemia global nos forçou a antecipar a agenda relacionada ao futuro do trabalho e o mercado - incluindo as empresas, colaboradores, órgãos governamentais e consumidores - não estava pronto para esta ruptura.

PALAVRAS-CHAVE: COVID-19. Futuro do trabalho. Inovação. Trabalho. Tecnologia. Futurismo.

Introduction

From the first societies, the human have wanted to know about the future, using the creativity to anticipate the facts that do not happened yet (Nissen, 2020). Until nowadays, know about the future is an ambition of most of the people, especially if this guarantee some advantage, such as professionally. The idea of to understand the trends of the job future may be a way to create strategies to survive and get over the challenges that the labour market can bring. The "purpose of futures studies are to discover or invent, examine and evaluate, and propose possible, probable and preferable futures" (Bell, 2003, p. 73 apud Nissen, 2020).

The future of work will be "an evolution of this current era" (Schulte et al, 2020, p. 4), but what this tomorrow can bring to the workers? Nissen (2020) says that the future of work embrace more and more the complexity, the diversity of fields and knowledges, with more decentralization, inclusion and connectivity, and following this trend, a new techno-economic paradigm (Pérez, 2003) have been building: industry 4.0, a "new industrial revolution" (Hawken, Lovins, & Lovins, 2013; Schwab, 2017) led by the universal digitalization, robotization (Ford, 2015) and creation of smart networks (Zemtsov, 2020), changing "The nature of work, the workplace, and the workforce (...) rapidly, differently, and to a greater extent than in years past, affecting greater numbers of individuals in profoundly powerful ways" (Schulte et al., 2020, p.2). There are nine pillars of the industry 4.0 (Rüßmann et al., 2015 apud Silva, 2017, p. 10-11):

1. Big data;
2. Cloud computing;
3. Integration of vertical and horizontal systems;
4. Artificial intelligence;
5. Industrial Internet of Things;
6. Virtual reality;
7. Autonomous robots;
8. Cybersecurity.
9. Simulation and 3D printing;

There are some arguments against the IA of work, such as limitations on availability and reliability of big data, the existence of many tasks that favour humans, narrow capabilities of IA technologies, the high availability of human workers (Coombs, 2020) and the uncertain about massive job losses (Burgess & Connell, 2020). However, the changes promoted by AI on work may be accelerated on important events that shake the world social, economic and politics scenario, as of the outbreak, due to the economic need in the midst of human vulnerability to the COVID-19 pathogen.



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Forecasts appoint that 30 to 47% of all jobs are at risk of automation, especially at the task level (Schulte et al., 2020), while predictions from The World Bank appoint that this number can reach 60% across Organization for Economic Cooperation and Development (OECD) countries (Burgess & Connell, 2020). This means that a large portion of workers performs potentially automated tasks, becoming replaceable with machines or software. In this discussion, some topics emerge as important: Technological inevitability, inclusion of some groups on work (young, women, migrants and people with disabilities), time, work, and leisure, social isolation and loneliness, globalization, urbanization, climate-related factors, cognitive and physical enhancement, worker monitoring, advanced manufacturing, hazardous exposures and disease, biotechnology and synthetic biology, sustainably and political and economic factors (Schulte et al., 2020).

These changes have unequal impacts of the pandemic in many groups by their social, racial, gender, economic, political contexts and individual characteristics. According to Frey e Osborne (2017) there are some fields that have more chances than others to automation such as seamstresses, tax and tourist agents, bank clerks, librarians and call centre staff (higher than 0.99) due to the levels of perception and manipulation, creative (David, 2015) and social intelligence. By the way, other jobs, such as doctor, mentor, STEM professions and scientists have minimum chances of automation, less than 0.01. However, there are fields that won't disappear, but will go through an acknowledgement and reconceptualizing, such as law, medicine, journalism and social work (Nissen, 2020).

Existing surveys and an online survey were used to examine the influence of this pandemic on anticipation of the forecasts for future of work, analyzing the variables such as gender, work type (entrepreneur, public service, freelancer, formal worker and others) and field. Then, we brought the repercussions of these changes, considerations about them and possibilities of practical actions to organizational and individuals.

