

## IMPLICATIONS OF COVID-19 PANDEMIC IN THE WORLD AND THE ROMANIAN SOCIETY. AN INTERDISCIPLINARY APPROACH

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**Abstract:** This article examines how the COVID-19 pandemic has affected mental health while the virus was spreading and governments took measures around the world, in Europe and, more specifically, in Romania, while paying particular attention to vulnerable categories of individuals, parent-child interactions and distress, educational changes and adaptive behaviours, work-related stress and communication, digitalization and lack of proper social contact. The impact of the pandemic on several facets of mental health as well as its impact on the situations is evaluated using data from current literature.

The findings demonstrate that the pandemic has had a profoundly negative influence on mental health, resulting in higher levels of stress and anxiety, lower overall life satisfaction, and a higher likelihood of developing a depressive disorder. Additionally, it shows several modifications in the child-parent connection, including a decline in communication and an uptick in conflict, as well as comparable tendencies in the educational field. While digitalization sure was a solution and it made things easier, it also led to a bigger gender gap and work-family balance issues which put more pressure on women and their career development. Cyberchondria now replaces hypochondria, efficiency in education hits a peak but we lack effectiveness and, while the solutions found were appropriate and best for diverse situations, they also outlined more problems that overtook the advantages. We need

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to develop and adapt but we must not forget about what technology cannot yet replace: emotion, empathy, warmth and all that keeps us mentally healthy and wealthy.

**Keywords:** pandemic, health crisis, mental health, vulnerable populations, parent-child relationship, education.

**Résumé :** Cet article examine comment la pandémie de COVID-19 a affecté la santé mentale alors que le virus se propageait et que les gouvernements prenaient des mesures dans le monde, en Europe et, plus spécifiquement, en Roumanie, tout en accordant une attention particulière aux catégories d'individus vulnérables, aux interactions et à la détresse parents-enfants, aux changements éducatifs et aux comportements adaptatifs, au stress et à la communication liés au travail, à la numérisation et au manque de contacts sociaux appropriés. L'impact de la pandémie sur plusieurs facettes de la santé mentale ainsi que son impact sur les situations sont évalués à partir des données de la littérature actuelle. Les résultats démontrent que la pandémie a eu une influence profondément négative sur la santé mentale, entraînant des niveaux plus élevés de stress et d'anxiété, une satisfaction de vie globale plus faible et une probabilité plus élevée de développer un trouble dépressif. En outre, il montre plusieurs modifications dans le lien enfant-parent, notamment une baisse de la communication et une augmentation des conflits, ainsi que des tendances comparables dans le domaine de l'éducation. Alors que la numérisation était une solution et facilitait les choses, elle a également conduit à un écart plus important entre les sexes et à des problèmes d'équilibre travail-famille qui ont mis plus de pression sur les femmes et leur développement de carrière. La cybercondrie remplace désormais l'hypocondrie, l'efficacité dans l'éducation atteint un sommet mais nous manquons d'efficacité et, si les solutions trouvées étaient appropriées et les meilleures pour diverses situations, elles ont également souligné davantage de problèmes qui ont dépassé les avantages. Nous devons nous développer et nous adapter, mais nous ne devons pas oublier ce que la technologie ne peut pas encore remplacer : l'émotion, l'empathie, la chaleur et tout ce qui nous maintient mentalement sains et riches.

**Mots-clés:** pandémie, crise sanitaire, santé mentale, populations vulnérables, relation parent-enfant, éducation.

**Rezumat:** Acest articol examinează modul în care pandemia COVID-19 a afectat sănătatea mintală în timp ce virusul se răspânda și guvernele au luat măsuri în întreaga lume, în Europa și, mai precis, în România, acordând în același timp o atenție deosebită categoriilor vulnerabile de indivizi, interacțiunilor și suferinței părinte-copil, schimbărilor educaționale și comportamentelor adaptative, stresului și comunicării legate de muncă, digitalizării și lipsei unui contact social adecvat. Impactul pandemiei asupra mai multor fațete ale sănătății mintale, precum și impactul acesteia asupra situațiilor, este evaluat folosind date din literatura actuală.

Descoperirile demonstrează că pandemia a avut o influență profund negativă asupra sănătății mintale, ducând la niveluri mai ridicate de stres și anxietate, o satisfacție generală mai scăzută cu viața și o probabilitate mai mare de a dezvolta o tulburare depresivă. În plus, arată mai multe modificări în relația copil-părinte, inclusiv o scădere a comunicării și o creștere a conflictului, precum și tendințe comparabile în domeniul educațional. Deși digitalizarea a fost cu siguranță o soluție și a ușurat lucrurile, a dus, de asemenea, la o diferență mai mare de gen și la probleme de echilibru între muncă și familie, care au pus mai multă presiune asupra femeilor și asupra dezvoltării carierei lor. Cybercondria înlocuiește acum ipohondria, eficiența în educație atinge un apogeu, dar ne lipsește

eficacitatea și, deși soluțiile găsite au fost adecvate și cele mai bune pentru diverse situații, au conturat și mai multe probleme care au depășit avantajele. Trebuie să ne dezvoltăm și să ne adaptăm, dar nu trebuie să uităm de ceea ce tehnologia nu poate înlocui încă: emoția, empatia, căldura și tot ceea ce ne menține sănătoși și bogați mintal.

