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THE EFFECTS OF TELEWORK ON EMPLOYEES' HEALTH

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Abstract
The COVID-19 pandemic forced a large number of people into telework. The change of working conditions was not done with the help of specialists or with the support from employers, resulting in improvisations that had negative consequences for employee health. The survey conducted by the Bureau of Social Research at the end of 2020 measured the impact of work from home on various health problems and body organs. The results clearly show a deterioration of the bones, muscles and joints, the mental system, the stomach, the eyes and the heart for an important segment of the employees. The most vulnerable people were those aged 40-60, PhD graduates, domiciled in medium and small cities, employed by the state in areas that had the greatest difficulties in adapting to digitization and working on online platforms: culture, education, public administration. As experts say that working from home will continue in the coming years even after the pandemic disappears, the deterioration of employees' health will intensify.

Keywords: *telework, health, stress, sedentary behavior, COVID-19.*

INTRODUCTION

The COVID-19 pandemic has affected many organizations, changing their priorities, strategies and habits, forcing them to make major changes to adapt and survive. Some staff (or even all staff in some areas, such as education, entertainment, financial and insurance services, etc.) have been forced to work from home since the first day of the state of emergency, without receiving professional support for getting proper working conditions. This support would have not even been possible in the two months of total isolation that almost the entire population of the globe experienced. At that time, managers rediscovered older studies on telework done by various specialists, and most showed the advantages of this new way of working: reducing the high costs related to the rent, equipment, office maintenance, transportation), schedule flexibility, eliminating absenteeism due to sickness since employees could work from home, simplifying bureaucracy, monitoring employees, increasing the overload, supplementing tasks, increasing efficiency, accelerating specialization and professionalization of employees, much easier association with other experts, increasing network-based communication, etc. [1], [2], [3], [4].
To prevent the spread of the virus, many employers have asked employees to continue working from home after the expiration of the state of emergency, offering them facilities such as: computers, laptops, tablets or phones, software, training courses, reimbursement of

administrative expenses (internet, electricity and heat), etc. Working from home, seen as an exception in March-May 2020, has become the rule for many employees in the next 6-7 months. Studies on the negative consequences of telework have been rediscovered, and they focused on several aspects: the intrusion of work into family life, the impact on other family members, the control of the home environment without the family consent, affecting their leisure time, reducing social interactions and the power of employees to influence events at work, job insecurity, reduced career development options, difficult motivation, isolation, atomization and loss of team spirit, group, often poor communication or miscommunication, increased anxiety, fatigue and stress, etc.[5], [6], [7], [8].

Research on the health of employees in telework has been marginal, compared to the huge effort to discover an anti-COVID vaccine, but they have gradually begun to make their presence felt, forcing public authorities and management to make certain decisions to prevent the employees' illness. The European Agency for Safety and Health at Work (EU-OSHA) has published several materials on the physical and mental health of people working from home, offering recommendations for organizing healthier, safer and more effective conditions. Musculoskeletal, mental, visual, skin and other work-related diseases have been considered occupational diseases, based on studies that have shown that digitization and working on online platforms pose emerging risks because they expose people to medical conditions. The risks of damage or dysfunction of parts of the body are determined by four aspects: 1. the characteristics of work tasks (monotony, quantity, work pace and automation); 2. the characteristics of the organization (hierarchical structure, relations with colleagues and other members, communication channels, monitoring systems); 3. organization of working time (breaks, work disruptions, shifts, type of work); 4. job characteristics (salary, physical condition, workspace design). Carlos Eduardo Venegas Tresierra and Astrid Carolina Leyva Pozo (2020) said that risk perception is in itself a public health problem, as it alters cardiovascular function, aggravates coronary and blood pressure problems, accelerates exhaustion and stress.[9]

The study presented in this article follows on from relevant research at international level in terms of occupational health and analyzes the impact that telework has had on various organs of the body and medical issues. The results of a national survey at the end of 2020 revealed data that confirmed or refuted other international research. It also brought to light information that may be useful for developing public policies. The final part of this article presents the conclusions and predictions regarding the evolution of the health status of employees working from home in the near future.