1 The pandemic

The COVID-19 pandemic was an unpredictable breakdown in global scale, affecting all ages, countries and ethnics and imposing social distancing, restrictions, lockdown and sudden changes in many places of the globe. The collapse started on December 31st, in Wuhan, China, with a surge of viral pneumonia which that has taken disproportionate dimensions. The case was announced by the Wuhan Municipal Health Commission but only on January 9th WHO reported to Chinese authorities that it was a new type of coronavirus (Lauxmann, Santucci & Aufrán-Gómez, 2020).

On February 11, 2020, the International Committee on Taxonomy of Viruses (ICTV) announced "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)" as the official name of the virus, at the same date as World Health Organization (WHO) stated "COVID-19" as the name of



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the new disease (WHO, 2020). Less than two months later, on April 4, 2020, the first million of cases of COVID-19 was confirmed (WHO, 2021a) and the number just increased day by day, having reached over 600.000 daily cases and almost two millions deaths until the end of this article (WHO, 2021b).

COVID-19 brought new needs for health protection, economy and survival, such as social distance, constant use of a mask, hand hygiene, blocking and prohibition of agglomeration, causing the closure of many sectors considered non-essential. In this way, the pandemic generated a rupture between work formats, dividing professionals between "essentials", who could work in person, and those who would work in the remote model (Kniffin et al, 2020). Those who did not have essential jobs or who could not work remotely were at serious risk of unemployment, causing this number to skyrocket and encouraging the adoption of the home office model according to needs (CHO, 2020).

The crisis open opportunities to the digitalization of work such as online services, remote work, medical robots assistants, delivery drones (Zemtsov, 2020), virtual teamwork, remote leadership and management (Kniffin et al, 2020) and online education (Aulakh, Duggal & Sutton, 2020), because the new challenges have renewed the interest in debate about Intelligent Automation (IA) of work (Coombs, 2020). Intelligent Automation (IA) surpass the human works in cognitive capabilities and of problem-solving and replace them in case of the unavailability or high acquisition cost, as in the COVID-19 pandemic (Coombs, 2020). Changes as that bring the goal of increasing productivity, intense pace of work and more flexibility, generating more precarious situations, lower payment, fewer benefits and heavier turnover (Felkner et al, 2020), raising the risk of unemployment in record numbers in fields that remote work wasn't available (Howe, Chauhan, Soderberg & Buckley, 2020) or human work may be replaced. Due to this scenario, Brazil reached 14.6% of unemployment in 2020 (G1, 2021), the highest index in history of its measurement, and the losses of the pandemic probably will extend for a long time because the country was already recovering from a recession.

Before the pandemic the workers had more bargaining power and leverage, and this situation changed by the time that the unemployment achieve record numbers. Now workers tend to be more flexible in terms of hours, type, pay and level of work effort, even if it causes a decrease in personal well-being. Besides that, the COVID-19 outbreak may increase the career transitions, especially lower-skill jobs in fields with big numbers of unemployment, making them less attractive to new workers and rising the competitiveness on other fields in the work market (Howe et al, 2020).

Many industries continue suffering the impacts of COVID-19 outbreak, as travel, entertainment and restaurants, with companies announcing massive lay-offs due to the financial losses caused by the pandemic, bringing the bullwhip effect, characterized by disturbances in a supply chain resulting in fluctuation of prices and jobless. Now at the progressive resume of some industries it's unlikely to determinate the extension of these consequences, which jobs will return (and when they will) and which may never come back (Howe et al, 2020, p.2). Previous pandemics



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(such as SARS and MERS) and other crises also impacted the hospitality industry, but COVID-19 have a geographic and timescale that's been harming the whole globe (Baum et al, 2020).

This scene provoked by the COVID-19 outbreak translates perfectly the idea of V.U.C.A environment: Volatile, Uncertain, Complex and Ambiguous (Biron et al, 2020). That is: the pandemic showed that companies (and people) need to react quickly to changes that continue to happen at an ever-increasing rate (Biron et al, 2020). According to Kniffin et al (2020), there are three possible organizational trends in the face of major political and economic changes, such as the COVID-19 crisis: a) radical transformation of some industries, b) accelerating existing changes, 3) providing the emergence of new industries, and that statement agrees with the idea that "The future of work will be a mosaic of scenarios of old, current, and new jobs and hazards" (Schulte et al, 2020, p.807).