**Cuvinte cheie:** pandemie, criză de sănătate, sănătate mintală, populații vulnerabile, relație părinte-copil, educație.

## 1. Introduction

It all started on December 31<sup>st</sup> of 2019 when, in Wuhan, the first case of COVID-19, „a respiratory disease” was observed (Munot et al., 2021, p. 1). From this „the most disturbing event in the lifetime of most of our planet's citizens” (Alexa et al., 2022, p. 19) started to develop: the pandemic made its way to Asia in January 2020 (Zhu et al., 2022, p. 2) and, by March 2020, the virus had spread to other countries in the region such as South Korea, Taiwan, Singapore, and Japan. The first case of COVID-19 in North America was officially identified on January 20, 2020, in Washington State (Capainolo & Chase, 2022, p. 330). In South America and Africa, the pandemic started developing in late February with the first cases being identified in Brazil (Martines et al., 2021, p. 7) and Egypt (Samir et al., 2021, p. 2).

With the first cases being recorded in France on February 26, 2020, the pandemic spread across Europe over the following month and in June 2020 we already have a European Parliament report on most of the member state situation regarding the state of the emergency legal frame and specific measures taken: the Netherlands declared a national emergency on March 13, 2020, the UK on March 19, 2020, and Germany on March 22, 2020 (Bentzen et al., 2020, pp. 2-11). The pandemic had greatly worsened by April 12, in nations like Italy (Fochesato et al., 2021, p. 3), France, Spain, and the UK. In an attempt to slow the virus's transmission at this time, social isolation policies and other limitations were implemented.

The Romanian pandemic episode also began on February 26. By March 16, 2020, the government of Romania had proclaimed a state of emergency to stop the spread of Covid-19 and imposed stringent rules: a nationwide lockdown on March 21, 2020, closing all non-essential businesses and educational institutions. It was originally planned for this lockdown to conclude on April 30, 2020, but it was postponed until May 15, 2020. In addition, the government also implemented various measures to help combat the spread of the virus. These measures included ordering citizens to wear face masks in public, introducing contact tracing measures, banning travel outside the country, and setting up quarantine facilities to isolate those who had tested positive. The Romanian government has also made testing more widely available and set up medical facilities to provide care to those infected with Covid-19. All measures impacted the life standard of the population (Arpinte et al., 2020, p.7), access to medical care services, access to educational services, emotional support, lack of socialization, change in working, parenting, teaching also brought new perspectives on life priorities.

## 2. The social impact of COVID-19

### 2.1. *The impact of the health crisis on vulnerable urban populations*

The COVID-19 pandemic has affected all social structures by imposing social distancing, limiting interactions and transforming direct communication into mediated communication in all the socio-economic spheres where it was possible, presumably exerting severe pressures on the social and economic lives of the individuals. How women, the elderly and children have responded to the need to interact with others is of increasing interest to this theoretical approach, which aims to present several studies that address the effect of the pandemic on the relationships of these categories of people who have been regarded as physically, socially or culturally vulnerable.

According to the Merriam-Webster Dictionary 1997, the word vulnerable is derived from the Latin word *vulnerable* which means *to wound*, the definition also includes *being capable of being wounded* and open to attack. Why have we included women in the category of vulnerable people? Addressing the issue of relationships and social interactions, we start from the studies showing that women are more vulnerable to violence in general, compared to men, which also sensitizes them to other risk situations (Wägnerud et al., 2019), showing a greater tendency to anticipate negative outcomes (Stockemer et al. 2021) thus, their type of crisis response is different, in line with their psycho-emotional elements.

Studies showed that women are oriented towards others, are anchored in an ethic of care and connection (Jordan, 2017) as predominant themes in their lives, and women's sense of empowerment is defined by the quality of relationships they have with others (Miller, 1988, cited in Salisbury, 2009). In the case of women, relationships are seen as the primary context for psychological growth and healing, having the capacity to be empowering in women's developmental process (Kerr, 2009, p. 6). Seeking relationships is not a sign of weakness (Jordan, 2017), it is the fundamental model by which all people are strongly drawn to each other, by the desire for connection, belonging, and social inclusion (Comstock et al. 2008). During the pandemic period, women's response to the connection and relationship dimension, important aspects of their lives, has been associated in the literature with stricter compliance with imposed rules and measures, due to strong fears about the lives and health of those around them (Stockemer et al. 2021) while also expressing other negative feelings about the future effects of the pandemic. Dang and Nguyen (2020) showed that women worry more about the losses related to the Covid pandemic; they are worried about losing their jobs or that their income will decline, and feel the risk more acutely than men in a variety of situations, converging on women's characteristic of being more cautious, especially in life-threatening situations (Maxfield et al. 2010, cited in Stockemer et al., 2021).

According to the relational sociological perspective, each process of uncertainty creates changes in social networks and relationships, and these changes affect the identities and roles of the individuals, as well as the strategies for dealing with relationships (Babuç, 2022). In the case of women, and the context

of this ambiguity and uncertainty, we observe that their predisposition towards care took the form of strategies that aimed to protect others, making sacrifices that affected all aspects of their lives. Women were also exposed during the pandemic to other negative consequences, with studies showing that in any crisis, the incidence of violent behaviour towards women increases. We point out in this regard that New Zealand reported a 53% increase in domestic violence following the 2010-2011 earthquakes, and research following Hurricane Katrina in 2005 led to the conclusion that violence against women increased by 98% during that period (Morley, 2021). In this new social normality, where isolation from the usual social network has become common, the search for adaptive states that provide security has become central. However, the pandemic has left women facing a complexity of problems that have manifested themselves in many forms, including greater financial hardship, insecurity or loss of employment and its associated social network, increased levels of stress, substance use and mental health problems, and not least, increased levels of domestic violence (Morley, 2021).