REVIEW OF RELEVANT STUDIES ON THIS TOPIC

Work from home involves the frequent use of electronic devices (desktop computer, laptop, tablet, smartphone, etc.), their connection to the Internet to transmit results, to communicate with coworkers and bosses, but also to search for materials on various websites, the use of software, physical space, privacy and sometimes technical assistance. Telework is carried out by people with a higher level of professional training, who work in areas where the percentage of ICT use is high: financial services, education, administration, but also in various other areas where certain activities can be carried out outside the organization. Jack Nilles, Alvin Toffler and Charles Handy were among the first specialists to analyze work from home, and they wrote four decades ago that this type of work will absorb more and more people. Although subsequent research has highlighted the benefits of this form of work,

and the authorities have offered various facilities to those who adopt it, until the declaration of quarantine due to the COVID-19 pandemic (in the first half of March 2020), the percentage of those who were working from home was reduced. The Eurofound study showed that in 2019 only 0.8% of employees in Romania worked from home, and the figures were not very high in other countries either.[10] One of the possible explanations is related to the negative consequences on health. These consequences have been studied by various specialists, who have grouped them on several criteria: visual, musculoskeletal, psychosocial and other.

Visual disorders

In 2003, James Sheedy, John Hayes and Jon Engle of Columbus College of Optometry, The Ohio State University studied asthenopia in an experiment that measured the discomfort of subjects in conditions of astigmatism, short distance from the screen, small font, screen protector, looking up or down, glow and flickering light. They have shown that prolonged computer work causes not only burns, irritations and dryness, but also pain and headaches, a weak cornea, stress and discomfort.[11]
Research conducted in 2005 by Clayton Blehm and his team at the Department of Ophthalmology and Visual Sciences at the University of Texas at Houston focused on the symptoms of computer vision syndrome (eye fatigue, dry eyes, irritation, redness, blurred vision, double vision), that appear as a result of the display characteristics: brightness, quality of image, refreshing rates, radiation. Eye lubrication drops and special glasses were recommended for all those who sat in front of screens for a long time.[12]
Peder Wolkoff and his colleagues at the National Institute of Occupational Health in Copenhagen published a study in 2005 that showed that eye problems caused by computer work are related with several factors: low humidity or high room temperature, concentration on task that widens the exposed eye surface and reduces eyelid blinking and tear flow, the use of contact lenses, the existence in the atmosphere of irritating chemical compounds and certain individual characteristics (myopia, farsightedness, diabetes, migraines, etc.) that lead to difficulty concentrating, photophobia, glaucoma or intraocular pressure.[13]

Musculoskeletal disorders

To highlight the effects of telework on health, Meg Honan conducted two surveys in 2015. In the first one, professionals in ergonomics have supervised the users, provided support to correct problems, and intervened to reduce the negative effects. In the second survey she explored the usual activities of workers, locations, time of using the electronic devices. Her conclusion was that working from home presents risks of deterioration in the health of the neck, thumbs and hands, and these risks increase when ICT users are not advised by specialists. Prolonged sitting on a chair, armchair, sofa or bed, home-made improvisations, furniture distribution in the room, inadequate work surfaces, repetitive movements, tilting the head, bending the shoulders and arms, holding devices (tablets, telephone, etc.) in the hand at chest level, tightening the neck and fixing it in a rigid position for a longer period - all these affect the neck, shoulders, bones, lead to muscle fatigue and tendon inflammation.[14]
Xiaopeng Ning and colleagues at the Ergonomics Laboratory at West Virginia University published a study in 2015 that assessed muscle activity and cervical spine movements while

using ICT devices, showing that participants maintain a neck inflection for almost half of their working time and have low levels of muscle activity.[15] Stillness, stiffness and concentration affect the muscles, neck and hands, causing dizziness, headaches, and changes in the spine.
Kenneth Hansraj of New York Spine Surgery and Rehabilitation Medicine showed in a study published in 2014 that people spend an average of 4 hours a day with their heads bowed for reading and transmitting messages and tilting their heads forward during the use of ICT increases the pressure on the spine. Loss of the natural curve of the spine leads to degeneration, early wear, ruptures and possible surgery.[16]