Knowing that socio-political, humanitarian and economic shocks like the one provided by the COVID-19 outbreak have permanent repercussions (Kniffin et al, 2020), what could this pandemic have caused in the forecasts about work?

2 Method

At first, it was conducted a meta-analysis using the recommendations of Preferred Reporting Items for Systematic Reviews and Meta-Analyses - PRISMA (Galvão, Pansani, & Harrad, 2015), to maintain a replicable and thorough methodology. The question of the study was: Did the COVID-19 pandemic have anticipated the forecasts for the future of work? From this point was searched in the literature the main changes caused by the outbreak and its repercussions on three levels: macro (global, policy, government), meso (organizational) and micro (employee) (Baum, Mooney, Robinson & Solnet, 2020), especially at the individual.

2.1 Document selection

Research was carried out in peer-reviewed papers on the main scientific bases between December 2020 and January 2021, on Scopus, Web Of Science, Scielo, PubMed, PsycINFO and MEDLINE Ovid. It was used in a Boolean string to amplify the results: (covid-19 AND work AND changes AND (future AND of AND work)). The combination was made from words registered in DeCs (Descritores em Ciências da Saúde - Health Sciences Descriptors, in English), and free terms chosen from reading about the changes in the world of work during the COVID-19 pandemic, mainly those which was predicted in future of work.

The first search using the keyword identified 385 papers (PsycINFO = 11; PubMed = 149; ScieLo = 1; Web Of Science = 123; MEDLINE Ovid = 4; Scopus = 97). The inclusion process had three passes and the first was to identify the studies that satisfied the selection criteria (below) based on reading the titles; the second was based on reading the abstract; the third was by the full reading.



2.3 Selection and exclusion criteria

To be included on this study, the paper must be original, wrote in English, published in 2020, open access and fully or partially address the issue of this study. Papers without free access, that don't attend to the question of this research; conferences, book and book chapter; theses and dissertations were excluded.

Before start the selection of the papers was analyzed if any paper was published in more than one base with different order of primary authors, to eliminate one of them. Using these criteria, this process removed 75 duplicated, resulting in 310 studies. Of these, only 48 passed the title selection phase (pass 1). From them, 24 papers were selected by abstract (pass 2) and 14 were approved on full reading (pass 3). Figure 1 can show an overview of the selection of the papers.

Figure 1.