During the pandemic, at the level of family groups, some studies show a *re-rationalization of gender roles* (Allmendinger, 2020, cited in Müller, 2023, p. 184), which has generated opportunities to reduce gender gaps and expand the horizon for sharing of responsibilities between women and men (Dey et al., 2021). However, women's role as primary caregivers for children has remained unchanged (Müller, 2023), which, in the context of the concern about job loss or new job-related demands, has led to an exacerbation of stressors associated with the pandemic and the experience of strong negative emotions. A study on the situation of women in academia during the pandemic (Bender, 2022) shows that they felt the need for supportive professional structures, and felt overwhelmed by their inextricably linked roles as parents and women in academia, each serving as a fundamental component of their identity. Beck (2020) has stated that the new risks are more democratic because they affect everyone, yet the context of the pandemic has had important implications for the situation of women, as they are vulnerable to the effects of the crisis, physically, emotionally but also socially.

In a study on the US population, women had higher percentages than men in all areas that looked at the negative effects of the pandemic on people's mental states. Thus, 95% of women had a clear perception that social isolation has a significant impact on people's mental health, reporting higher percentages than men both in the areas related to anxiety created by isolation, but also in connection to the efforts undertaken to maintain social bonds. Women's frame of mind during the pandemic was aggravated by the age variable, with the same study showing that women over 50 felt social isolation and its negative effects more strongly than men. Between March and June 2020, four in ten US adults aged 50 to 80 felt a negative sense of social isolation, with the rate being much higher among women (47%) than men (35%), and women also reported more symptoms of depression (84%) (Elflein, 2021).

In the absence of studies in Romania, we refer further to another study on the US population (McCarthy, 2020), which shows that the COVID-19 pandemic

had the most severe impact on the elderly population. The pandemic has had a disproportionate effect on the population by age worldwide, with the elderly being classified as a risk group since the onset of the health crisis, with hospitalizations and deaths hitting the hardest in this category. This classification as a risk group has reinforced the stigma among the elderly population, generating unease among this category about the use and proliferation of the mentioned label and its associations (Hopf, 2021). The mentioned study (Hopf, 2021) also shows the situation faced by the elderly population, who has been labelled as the culprit of society's blockage. Older adults were advised throughout the pandemic, all over the world, to avoid interactions, an aspect that exacerbated the loneliness of the elderly who were prone to isolation anyway, due to the physical and social conditions associated with this stage of life. Studies of adults in the United States and Australia confirmed that people aged over 60 were particularly prone to loneliness throughout the virus' bans (Carr et al., 2021). Overall, the discourse surrounding the pandemic has reinforced the homogeneous view of older adults as vulnerable, a negative age-based stereotype already widely embedded (Cohn-Schwartz & Ayalon, 2020), further emphasizing the psychological distance between generations and adopting a perspective that can disrupt intergenerational cohesion (Abrams et al., 2011, cited in Swif et al. 2021).

To strengthen our understanding of those factors that increase vulnerability in the face of the pandemic crisis, we consider the multiple axes of inequality because the pandemic is not only a health crisis, but also an ecological, economic, social, cultural and gender crisis of vast complexity that has placed a huge burden on communities, households and individuals wherever they may be (Lemkow-Tovías et al., 2023). A 2020 United Nations communiqué draws attention to the fact that the harmful effects of this pandemic will not be evenly distributed and are expected to be most damaging to children in poor countries. While health and mortality rates among children are less affected by COVID-19 compared to the adult population, their mental health and well-being, as well as access to education and various social interactions are likely to have been affected, the degree to which they have been impacted depending on the socio-economic conditions of their background. Evidence from previous epidemic crises shows that women and girls are among the most affected, especially if they have histories of poor social and economic status, disability, mental health problems or other types of physical or social barriers (Fore, 2020).

The current crisis has had a significant negative impact on women, single mothers, who have been affected by the pandemic, but also by the social and economic measures adjacent to it, and this is certain to have a significant negative impact on their children, as it is well known that the well-being of children depends very much on the social and economic circumstances of the home environment (Lemkow-Tovías et al., 2023). We have previously shown that women have experienced a high degree of stress in the face of changes brought about by the pandemic, and this cannot remain without repercussions on the children in their care, who are more vulnerable in the context of parents who have not adequately

fulfilled their responsibilities. In a paper on child protection (Alliance for Child Protection in Humanitarian Action, 2018, 2019, cited in Lemkow-Tovías et al., 2023) it is shown that stressed parents suffering from fatigue and depression are unable to adequately fulfil their parenting role, a situation that exposes children to risks, including accidents. Moreover, when children have had to stay at home in isolation, parents have had to take on additional responsibilities for their children's upbringing; these additional responsibilities have most likely been reflected in changes to the children's daily schedule and the whole family dynamic.

Finally, we reiterate that the COVID-19 pandemic quickly turned into a global health crisis with economic, social, interpersonal and emotional implications, generating risks and uncertainties that particularly affected vulnerable groups, this characteristic being important concerning age and gender.