Psycho-social disorders

Kimberly Eddleston and Jay Mulki did a survey of 299 employees and showed that women find it harder to get off work when working from home, being more stressed than men and having more problems integrating work into the family.[17]
Gimenez-Nadal and his colleagues conducted a survey of 2,471 employees in 2020 and showed that men who worked from home had significantly lower levels of stress, pain and fatigue than those who went to work (commuters), and the teleworker women reported higher levels of happiness compared to the commuter women.[18]
Younghwan Song and Jia Gao analyzed the results of the 2010, 2012 and 2013 American Time Use Survey Well-Being Modules, which involved 3,662 employees and showed that teleworking is associated with increased stress and low happiness, especially when working on weekends, and those with children reported a lower level of well-being compared to those without children.[19]
Ayoung Suh and Jumin Lee analyzed 258 teleworkers in IT companies and talked about technostress, defined as overloading with tasks, invasion of privacy, role ambiguity, increased pace of change in the IT field, reduced autonomy, and the need to be in constant electronic contact with the workplace. They showed that organizational support reduces technostress. Those who worked for several days at home mentioned more often the emotional exhaustion, technostress, and reduced social support.[20]
The National Institute of Administration in Romania published in December 2020 the results of a research based on an extensive survey among public administration staff, to which 3285 people with executive positions and 776 people with management positions responded. According to the results, the biggest challenges were the lack of protocols or gaps in teleworking procedures, the way the team was monitored, the strong feeling of isolation from the team members, the lack of the necessary information or access to various databases.[21]
The pandemic has led to a change in many work habits and practices, which have created uncertainty for employees. Frequent communication with the organization ensured clarity in terms of expectations, performance, workloads, and access to resources. The training and assistance from managers reduced the state of uncertainty. Organizations that facilitated formal and informal relationships with colleagues, providing support to teleworkers, clearly sharing burdens, solving problems and removing uncertainties, providing information on emerging opportunities, had employees with a high level of psychological well-being.

Other disorders

Maryam Feiz Arefi, Amin Babaei-Pouya and Mohsen Poursadeqiyan wrote in August 2020 that quarantine inactivity led to a variety of medical problems in Iran, from obesity, muscle weakness, worsening osteoarthritis and heart problems, to hyperlipidemia and dryness articular.[22]

Rachel Mosher Henke and her collaborators at Truven Health Analytics, Ann Arbor, Michigan analyzed in 2015 the effects of working from home on employees' health based on their medical statements, grouping the results on eight indicators of health risk (obesity, depression, stress, consumption of tobacco, alcohol abuse, poor nutrition, physical inactivity and an overall assessment of the risk of health deterioration). They concluded that teleworkers have a higher overall risk of health damage than those who commute to work. The higher the intensity of work from home, the higher the consumption of alcohol, tobacco, food, and the depression also increases significantly.[23]

Jodi Oakman, Natasha Kinsman, Rwth Stuckey, Melissa Graham and Victoria Weale of La Trobe University in Australia reviewed studies published by various experts from 2007 to May 2020 on the impact of teleworking on employees' health and concluded that the impact on health was strongly influenced by the support of the organization, colleagues, social networks that are not work related, family conflicts. They concluded that organizations will need to implement policies on teleworking, taking into account the boundaries between work and family life, clarity of professional roles, workload, performance indicators, supporting the peer communication networks and training the managers.[24]

The impact of working from home on physical and mental health must not be neglected. Despite a relatively small amount of research, it is clear that employers need to consider working conditions at home to mitigate the negative effects on health. Isolation, immobility, poor communication, excessive consumption of food, alcohol, tobacco, drugs, have long-term negative consequences, and the recent studies focus on new pathologies. At the same time, they recommend quick action, because the speed of changes does not leave much time for reaction in terms of prevention and cure.

METHODS

The research conducted at the end of 2020 aimed to measure the impact that telework had on employees' health. The questionnaire was developed based on the model used by Antimo Moretti and his team from the Department of Medical, Surgical and Dental Specialties at the University of Campania "Luigi Vanvitelli", Naples, Italy,[25] but many questions have been reformulated and other aspects have been measured as well. Starting from the international classification of diseases made by the World Health Organization [26], we grouped medical problems into 19 categories and we addressed other relevant issues, resulting in a questionnaire with over 100 items. The questionnaire was pre-tested on a group of eight sociologists, who reformulated some questions, merged some, eliminated others, resulting in a final version with 85 items, to which socio-demographic data (sex, age, education, occupation, type of locality, geographical region) and personal data (name, surname, telephone number) were added. The questionnaire was sent to a number of 12,240 employees in Romania, who were selected from the databases of the Bureau of Social Research, keeping the proportions on all socio-demographic categories provided by the National Institute of

Statistics based on Tempo Online. The over 12,000 people (representative for the employed population in Romania with an error of +/- 1%) were asked if they worked from home in the last half year, after the expiration of the state of emergency (after May 15, 2020), and then, if the answer was positive, they were invited to complete the questionnaire, accessing a link that was sent to them by text message or email. Due to the sensitive topics addressed in the questionnaire, the self-completion option was chosen, with the risk of a low response rate, but with the certainty that people understand the purpose of the research, answer questions correctly, leave their contact details to confirm participation, and contact again to detail certain aspects.