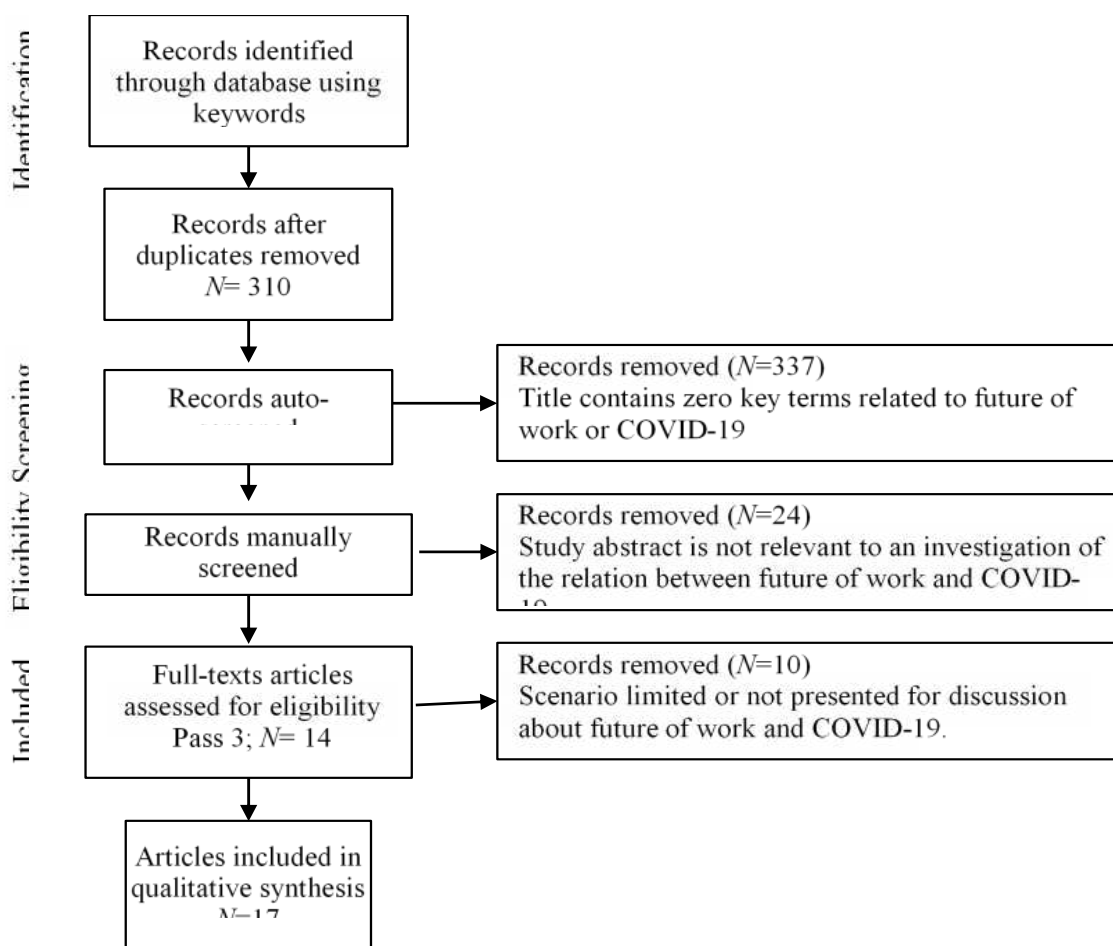


Figure with process of inclusion of the papers about relation between future of work and COVID-19.



2.4 Survey

The meta-analysis made in this study - specially the investigation described by Schulte et al (2020) about the potential scenarios and hazards in the future of work - gave the base to define 31 constructs (divided in four groups) to be evaluated as forecasts on work scenario potentially accelerated by COVID-19 pandemic:

a. Format:

1. Flexible working hours;
2. Alternative/non-conventional working hours;
3. Longer working hours;
4. Shorter working hours;
5. Availability 24 hours a day, 7 days a week;
6. Home office/remote work permanent;
7. Home office/remote work temporary or interspersed;
8. Work/employee sharing;
9. Predominance of online meetings;
10. Online customer/patient/student service;
11. Leadership of virtual teams;
12. Jobs and projects with remote teams;
13. Use of management platforms and goals shared with the team;
14. Increased flow of information;

b. Contract:

15. Delivery/Drive-thru/drone use for contactless product and service delivery;
16. On-demand work;
17. Work with short term contracts, instead of long ones. Ex: temporary work, freelance, service provision, etc (gig economy);
18. Offering services/products on any digital platform;

c. Digitalization:

19. Full or partial digitization / automation of work;
20. Reduced need for human workers due to the rise in the use of technologies at work;
21. Interaction with intelligent software, robots and / or machines;
22. Difficulty separating personal and professional life;
23. Misuse, abuse and disuse of technology;

c. Human resources:

24. Reduction of human relations;
25. Reduction of organizational commitment;
26. Greater speed and intensity of upskilling, deskilling, and reskilling;
27. 100% online selection process;
28. Increased educational requirements;
29. Disappearance of medium-skilled jobs;
30. Physical and mental exhaustion due to overwork;
31. Greater appearance of women in historically masculine areas.



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These constructs were grouped on 12 questions (7 of these were sociodemographic and formal) and distributed in an online survey in Brazilian Portuguese (pt-BR), from where this study will identify which trends in the future of work were accelerated by the sudden arrival of the COVID-19 pandemic.