### ***2.2. The impact of the health crisis on the parent-child relationship***

COVID-19 Pandemic has affected life in almost all its aspects and, while it is generally admitted that parenting, „the oldest profession in the world” (Sherr et al., 2017, p. 145.) has, by itself, difficulties and presumes stress (Rivas et al., 2021, p. 27) and burnout comparable with the job related one (Mikolajczak et al., 2020, p. 674), the pandemic period surely aggravated the situation: parents started working online (Andrade & Lousa, 2021, p. 1), children enrolled to online lessons (Levine et al., 2023, p. 1) and nobody could go out for a breath of fresh air, a change of view or movement (Kharel et al., 2022, p. 1).

Working from home, in all of its aspects, while an opportunity and a solution, also brought an aggravation of the work-family conflict. No matter how we name or define work-at-home, work-from-home, telecommuting, and teleworking (Agbakwuru & Ejakpovi, 2022, p. 80) or if they were implemented before the pandemic times or not, the options of doing it while the children left for educational purposes disappeared. Moreover, during lockdown, even the possibility to vent, to organize, to finish a task while children played outside disappeared and mental distress started to take over (Lai et al., 2021, pp. 1-2). Because this relationship is two-dimensional, the children also, besides adapting to online learning, felt little to no freedom, with no time away from their parents' presence.

In 2020 Sclafani outlines the importance of adapting parenting and adjusting to see our children holistically, so that we can compensate for the multi-dimensional exposure and experience that completely lacks during the pandemic times (Sclafani, 2020, p. 2) while, later, de Jong et al. (2021, p. 2) sees the parent-child conflict during the mandatory home-schooling as an opportunity for mothers to develop self-efficacy in teaching while providing a more suitable home learning environment.

So, while we have research that shows how the pandemic created chaos that ruined the children's sleep, diet and behaviour (Auðardóttir & Rúðólfsdóttir, 2020, p. 1), affected the children's lifestyles and anxiety levels (Zengin et al., 2021, p. 1), sleep habits, chronotype and health-related quality of life (Genta et al., 2021,

p. 1372) we also have research that correlates the children stress during the pandemic with parental emotion regulation and parental playfulness (Shorer & Leibovich, 2020, p. 8), parent emotional intelligence (Adams-Sadiqi & Jiang, 2023, p. 42) and even state that parents emotion suppression exacerbates the effect of COVID-19 stress on youth internalizing symptomatology (Cohodes et al., 2022, pp. 3-5). Extrapolating, besides juggling with working for the job in an inappropriate space, while being teachers and parents for children with little to no access to nature and open spaces, parents are also responsible for all stress and stress consequences brought by changes, lockdowns and online learning so parental guilt is even more present and destructive.

Both male and women parents suffer from the effects of the pandemic period and Baker outlines that men are more likely to take on domestic tasks while on breaks (2022, p. 4) while Hjalmsdottir and Bjarnadottir use the term „gender paradise” to outline the aggravation of gender gap during COVID that helped reveal and exaggerate „strong gender norms and expectations toward mothers” (2021, p. 268). Hagan et al., (2022, p. 131) bring forward how the pandemic brought to light the mother's adverse childhood experiences as traumatic stress reactions in their children and Chauhan states that „work-from-home is not gender neutral” and it affects and discriminates women even more than before (Chauhan, 2022).

In conclusion, the changes in work-family balance for women (Adisa et al., 2020, p. 1) and men parents brought more time spend with their children but this time is not necessarily quality time but rather cause guilt, distress, violence and trauma because the parents had to fill positions for which were not necessarily qualified for or without specific period allocated. Probably the most realistic view on the subject is the one that sees „risk and resilience” in the family well-being during the pandemic (Prime et al., 2020, p. 631).

### **3. Mental health symptomatically**

Various scholars examined the implications of the COVID-19 pandemic, especially regarding the impact of self-isolation and quarantine, on people's mental health (Kupcova et al., 2023). The detrimental effects of the pandemic have been examined in studies around the world among children (Deng et al., 2023), adolescents (Magklara et al., 2023), and adults (Chandola et al., 2022), and results generally suggested significant increases in psychological distress, anxiety, anger, hopelessness and loneliness (Takács et al., 2023), fear and sadness (Ahorsu et al., 2022), confusion and posttraumatic symptoms (Khan et al., 2013).

Studies among the Romanian population also aligned with the results suggested by scholars worldwide, highlighting the negative impact of the COVID-19 pandemic at various levels (Curşeu et al., 2021; Dominte et al., 2022; Enea et al., 2022; Măirean et al., 2023; Zancu et al., 2022). For instance, COVID-19 healthcare workers reported high levels of exposure to potentially morally injurious events, which were related to physical and emotional self-reported distress (Maftei & Holman, 2021b). Similar findings were reported by scholars examining the moral stressors related to the COVID-19 pandemic (D'Alessandro et al., 2022),



highlighting the need for long-term emotional support for healthcare front-line workers (Litam & Balkin, 2021). However, studies have also shown that, at least at the beginning of the pandemic, younger Romanians were more likely to consider some potential positive outcomes following the pandemic at various levels, including interpersonal relationships and overall personal growth (Maftai & Holman, 2020b).