The data collection took place between November 19 and December 22, 2020, and the final sample consisted of 554 people, living in 138 urban and rural localities in 38 counties. The SPSS program was used for statistical analysis, performing the Shapiro-Wilk normality test for all continuous data, the Student's t test for comparison between groups, but also other statistical tests where appropriate, and the answers were presented in absolute and relative values, without being weighted. The statistical error of the survey is +/- 4.1%, at a confidence interval of 99%.

The research shows that more women (61.2%) than men (38.8%) have teleworked, with an average age of 35 years, with a high level of schooling (84% of subjects graduated faculty), with average monthly income of 1,000 EURO. About a third of them work in the public sector, and two thirds in the private sector or they are self-employed. Over 85% live in urban areas, especially in very large cities, with over 200,000 inhabitants. Using the classification of areas of activity according to the CANE code, most of the participants in this study work in education (20.2%), information and communications (18.8%), professional, scientific and technical activities (9.7%), financial and insurance services (8.3%), other collective, social and personal service activities (7.8%). Employees in the fields of hotels and restaurants (0.4%), extractive and processing industry (0.5%), cultural and entertainment activities (0.7%), real estate (0.9%), agriculture, forestry and fishing (1.3%) were at least able to work from home in the second half of 2020. Grouping them by the size of the employing institution, 46.4% work in large organizations (over 350 employees), 24.4% in medium-sized institutions (with 50-249 employees), 19.9% in small companies (10-49 employees) and 9.7% in micro-enterprises (0-9 employees). The average length of service is 12 years, and the average number of hours worked per week is 41.2, meaning 8.2 hours per day. Only 39% of teleworkers live alone, 40% being accompanied by another person, and 21% by two or more people. More than a third of the subjects (37%) have at least one minor child.

RESULTS

We used the ranking of diseases and health components from the "International Classification of Functioning, Disability and Health" developed by the World Health Organization and we grouped them into 19 categories. Study participants were asked to tell which organs or existing medical conditions had worsened in the last half year. Out of the total, 35.7% had no health problems and 64.3% mentioned a problem. Then, 42.2% mentioned a second problem, 27.4% said a third problem and 18.6% said about a fourth medical problem. The nearly two-thirds of employees who had health issues in telework reported an average of 2.4 medical problems, not just one.

Table 1 shows the answers of the interviewed subjects to the question about organs and medical problems in which they feel that their health has worsened in the last half year.

Table 1: Which of the following organs and medical problems do you feel has worsened your health in the last half year?

	Nr	Percent
Bones, muscles and joints (osteoporosis, arthritis, fractures, hernia, spondylosis, etc.)	135	24,4%
Mental system (anxiety, depression, phobias, addictions, personality disorders, stress, etc.)	115	20,8%
Stomach (gastritis, ulcer, burns, nausea, vomiting, obesity, etc.)	92	16,6%
Eyes (cataract, conjunctivitis, glaucoma, neuritis, myopia, strabismus, etc.)	88	15,9%
Heart (blood pressure, heart disease, atherosclerosis, arrhythmias, chest pain, palpitations, dizziness, etc.)	64	11,6%
Teeth (caries, gingivitis, periodontitis, pain, etc.)	58	10,5%
Skin (allergies, hives, eczema, dermatitis, erythema, cellulite, infections, etc.)	52	9,4%
Nervous system (asthenia, Alzheimer's, meningitis, neurosis, paralysis, sclerosis, etc.)	43	7,8%
Lungs (pneumonia, asthma, bronchitis, tuberculosis, bronchopulmonary cancer, etc.)	28	5,1%
Kidneys (kidney failure, nephritis, kidney stones, etc.)	25	4,5%
Intestines (colitis, inflammation, Crohn's disease, appendicitis, etc.)	24	4,3%
Ears, neck and nose (otitis, tonsillitis, laryngitis, rhinitis, sinusitis, etc.)	24	4,3%
Sexual organ (infections, pain, urinary incontinence, injuries, dysfunctions, etc.)	23	4,2%
Liver (cholecystitis, hepatitis, steatosis, cirrhosis, etc.)	23	4,2%
Brain (epilepsy, Parkinson's, stroke, dysfunction, concussion, migraines, encephalopathy, etc.)	16	2,9%
Infections (abscess, fever, flu, fungal infections, viruses, etc.)	10	1,8%
Blood (anemia, hemophilia, leukemia, hyperglycemia, etc.)	9	1,6%
Pancreas (diabetes, pancreatitis, pancreatic cancer, etc.)	4	0,7%
Other conditions (respiratory, endocrine, immune, genetic, etc.)	12	2,2%
None	198	35,7%
Total	1043	188,3%