3 Results

3.1 Meta-analysis

For this study, 14 articles were selected, of which 5 (35.7%) are review, 4 (28.9%) are essay, 3 (21.4%) are research, 1 (7.1%) is survey and 1 (7.1%) is a case of study. Due to the small number of studies examining human participants (Variri, Casper, Wayne & Matthews, 2020; Aulakh, Duggal & Sutton, 2020), there are n=393 participants on the sample of this meta-analysis, without a big richness of sociodemographic data. However, all these studies reached the goal of contributions setted in PRISMA process and were selected. The 14 studies chosen on final pass of meta-analysis were individually described on Table 1.

Table 1. Studies selected on meta-analysis

Author/Year	Type	Main contributions about the theme
Cho, E. (2020)	Essay	Effects of micro and macro boundaries of COVID-19 on vocational behaviour and future of work.
Biron, M. et al. (2020)	Case of study	Skunk works model and its implications on innovation and future of work.
Vaziri, H., Casper, W. J., Wayne, J. H., & Matthews, R. A. (2020)	Research	Technology may cause stress (technostress) due to the demand of continuous availability and faster work. Trends of behaviour change depends on availability of resources that the person had on the beginning of the crisis.
Kniffin, K. M. et al (2020)	Review	Summarization of implications, issues for future and insight-driven actions for the domain of work.
Schulte, P. A. et al (2020)	Review	Pictured that the future of work isn't make of one scenario, but "of diverse complex scenarios and a mosaic of old and new hazards" (Schulte et al, 2020, p.787). And describe some potential scenarios of the future of work.
Coombs, C. (2020)	Essay	Discussed positive and negative arguments about IA of work and show how COVID-19 increased the IA adoption levels
Felknor, S. A. et al (2020)	Review	Taking the OSH professional as theme, this study highlight how the future of work may bring excessive flexibility to working relationships, making the worker vulnerable and making his job precarious.
Aulakh, G. S., Duggal, S., & Sutton, D. (2020)	Survey	COVID-10 was a catalyst of technology adoption, especially of virtual teaching.



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Howe, D. C., Chauhan, R. S., Soderberg, A. T., & Buckley, M. R. (2020)	Essay	Talked about the multiple paradigms that COVID-19 outbreak has created.
Burgess, J., & Connell, J. (2020)	Research	Explored the relation between the fourth industrial revolution and work.
Baum, T., Mooney, S. K. K., Robinson, R. N. S., & Solnet, D. (2020)	Essay	The disproportionate impact in hospitality works (in comparison to others crisis) and calling to a future-centered agenda to this industry.
Nissen, L. (2020)	Research	Futurism timeline and the future of social work.
Parker, L. D. (2020)	Review	Comprehension of the COVID-19 office in transition and its implications.
Zemtsov, S. (2020)	Review	Discussed how the increase of use of unmanned technology during COVID-19 pandemic may decrease the employment in long-term.

Source: By the author (2021).