Cyberchondria (i.e., the excessive and repetitive search for medical information using online sources; Starcevic et al., 2021) is one of the pathological behaviours widely examined within the pandemic context. Studies have found that this type of behaviour significantly increased during the COVID-19 pandemic (Jokic-Begic et al., 2020), resulting in elevated stress, depression, anxiety, and obsessive-compulsive disorder symptoms (Vismara et al., 2022). Research also suggested that younger females, with a history of mental disorders might be at higher risk to develop cyberchondria (Vismara et al., 2022). Also, people high in neuroticism and impulsivity, with low self-esteem and high intolerance of uncertainty might be more prone to experience cyberchondria (Mestre-Bach & Potenza, 2023). Studies among the Romanian population during the COVID-19 pandemic also suggested that people high in neuroticism – especially older, female individuals, are at higher risk of developing cyberchondria (Maftai & Holman, 2020a). Also, among the Romanian population, cyberchondria was positively associated with prospective negative behaviours during the COVID-19 lockdown and with positive behaviours after the lockdown, highlighting the role of prospective moral licensing and cleansing, and health anxiety in shaping moral decisions during the pandemic (Maftai & Holman, 2021a).

Studies examining the COVID-19-associated mental health symptomatology among children and adolescents generally highlighted depression, anxiety, stress, and fear as commonly related outcomes (Racine et al., 2021), and studies among the Romanian youth population aligned with this general overview. For instance, (Maftai et al., 2022) found that sadness was commonly reported by children and adolescents aged 10 to 13 as the most frequently associated emotion with the COVID-19 pandemic. Similarly, Stevanovic et al. (2022) suggested that Romanian children, similar to those from Georgia, Lithuania, Serbia, and Turkey, reported significant alterations in the overall quality of mental health during the COVID-19 pandemic.

Some other previous studies conducted in Romanian samples reported results about mental health symptomatology. For example, a sample conducted with young adults attending college in the first and second year of study aimed to assess the longitudinal relation between psychological distress (depression and anxiety symptoms) and positive mental health in two-time points, at the end of the initial lockdown in Romania and six months later. Moreover, the study evaluated the relationship between COVID-19-related factors with psychological distress and positive mental health. Among the COVID-19-related factors, the authors included risk perception of COVID-19, COVID-19 preventive behaviours, perceived efficacy of preventive behaviours, knowledge about COVID-19, fear of COVID-19, COVID-

19 experience in the last six months (Măirean et al., 2023). The results showed that preventive behaviours and perceived efficacy of these behaviours showed a decrease over a six-month period of time, while risk perception about contracting the disease and knowledge about COVID-19 did not present changes during this period. Concerning mental health, the result indicated that positive mental health decreased, while psychological distress did not change during that period. Further, psychological distress, positive mental health, risk perception at the first time, and fear of COVID-19 at Time 2 of measurement are significant predictors of psychological distress in the second wave. Moreover, a high level of positive mental health, as well as a low level of psychological distress and risk perception in the first moment predicted positive mental health at the second time.

Another study conducted in a Romanian sample, mostly comprised of young adults, aimed to identify the relation between time perspective, COVID-19 risk perception and preventive behaviours, over six months. The results showed that participants with a positive orientation toward the future reported more preventive behaviours six months later, while the perceived severity of the COVID-19 pandemic was positively related to preventive behaviours during the second wave (Zancu et al., 2022). The practical implications of these results consist of focusing on the effectiveness of preventive behaviours in protecting against the risks of the pandemic, by highlighting the positive implications of compliance to health protective behaviours.

#### **4. The implications on the educational level**

The COVID-19 pandemic affected all areas of activity. The education system could not escape untouched, and the consequences are significant in the medium and long term. In a matter of weeks, the educational landscape has fundamentally changed. The crisis reconfigured educational practices from face-to-face interaction to online teaching and learning. Thus, in March 2020, training institutions all over the world closed their doors and moved quickly to online learning. The UNESCO report (July 31, 2020) showed the COVID-19 pandemic has had an unprecedented impact on all levels of education and learning around the world. In early April 2020, schools closed in 194 countries, affecting an estimated 1.5 billion students at preschool, primary, secondary and high school levels, representing 90% of all students enrolled in the education system. As Sternadel (2021) stated, „In most EU countries, the period of school disruptions due to the COVID-19 pandemic has led to more than one-third of the school year being lost; in Romania and Malta it was more than half (51%)” (p. 19). According to a UNESCO report, in Romania, school closures lasted 36 weeks: 22 weeks of full closure and 14 weeks of partial closure.

This new challenge has highlighted the role of digital education as a key objective for a high-quality, accessible and inclusive teaching-learning-assessment process. In Romania, the digitization of the education and training system before the COVID-19 crisis was at an early stage. According to the analysis „Integration of Technologies in the Romanian education system” published before the pandemic

and cited by the Ministry of Education and Research in the „Strategy for the Digitization of Education in Romania” (2020), most of the teachers participating in the focus group mentioned that they rarely use technology in teaching, and when they do it, they limit themselves to presentations played on a video projector. The same investigation stated that most students did not have access to a computer or mobile device during classes, and if they did, it was almost exclusively in Computer classes. Also, nine out of ten students didn't know any other way to reach information than using a specific search engine and the majority of teachers didn't encourage pupils to use the resources available on the Internet, nor did they systematically present reliable online resources, such as virtual libraries, educational platforms, online magazines etc. The COVID-19 crisis has revealed other significant gaps and deficiencies in infrastructure and connectivity, protocols and online working methods, digital skills and the use of technology in Romanian education.