Bones, muscles and joints were the most affected organs of employees while working from home. A quarter of them reported the deterioration in their health, 10% more women than men. The problems increased with age, from 23% in those under 30 to 31% in those over 60. Elementary and middle school graduates had the least problems with these organs, while 1 in 3 master's degree graduates mentioned their degradation. The health has deteriorated 3 times more for public employees than for self-employed workers. For those living in cities with less than 30,000 inhabitants, there were twice more damages than for those from cities

with more than 200,000 inhabitants. The most common cases were found in public administration employees, extraterritorial organizations, electricity, heat, gas and water (30%). Based on two surveys, Meg Honan demonstrated that people improvise to work from home, but the number of cases with medical problems has been lower where ergonomics professionals have been involved in reconfiguring home distribution of furniture and in limiting the use of work tools. In the case of teleworkers in Romania at the end of 2020, no employee stated that s/he benefited from the support of specialists in the ergonomic field. Instead, they said they turned to specialists in medicine to correct the degradation of bones, muscles and joints.

One in five teleworkers said their mental system had deteriorated in the last six months of 2020. Women were 35% more affected than men. The fewest cases were found in people aged 40-49 (18%), and most in those over 60 (31%). Depressions mainly affected employees in entertainment (50%), hotels and restaurants (50%), real estate (40%) – employees in those areas that were most affected by the pandemic.

One in six people who worked from home had stomach problems; men as much as women. Stomach problems were twice as common in those over 60 as in those under 30. PhD graduates had 3 times more stomach problems than those in high schools, and public servants complained twice as much as self-employed workers that their stomachs were damaged during work from home. Stomach diseases were more severe in employees working in entertainment, extractive industry and education (over 25%).

Eyes were also damaged in 1 in 6 teleworkers. In women, the diseases were 25% more than in men, and those aged 50-59 had the most symptoms of eye diseases - 3 times more than those aged 25-35. One in four public servants complained of vision problems - twice as many as private employees; most of them work in education and public administration. In addition to the diseases associated with the eyes that were included in the questionnaire (cataracts, conjunctivitis, glaucoma, neuritis, myopia, strabismus, etc.), the study participants also mentioned other aspects: tired eyes, burns, stings, irritations, dry eyes, blurred vision or double, change diopters in glasses, etc. These data are consistent with those measured by other specialists [27],[28], who showed that severe vision impairment occurs during work from home, more than when people work out of home, because they tend to focus more on tasks, not to have rhythm breaks, to blink less often and thus to have less wet eyes, becoming dry, tired and prone to faster degradation.

Heart problems were more common in men (30% more than in women), in those aged 35-55, living in small towns, employed in the fields of cultural and recreational activities, real estate and construction (over 30%).

The teeth were damaged the most among the employees aged 50-59, those with a doctoral degree, to the residents of rural areas or very small towns, and to those employed in international organizations.

Skin diseases were twice as common in women as in men. In those under 40 the incidence was two and a half times more than in those over this age. The risk of skin diseases is significantly higher in those with secondary education (25%) than in those with master or doctoral studies (6%). Employees working in international organizations, entertainment, real estate, transportation and storage, electricity and heat (over 15%) had the most skin conditions.

The pancreas, blood, infections, brain, liver, sexual organ, ears, throat and nose, intestines, kidneys and lungs were the least damaged organs and medical problems of employees who worked from home during the state of emergency.