3.2 Survey

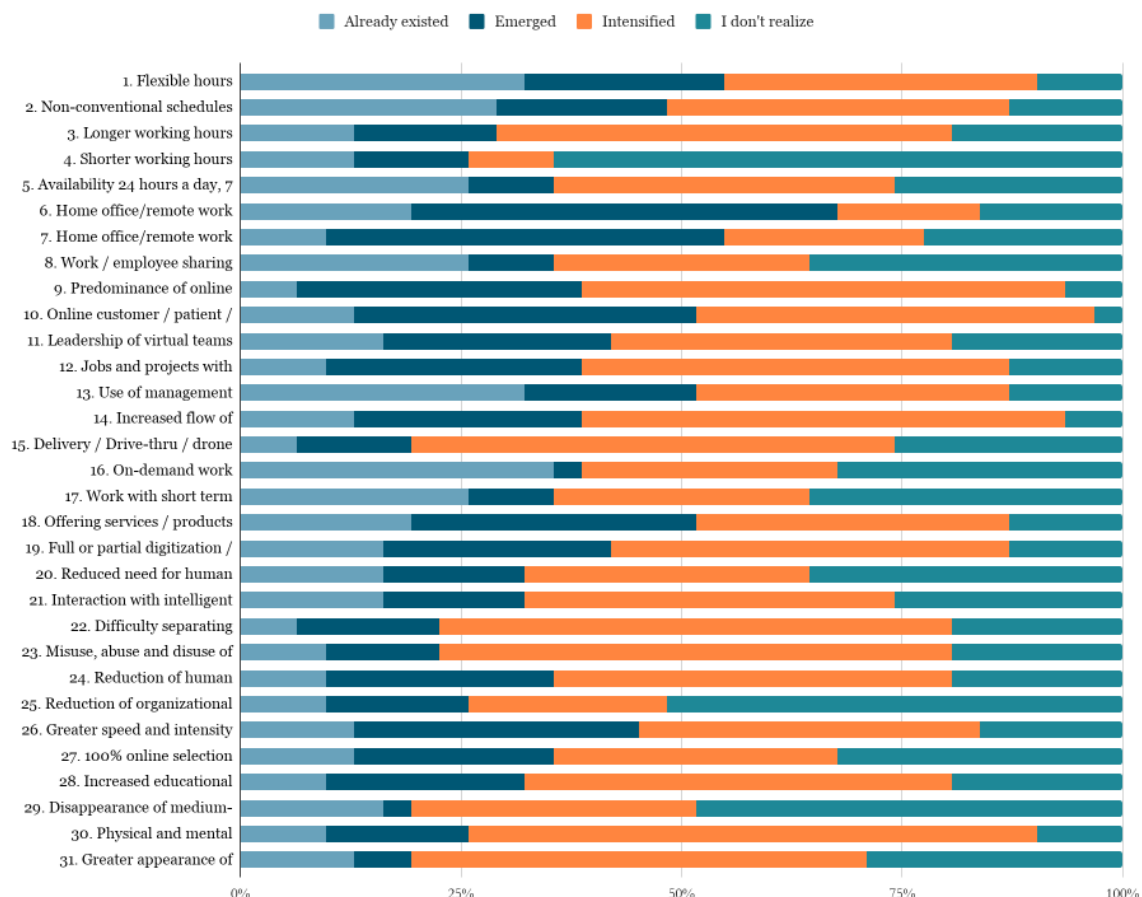
The survey collected 32 answers. However, one respondent was unemployed during the pandemic, disqualifying her participation for not meeting the established study criteria. From the last 31 participants, 23 (74.2%) were from women and 8 (25.8%) from men. The age were between 19-59 years old, with a medium age $M_{age} = 33.65$. All sample were Brazilian and lives in Brazil.

When asked about work, 40.6% (12 respondents) of the sample is reported that are formal worker, 28.1% (9 respondents) said that are entrepreneur, 18.8% (6 respondents) are public server and 12.5% (4 respondents) are freelancer. About the occupation area, 21.9% (7 respondents) work at Education, 18.8% (6 respondents) are from Administration, 12.5% (4 respondents) said that work in Communication, Advertising and International Relations, 12.5% (4 respondents) are from IT and technologies, 6.3% (2 participants) work in Agronomy, Agrarian Sciences and Animal Science, 6.3% (2 participants) at Finance, 3.1% (1 participant) are from Engineering, 3.1% (1 participant) are from Insurance, 3.1% (1 participant) are from Sales, 3.1% (1 participant) work with Crafts and sewing, 3.1% (1 participant) work in Food industry and 3.1% (1 participant) are from Design.

Due to the complexity and extension of the question, the answers of "Assess how you perceive that the characteristics and paradigms below relate to your work context AFTER the emergence of the COVID-19 pandemic" (about the 31 foresights for the future of work that may be accelerated by the outbreak, described in 2.4) will be represented in Figure 2.



Figure 2. Work format during pandemic: answers from survey



Source: By the author (2021).