Despite all these lacks, teachers, students and their families quickly adapted and continued to learn, showing determination and perseverance. The closure of educational establishments and face-to-face educational activities led to the need for each entity to determine the appropriate ways to continue courses, and the management teams decided how they would organize online learning activities and communication with parents and students. There is a large consensus that e-learning or online learning refers to courses delivered partially or fully online (Gedik et al., 2013) or, as Allen and Seaman (2011) stated „online courses are those in which at least 80 per cent of the course content is delivered online. Face-to-face instruction includes courses in which zero to 29 per cent of the content is delivered online; this category includes both traditional and web-facilitated courses” (p. 7).

Over the years, online teaching and learning had many classifications. Twigg (2003) found five types: supplemental, replacement, emporium, fully online, and buffet; Picciano (2017) added two more: HyFlex and multimodal. The most common classification is that of Martin and Oyarzun (2017). They presented five types of online courses: asynchronous, synchronous, Massive Open Online Courses, blended/hybrid, and blended synchronous. An asynchronous course is the one where most of the information is delivered online and students may participate from anywhere, anytime. It doesn't imply real-time online or face-to-face meetings. Learning may include interactive online activities, readings, practice exercises, quizzes etc. On the other end, a synchronous course involves real-time online meetings. The content is delivered online and students can participate in courses from anywhere but at the same time. Learning is guided and monitored by the teacher for the whole duration of the online class and may include: video conferences, question-and-answer sessions, debates on pre-announced topics, evaluation sessions etc. To best support the learning objectives, asynchronous and synchronous online activities may be used complementary.

Massive Open Online Courses (MOOC) are partly related to the open and online component of education. This type of class assumes that an unlimited

number of students can access the open-source content free of cost, in a flexible learning environment. There is evidence that, during the COVID-19 pandemic, MOOC enrolment increased (Tlili et al., 2022). A blended or hybrid course involves a combination of face-to-face and asynchronously online delivery. A variation of this type is when the class is divided into two groups that take turns doing one day/week in school, and one day/week online. This model was recommended in alert situations when multiple cases of COVID-19 were detected nationwide. The Romanian education system developed all those models according to the gravity of the situation, during the pandemic. To get an overview of how formal education was done during the pandemic period, we will unfold the results of some investigations.

In a large study carried out two weeks after the first closure of educational institutions (March 25-31, 2020), a team of researchers and professors from the University of Bucharest, Timișoara West University, Alexandru Ioan Cuza University Iași, and the Institute of Education Sciences conducted evaluative research on teaching practices and difficulties in carrying out activities with students. This research shows that in online learning, teachers and students most frequently used simple applications for communication such as WhatsApp or Messenger (91%), phone calls (83%), open educational resources and digital content (e.g. information and illustration sites, online libraries, simulations, educational software, virtual labs, virtual museums, Digitaliada, LearningApps), but also specialized e-learning platforms and videoconferencing applications as Webex, Zoom, Meet, Teams. For meetings and discussions with colleagues, teachers said they use asynchronous discussion groups such as Whatsapp (94%), phone calls (75%), email (72%) and video conferencing via Zoom, Webex, Skype, Meet etc. (58%). For classroom and learning activity management, almost three-quarters of the respondents said they use e-learning platforms such as Google Classroom (68%), Moodle (3%), Edmodo (3%), and Easy Class (2%). Teachers also reported receiving guidance predominantly from the school principal (35%), the Ministry of Education and its institutions (25%), colleagues (23%), the IT teacher (9%), NGOs and private companies (4%), parents (2%) and pupils (2%).

The Romanian Institute of Educational Sciences report (August 2020) found that almost all principals surveyed (96%) said that school continued during the first lock-in period, March-June 2020. Schools that failed to organize such activities were from small urban towns or villages. In the same study, it is said that the use of electronic means and new technologies was predominant in learning activities. 91% of the school principals mentioned that the transmission of learning resources and tasks was mainly done through various digital means of communication. Some schools used alternative, non-digital forms of distance learning: phone communication (50% of the principals, 5% of the students), sending learning resources or tasks in printed form by post in rural areas (3% of the teachers, 2% of the students), watching TV broadcasts as „Tele-School” (5% of the students). According to the mentioned study, 75% of the teachers worked with all the students, more than 20% - with more than half of the pupils, and the rest - with

smaller groups of pupils. The teachers who most often reported working with higher proportions of their pupils belong to the following categories: come from urban schools, have at least a final/teaching degree, have more seniority in teaching, work at primary or secondary level, and have digital skills. The respondents from the study reported great difficulties in organizing online learning for students with disabilities and/or special educational needs.

As in many other situations, the COVID-19 pandemic implications are not just good or just bad for the educational system. It is more like a tapestry in which the negative elements are doubled by the positive. In the following, we will discuss these positive and negative facets.