One of the worst health problems that working at home causes to employees is related to low back, neck, shoulder, hip, knee, thigh or elbow pain due to prolonged sitting on the chair: 68.4% of employees said they had such pain. In women these problems are more serious than in men (75% versus 58%). Public employees are in greater pain than employees in the private sector (73% versus 59%), and employees working in financial services, transportation and storage, electricity and heat, public administration and education were in pain due to prolonged sitting in over 72%.

These conditions are occupational diseases. According to Directive 89/391 / EEC, institutions are responsible for the health of their employees, must provide them with working conditions which do not endanger their health and have a duty to prevent the illness of workers. They had to provide employees with ergonomic chairs. The research shows that only 8% of employees received an ergonomic chair from the institution where they are employed. The luckiest were those over 60 years, with doctoral degree, self-employed or employed in the private sector, in the fields of information and communications, professional scientific and technical activities, health and social assistance, collective social and personal services (they have received ergonomic chairs in a proportion of over 15%).

Due to improper working conditions, drug use increased by 18% among employees who worked from home in the second half of 2020. Drug use increased with age, being more than double in those over 60 (31%) compared to those under 30 (14%), was significantly higher in public employees (24%) than for those in the private sector (15%) and was more frequently found in the fields of extractive industry, electricity and heat, construction, transportation and storage, education and public administration (over 25%).

Half of the people who worked from home said they did not get enough rest. Women were more tired than men, and the lack of sleep increased with age: 62% of those over 60 did not get enough rest, compared to 43% of those under 30. Fatigue was more common in those people who are employed in areas whose activity has stopped drastically during the state of emergency: the cultural and entertainment activities, real estate, the extractive industry, hotels and restaurants. Lack of rest is the consequence of the stress felt by employees as a result of uncertainty about the future of their fields of activity, but also of the growing dependence on new technologies. Research on this issue has shown that teleworkers tend to have compulsive use of computers, tablets and mobile phones, have difficulty quitting work, including when the damage is obvious, have withdrawal symptoms after stopping work, have an increased intolerance and considerable chances of recurrence to become workaholics [29],[30]. The recovery through adequate rest and the disconnection from work are essential for people's physical and mental health. The excessive workload and heavy use of ICT are responsible for sleep deprivation and fatigue.[31]

The results of the specialists are also confirmed by this research: 47% of the employees in telework worked more and as many were more stressed than when they went to work in organizations.

In order to cope with the new conditions, people have changed their habits, the ways of being and manifesting themselves. Studying these changes, a similar pattern can be observed in important groups of employees, which has several characteristics:

- They started eating more: 35.7% gained weight in the second half of 2020 and only 15.5% lost weight, the rest remaining at the same weight. Men gained more weight and women lost more weight, but a third of women gained weight, too. The fat was deposited especially on the bodies of those aged 50-60, who work in the fields of transport and storage, trade, construction, electricity and heat, extraterritorial bodies, public administration.

- They reduced their physical and sportive activity: 59% moved less and only 13% moved more than before the pandemic; 37% left their homes only on weekends or even less often.
- Alcohol consumption increased for 15% and decreased for other 9% of subjects.
- Sexual activity was reduced for 15% and increased for another 12% of employees.

Asked to make an assessment of their general health, one in four employees said that it was worse than when working at the institution and only 9% said that their health was better since they starting working at home. Men, those 30-40 years old, those with doctoral degree, the self-employed, the residents of medium-sized cities (with 30,000 - 100,000 inhabitants), working in cultural and recreational activities, in extraterritorial organizations, in health, construction and agriculture, they found the most improvement in their health (about 15%). On the other hand, women, those over 60, those with master's degree, the public servants, those living in big cities (100,000-200,000 inhabitants), who work in the fields of real estate transactions, education, electricity and heat (over 30%), they all spoke about the poorer general health.

CONCLUSIONS

The shift to telework of a large number of employees, forced by the COVID-19 pandemic, has caused health changes in about two-thirds of them, but in a quarter of them at a faster pace. The deterioration of their health occurred because the adaptation to the new working conditions was made suddenly, through improvisations and individual experiments, without the support of employers, experts in medicine, gymnastics, ergonomics, without people being informed about the negative effects of telework on their health. Many considered that these disturbances are an exception due to the pandemic and that they will quickly return to the old habits, will resume the commute from home to work, will go out again in public spaces, will travel, will move. In fact, as we move forward in 2021, we find that homework will continue in the coming years, and the health problems measured in this research will have long-term consequences if no action is taken to reduce them.