When asked about areas of their lives that were benefited by the changes in work during COVID-19 crisis, the answers were varied: 17 (53.1%) participants said the studies benefited from the changes that the pandemic brought to the work; Also 17 (52.1%) said that their finances and economic were benefited by these changes; 16 (50%) participants chose parallel works and projects; 15 (46.9%) said personal organization; 14 (43.8%) affirmed that were the personal goals; 11 (34.4%) said that family relationship was the most benefited; also 11 (34.4%) participants marked hobbies, leisure and/or rest; 10 (31.3%) participants chosen spiritual and/or religious; mental health was marked by 6 participants (18.8%); 6 participants (18.8%) chose love life; 4 (12.5%) said body health; and 2 (6.3%) said that social life was the most benefited area. And the most affected general areas were, according to the participants: mental health (65.6%, 21 participants); body health (50%, 16 participants); social life (50%, 16 participants); hobbies, leisure and/or rest (40.6%, 13 participants); love life (28.9%, 9 participants); personal goals (25%, 8 participants); parallel works and projects



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(25%, 8 participants); study (21.9%, 7 participants); family relationship (21.9%, 7 participants); finance and economic (18.8%, 6 participants); personal organization (15.6%, 5 participants); spiritual and/or religious (12.%, 4 participants); and none (6.2%, 2 participants).

The participants were asked about benefits and losses in work caused by the professional changes post-pandemic. About the benefits, 20 participants (62.5%) said that the learnings were the best of them; 15 (46.9%) marked that was the autonomy; 12 (37.5%) said organization; also 12 (37.5%) marked productivity/results delivered; 9 (28.1%) pointed the self-motivation to work as a benefit; also 9 participants (28.1%) marked safety; the relationship with co-workers was a benefit to 8 participants (25%); also 8 (25%) said that relationship with leaders improved; 7 (21.9%) said remuneration; 6 participants (18.8%) pointed the quality of the work structure; 5 (15.6%), the worked hours; 5 participants (15.6%) said that the professional stability was benefited; also 5 (15.6%) marked the dress code; 4 participants (12.5%) considered that the job satisfaction was benefited; and 1 participant (3.1%) used the "Others" field to describe the feeling of belonging as a benefit after these changes in the pandemic.

The most affected professional areas, according to the participants, were: worked hours (65.6%, 21 participants); job satisfaction (31.3%, 10 participants); relationship with co-workers (28.1%, 9 participants); productivity/results delivered (25%, 8 participants); self-motivation to work (25%, 8 participants); quality of the work structure (25%, 8 participants); remuneration (21.9%, 7 participants); relationship with leaders (18.8%, 6 participants); professional stability (18.8%, 6 participants); organization (9.4%, 3 participants); learnings (9.4%, 3 participants); security (9.4%, 3 participants); autonomy (6.3%, 2 participants); dress code (6.3%, 2 participants); and familiar impact (3.1%, 1 participant), added on "Others" field.

At last, 25% (8) of respondents said that changed their careers during the pandemic, against 25% (24) that don't.

4 Discussion

One of the basic principles lifted by studies is that the future of work have many forecasts. So then, to study the impacts of COVID-19 on forecasts for the future of work were used the paradigms described in the literature selected on the meta-analysis (Cho, 2020; Biron et al. 2020; Vaziri, Casper, Wayne & Matthews, 2020; Kniffin et al, 2020; Schulte et al, 2020; Coombs, 2020; Felknor et al, 2020; Aulakh, Duggal & Sutton, 2020; Howe, Chauhan, Soderberg & Buckley, 2020; Burgess & Connell, 2020; Baum, Mooney, Robinson & Solnet, 2020; Nissen, 2020; Parker, 2020; Zemtsov, 2020) and made a survey to collect the real mapping of the scenario in Brazil.

According to the answers of the 32 participants of this study, the most evident professional changes/paradigms that was emerged in COVID-19 pandemic was the home office/remote work permanent (48.4%, 15 participants), the home office/remote work temporary or interspersed (45.2%, 14 participants) and the online customer/patient/student service (40.6%, 13 participants). The



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paradigms that was most intensified, according to the survey, was physical and mental exhaustion due to overwork (64.5%, 20 participants), difficulty separating personal and professional life and misuse, abuse and disuse of technology, both with 58.1% and 18 participants. These data reveals the emerging of virtual work during the pandemic due to the social isolation, and the possible repercussions of its sudden and unprepared appearance, such as overwork, lost of personal-professional boundaries (Cho, 2020) and intensified abuse of technology.