#### **4.1. Technology and Education**

The role of technology in education and training has always been important, they enhanced each other, capitalizing on each other and always being at the starting line of evolution: technology has helped to address how the efficiency and effectiveness of the education system are complemented by options that allow an inexpensive, fast and very good quality training process. On the other hand, education has always supported and contributed to the development of technology by stimulating people's creativity and training skills. The ardent topic of the speech on the advantages and disadvantages of education and training conducted online has always been efficiency and effectiveness. Based on the experience and expertise of over 60 years of research in the field, Stolovitch et al. (2017: 276-277) offer a convincing positioning regarding the impact of technology on vocational education and training:

*Media and technology can substantially improve the **efficiency** of the training and learning process (e.n. faster, inexpensive), which is extremely important. However, they have an almost negligible impact on the **effectiveness** of (e.n. performance, quality) learning process. (...) On the contrary, the way the course is designed is the one that influences the effectiveness of the learning process, not the technology used to transmit and communicate the instructional message.*

Therefore, technology can contribute to the efficiency of training, providing opportunities for access to skills training and development and the acquisition of knowledge quickly and inexpensively, if the quality standards of the training program are met and it is designed correctly. Along with accessibility, among the possible advantages of using digital technologies in the training/learning process, we mention:

- Simultaneous training for a large number of beneficiaries (removing the limits imposed by space and time and opening to beneficiaries the opportunity to participate in training without these conditions);
- Fast teaching of the courses (for the same reasons for the limitation caused by time and space, plus costs and variables related to a large number of

guides/trainers that would be needed in the version with a physical presence in the classroom (on site), training through digital technologies allows much faster access to courses and certification;

- Consistency of the message (the teaching material transmits the same content, regardless of how many times it needs to be run to each new series of learners; thus, the message sent to students) can be controlled more efficiently;
- Immediate response and feedback (the beneficiary can request help or feedback when needed, giving him definitions or examples for support);
- Immediate testing and feedback (before starting a course, the content can be presented according to the student's answers to the test questions; in this way, personalization and individualization of learning are achieved);
- Interactivity (beneficiaries can ask questions through messaging/e-mail, can solve problem situations, can perform incentive activities);
- Adaptability (in use): ease in changing and updating courses, providing the opportunity to participate while the course is taught (synchronous participation) or whenever it has availability (asynchronous participation);
- Possibility of reuse (parts of the courses can be recycled, thus saving the time required to recreate them) (Stolovitch et al., 2017: 279-283).

From the perspective of the aspects related to the financial, human and time resources involved, we find that the alternative of courses conducted through digital technology can be more productive. However, the success of a training program involves correlating and complying with the activities with the performance objectives pursued and reporting to appropriate standards in the organization and conduct of the activity. The promises that online education makes to beneficiaries need to be tempered by a few precautions inspired by the benefits of face-to-face training. The potential benefits of online training listed above can quickly become limitations on it, which must be taken into account when opting for such a program. Issues that cannot be neglected in online training are the level of digital skills of users (and, implicitly, the existence of the necessary infrastructure) and the compatibility of the beneficiaries with this way of going through the courses (the personal relevance of the activities, the learning style, the ability to remain active and involved, etc.).

Familiarizing future teachers with the use of digital technologies in learning and, to an equal extent, the training of their digital skills are priorities for each Member State of the European Union. In 2018, only 40% of teachers considered that they were ready to use digital technologies in teaching, and more than 1 in 5 young people failed (European Commission, 2021). The crisis caused in education by the COVID-19 pandemic highlighted the proportions of the discrepancy regarding the digital skills of teachers. Following a public consultation in 2020, the Commission has drawn up the new *Digital Education Action Plan (2021-2027)*, a document whose central objective is to adapt education and training to the digital age. To this end, the strategic priorities and measures to be taken at Member State level have been established:

**Priority 1:** Encourage the development of a high-performance digital education ecosystem

Measures:

- a) strategic dialogue with Member States on online and distance education;
- b) a Council Recommendation on online development of a European framework on digital education content; conducting a feasibility study on a possible European platform for the exchange of certified online resources;
- d) support for schools' connectivity and in-school connectivity;
- e) support for digital transformation plans at all levels of education and training; encouraging teachers to use digital pedagogy and knowledge in the field when using digital tools through the Erasmus Teacher Academies platform; launching a self-assessment tool for teachers-SELFIE (Self-reflection Effective Learning by Fostering the use of Innovative Educational technologies);
- f) development of artificial intelligence ethics guidelines (AI) and use of teaching and learning data for teachers; supporting research and innovation in the field through the Horizon Europe project.

**Priority 2:** Development of digital skills and competencies relevant to digital transformation

Measures:

- a) updating the European Digital Competence Framework (EDSC); support for the development of pedagogical resources in the field of artificial intelligence for schools and institutions responsible for vocational training;
- b) development of common guidelines for teachers and staff in educational institutions, to encourage digital literacy and combat misinformation through education and training;
- c) creation of a European digital skills certificate (EDSC);
- d) proposal for a Council Recommendation on improving the supply of digital skills in education and training (professional development of teachers, exchange of good teaching practices in high-quality IT training, collaboration with industry to constantly identify and update training needs as) occurs;
- e) development of advanced digital skills for learners and apprentices in the field of vocational education and training (ex: extension of the Digital Opportunity trains program);
- f) encouraging participation in the international study on IT skills (ICILS);
- g) encouraging women's participation in STIM (science, technology, engineering and mathematics; elaboration of higher education programs that attract women in engineering and ICT).

The European Commission's previous action strategy (the one proposed for the period 2018-2020) already aimed at developing digital skills and abilities, efficient and effective use of digital technologies in teaching and learning and improving education through more reliable data analysis and designing next steps

by anticipating the directions of evolution of the society's domains. Education is an area as stable as it is susceptible to the discoveries and innovations brought by research in the field. Change in education, in our times, involves the integration of technology into teaching-learning-evaluation, and those involved in the teaching act (teachers and students) need tools that allow them to keep up: continuously developed and refined digital skills.