If in 2020 organizations had to change their plans and priorities to deal with the storms they went through, being less attentive to staff health, in the next period they must find solutions to support the well-being and health of employees. The return to the state in 2019 will be only partial, and the coming years will be full of major changes. Employers have had the opportunity to learn more about the privacy of their employees, have seen the personal and professional problems they have faced and it is expected that they will want to increase or at least maintain this visibility to intervene in their lives in order to perform and get better professional results. Studies have shown that when organizations provided support, the negative effects were greatly diminished. If in the past the issues such as rest or sleep of employees were issues beyond the employers' attention, it is expected that these will be issues that matter a lot in the near future.

The involvement of institutions in supporting the physical and mental health of employees (requested by almost three quarters of the participants in this study) will lead to a major change in the structure of their value system. Consumption of drugs, alcohol, sex, websites, news, etc. will be monitored more closely, as will physical exercise, sport and health prevention activities; and institutions will develop policies and strategies to increase or decrease these activities. The consequences of these stronger interventions in private life will

impact not only the employees' health, but also the way people see their lives, the role in organizations, involvement in relationships with coworkers, etc. The health circles proposed by specialists two decades ago will become a reality. Discussing regularly the personal problems they face with their coworkers, sharing their experiences, receiving additional information from experts and support from managers (subscription to swimming pools, gyms and medical offices, outgoing team activities such as trips to the mountain, hiking, shows, reading books at the same time, watching movies, etc.), employees will end up having a system of values much closer to that of their company. The gap between work and home life will no longer be as great as it was before the pandemic. Employers are expected to pay experts to accelerate these changes and develop employees' skills to cope with an increasingly uncertain future.

Hybrid work - from home, from work and from alternative spaces such as cafes, chalets, hotels, etc. - and the flexible work schedule will lead to changes in governmental health policies. People will no longer want to pay a tax for health insurance to be paid to the national health insurance company that distributes it without consulting them. Pressures to break this monopoly will increase, and health institutions will create incentives to attract customers. The employees will move to live close to the institutions and places that increase their well-being. If in the past they moved close to the building where they worked in order to reduce time spent in traffic, in the near future they will prefer to live close to places where they can engage in physical and cultural activities, in less polluted environments, with fresh air, near gyms or swimming pools, close to the health clinics they trust.

If the year 2020 has produced the most changes in modern history, including in terms of human health, it is a mistake to believe that they will stop or at least slow down. They will accelerate and be even deeper. Without health protection, these changes will have major negative consequences.

REFERENCES

[1] Toffler, A. The third wave. Bucharest: Politica Publishing House, Contemporary Ideas series; 1983.

[2] Baruch, Y. Teleworking: benefits and pitfalls as perceived by professionals and managers. New Technology, Work and Employment, 2000;15(1), Blackwell Publishers Ltd., 34-49.

[3] Snellman CL. Virtual teams: opportunities and challenges for e-leaders. Procedia – Social and Behavioral Science. 2014;110:1251-1261.

[4] Kuscu M, Arslan H. Virtual Leadership at Distance Education Teams. Turkish Online Journal of Distance Education – TOJDE. 2016;17(3):136-156.

[5] Baruch, Y. Teleworking: benefits and pitfalls as perceived by professionals and managers. New Technology, Work and Employment. 2000;15(1):34-49.

[6] Mann S, Holdsworth L. The psychological impact of teleworking: Stress, emotions and health. New Technology, Work and Employment. 2003;18(3):196-211.

[7] Russell H, O`Connell PJ, McGinnity F. The Impact of Flexible Working on Work-life Conflict and Work Pressure in Ireland. Gender, Work and Organization. 2009;16(1):73-97.