On-demand work (35.5%, 11 participants), flexible hours (32.3%, 10 participants) and the use of management platforms and goals shared with the team (32.2%, 10 participants) were the most marked as those already existed. These data shows that the transformation of work accelerated by digitalization and automation isn't new. Others high-voted items reinforced it, such as the delivery/drive-thru/drone use for contactless product and service delivery (54.8%, 17 participants).

Although, 21 participants (64.5%) voted that don't realized less working hours after pandemic, and then the most voted were the reduction of organizational commitment (51.6%, 16 participants) and the disappearance of medium-skilled jobs (48.4%, 15 participants). Maybe these forecasts is not strong in this sample, country or even period, or - as Schulte et al. (2020) said - these are only one of many possibilities of scenarios for the future, and specifically these do not come true.

The greater appearance of women in historically masculine areas emerged as a high-voted item in the survey with 16 participants (51.6%) saying that it intensified after pandemic, and the reality of the women that answered the survey is not the best. Women were the most impacted by the changes: From all 21 participants that answered that were harmed for the change of working hours during the pandemic, 15 (71.43%) were women; From the 8 respondents that said that were less self-motivated, 6 (75%) were women; From those 8 that marked the negative impact on productivity and results delivered, 5 (62.5%) were women; 100% of negative impacts on job satisfaction were reported by women (10 participants); Also from organization (3 participants).

It is supposed that these losses was because the women were the sample that was most impacted by the emerging or intensifying of home office, both permanent and interspersed. The literature point that the remote work may impact the results and quality of life of someone that have to deal with work and non-professional activities, as women frequently do the homework due to the traditional gender roles (Cho, 2020; Kniffin et al., 2020). It's for this reason that women are disproportionately affected by automation (Hodder, 2020).

From 15 answers about the emergence of permanent home office/remote work, 12 (80%) were from women. From 5 about intensification, 3 (60%) were from women; and 3 of 6 answers (50%) about previous existence of permanent home office/remote work were from women. About home office/remote work interspersed, 12 of 14 answers (85.71%) about emergence, 3 of 7 (42.86%) about intensification and 2 of 3 (66.7%) about previous existence were from women,



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proving that (in this study) women were the strongly impacted by home office. The inequality that they may face while work from home can decrease their productivity and quality of life. This theory is reinforced by the literature, that points that this scenario still real even the numbers of egalitarian houses had increased during the pandemic (Carli, 2020).

5 Conclusion

As some papers described the COVID-19 pandemic and consequent economic crisis accelerated the forecasts to digital transformation in work (Aulahk, Duggal & Sutton, 2020; Vedev, Drobyshevsky, Knobel, Sokolov, & Trunin, 2020; Kniffin et al, 2020). About this, Kniffin et al (2020, p. 65) describe three organizational trends in the face of crises such as COVID-19: "(a) change some industries fundamentally, (b) accelerate trends that were already underway in others, and (c) open opportunities for novel industries to emerge". The literature screened on meta-analysis and the answers in the survey points to a mix of these trends in different levels and industries, happening in simultaneous.

Remote work, online services and contactless delivery were some trends highlighted, following the behaviour consequences of development of longer journeys of work, physical and mental exhaustion due to overwork, lost of boundaries between work and family, and abuse, misuse and reuse of technology. In the midst of these changes, it was identified that the women were the most affected public, possibly due to the unequal distribution of non-professional activities parallel to the remote work.

COVID-19 has profoundly affected global health, economics and politics (Coombs, 2020) and changed the world of work in a way never seen before, and it is important to understand the panorama of changes in the world of work caused by COVID-19 to prepare the individual paths of each professional level in the face of these realities (CHO, 2020). These forecasts help the individuals, organizations and the Government to be prepared to the work scenario that will surge and be less harmed by it, as a toolbox or a map that indicate the better way to lead the changes on the job market and its repercussions (Nissen, 2020).

Originality/value

This paper is one of the few that studies the relation between the COVID-19 outbreak and the forecasts for the future of work, tracing the co-relation between them and showing the repercussions of this scenario, and it is the only paper (until it was written) that presents a field research associated to a meta-analysis to talk about this theme, endorsing the value of the paper.

Declaration of conflicts of interest



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