[8] Morganson VJ, Majo DA, Oborn KL, Verive JM, Heelan MP. Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion. Journal of Managerial Psychology. 2010;25(6):578–595.
[9] Venegas Tresierra CE, Leyva Pozo AC. La fatiga y la carga mental en los teletrabajadores: a propósito del distanciamiento social. Revista Española de Salud Pública. 2020;94(1):e1-e17.
[10] Eurofound. Living, working and COVID-19. COVID-19 series, Publications Office of the European Union, Luxembourg. 2020. [online] Available at: <https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20059en.pdf>
[11] Sheedy J, Hayes JN, Engle J. Is all asthenopia the same? Optometry and vision science. 2003;80(11):732-739.
[12] Blehm C, Vishnu S, Khattak A, Mitra S, Yee RW. Computer vision syndrome: a review. Survey of Ophtalmology. 2005;50(3):253-262.
[13] Wolkoff P, Nøjgaard JK, Troiano P, Piccoli B. Eye complaints in the office environment: precorneal tear film integrity influenced by eye blinking efficiency. Occupational and environmental medicine. 2005;62(1):4-12.
[14] Honan M. Mobile work: Ergonomics in a rapidly changing work environment. Work – a journal of prevention assessment & rehabilitation. 2015;52(2):289-301.
[15] Ning X, Huang Y, Hu B, Nimbarte A. Neck kinematics and muscle activity during mobile device operations. International Journal of Industrial Ergonomics. 2015;48:10-15.
[16] Hansraj KK. Assessment of stresses in the cervical spine caused by posture and position of the head. Surgical Technology International. 2014;25:277-279.
[17] Eddleston KA, Mulki J. Toward understanding remote workers' management of work-family boundaries: the complexity of workplace embeddedness. Group & Organization Management. 2015;42(3):346–387.
[18] Gimenez-Nadal JI, Molina JA, Velilla J. Work time and well-being for workers at home: evidence from the American time use survey. International Journal of Manpower. 2019;41(2):184–206.
[18] Song Y, Gao J. Does telework stress employees out? A study on working at home and subjective well-being for wage/salary workers. Journal of Happiness Studies, Springer. 2019;21(7):2649–2668.
[20] Suh A, Lee J. Understanding teleworkers' technostress and its influence on job satisfaction. Internet Research. 2017;27(1):140–159.
[21] Leca I, Merluşcă N, Bordea A, Chirea-Prichici S, Calotă A. Studiu privind oportunitatea flexibilizării modului și timpului de lucru în administrația publică din România. Institutul Național de Administrație; 2020. Available at <http://ina.gov.ro/wp-content/uploads/2021/01/STUDIU-moduri-de-lucru-flexibile.pdf>.
[22] Arefi MF, Babaei-Pouya A, Poursadeqiyan M. The health effects of quarantine during the COVID-19 pandemic. Work – a journal of prevention assessment & rehabilitation. 2020;67(3):523-527.
[23] Henke RM, Benevent R, Schulte P, Rinehart C, Crighton KA, Corcoran M. The Effects of Telecommuting Intensity on Employee Health. American Journal of Health Promotion. 2016;30(8):604-612.

[25] Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. A rapid review of mental and physical health effects of working at home: how do we optimise health? BMC Public Health. 2020;20:1825.
[26] Moretti A, Menna F, Aulicino M, Paoletta M, Liguori S, Iolascon G. Characterization of Home Working Population during COVID-19 Emergency: A Cross-Sectional Analysis. International Journal of Environmental Research and Public Health. 2020;17(6284):2-12.
[27] World Health Organization. International Classification of Functioning, Disability and Health. București. MarLink Publishing House; 2004. Available at <https://apps.who.int/iris/bitstream/handle/10665/42407/9241545429_rum.pdf;sequence=5>.
[28] Portello JK, Rosenfield M, Bababekova Y, Estrada JM, Leon A. Computer related visual symptoms in office workers. Ophthalmic & Physiological Optics. 2012;32(5):375-382.
[29] Hayes JR, Sheedy JE, Stelmack JA, Heaney CA. Computer use, symptoms, and quality of life. Optometry and Vision Science. 2007;84(8):738-755.
[20] Brenner V. Psychology of computer use: XLVII. Parameters of Internet use, abuse and addiction: the first 90 days of the Internet usage survey, Psychological Reports. 1997;80 (3):879-882.
[30] Park WK. Mobile phone addiction, in Ling R. and Pedersen P.E. (eds.) Mobile communications: re-negotiating of the social sphere, London, Springer, 2005;253-271.
[31] Punamäki RL, Wallenius M, Nygård CH, Saarni L, Rimpelä A. Use of information and communication technology (ICT) and perceived health in adolescence: the role of sleeping habits and waking-time tiredness, Journal of Adolescence. 2007;30(4):569-585.