#### ***4.2. Education Policy in Romania***

Due to the global situation of SARS CoV2 virus infection, education has been conducted for a long time online worldwide. This measure also produced effects at the level of education policy documents, to cushion and value as well as possibly the effort to adapt to the new reality of education. As an annexe to *Order no. 4135 on the approval of the instruction for the creation and/or strengthening of the capacity of the pre-university education system through online learning*, in Romania, an Instruction has been approved that draws parameters and provides action guidelines for conducting the online learning process. Some of the measures have brought open educational resources and digital learning platforms to the fore:

(1) The Ministry of Education and Research, through the National Center for Policies and Evaluation in Education (CNPEE), operationalizes the Digital portal on [educated.ro](https://digital.educred.ro) (<https://digital.educred.ro>) as a whole of the online learning platforms and resources provided and, where appropriate, validated and recommended by the Ministry of Education and Research.

(2) The Digital [educated.ro](https://educated.ro) portal will contain a section with tutorials and other learning materials, intended for teacher training and support, to design, achieve, evaluate online learning activities and manage students' activities on online learning platforms.

Given that, in this variant, the teaching process requires teachers' skills that were previously optional (digital skills), the Methodology for the annual evaluation of the activity of the auxiliary teaching and teaching staff, approved by the *Order of the Minister of Education, Research, Youth and Sport no. 6.143/2011* has been modified and completed. A direct consequence of this measure is the need to add new performance criteria to some of the areas for the annual evaluation of teaching staff activity, most being inserted at „Activity Design Domain”, „Field of Conducting teaching activities” and „Evaluation of learning outcomes Domain”. Thus, professional standards for teachers suddenly brought them face to face with the latest developments in the field of digital technologies, which they were forced to discern to carry out their professional activities.

#### ***4.3. Negative implications***

Certainly, the total or quasi-total replacement of physical teaching with online teaching was, during the COVID-19 pandemic, the only chance to continue the education process, under the conditions of compliance with sanitary rules. The identified limits were multiple and severe and moved from the extrinsic aspects, of infrastructure, connectivity, and equipment to the intrinsic, human ones, related to



personal difficulties of understanding, digital training, reduced personal interaction, depersonalization of the educational process, and decreasing educational effectiveness and efficiency. Good knowledge, an x-ray of the disadvantages of online education has been in the attention of education politicians, considering that good knowledge also brings with it the identification of appropriate measures to minimize the disadvantages and increase the quality of the educational act.

In existing studies, the boundaries of online learning appear well structured in different registers. Thus, technical problems, download errors, connectivity, lack of equipment, and high costs of purchasing software and hardware (Dhull & Sakshi, 2017, Curelaru et al, 2021) appear to be acute and difficult problems to overcome. As a result, a multitude of minimization strategies have appeared, including at the level of European policies. The action plan for digital education (<https://education.ec.europa.eu/ro/focus-topics/digital-education/action-plan>) has a distinct dimension aimed at solving this disadvantage, by „encouraging the development of an ecosystem of high-performance digital education”, which ensures the development, with the help of specialists but also of European funds, the development of the digital infrastructure and its transformation into a facility easily accessible to all social categories. This would also solve the social issues of equity, the imbalances between those who come from or live in disadvantaged environments and do not have access to the Internet and those for whom access to the Internet is not a problem. A corollary problem, located on the border between technical and human limits, is the lack of technical skills, online knowledge and training, intensive and efficient use of applications and platforms”. (Holt et. al., 1998). A report made by the National Council of Students highlights exactly this problem, the lack of digital skills, e-teaching and digital assessment among teachers. This limit is also present in previous studies (Dhull & Sakshi, 2017), with the lack of initial and continuous training in the use of various digital tools and platforms being considered one of the factors that massively affect the quality of the online teaching-learning act. (Raboca and Cotoranu, 2020). And this reality is analyzed and evaluated in educational policy documents (Action Plan for Digital Education), along with other themes, the conclusion is that the development of digital skills and competencies relevant to digital transformation is a priority of the European Commission. Thus, the pandemic revealed that digital training is a challenge for education systems in terms of teacher training and that the high degree of digital skills and competencies of teachers will bring with it an increase in the quality of online teaching.

The disadvantages related to the human dimension, of personal skills, are also frequently mentioned in the specialized literature. Thus, at the level of psychic functions, we find references to lack of attention, decreased concentration and weak involvement in activities on the part of the educated (Dhull & Sakshi, 2017, Radha et. al., 2020), to the reduction of student motivation, closely related to the lack feedback and student control during assessments (Tamm, 2019). The reduction of social interaction between teacher-student, but also student-student (Bączek et

al, 2021), which inevitably leads to a reduced time and support allocated to learners, i.e. to a transfer of responsibility (emphasis on increasing the weight of the individual learning process, increasing the volume of individual work), which causes an increase in the degree of student dissatisfaction) (Raboca & Cotoranu, 2020) are another dimension of the table of diagnosed limits of online education. In the same register, isolation, and lack of social interaction seem to be closely related to students' mental health, their learning ability and exhaustion (Ensmann et al., 2021). There are serious studies that identify, in addition to psychosocial problems (stress, anxiety, boredom, low work efficiency) and a wide range of physical health problems, which appeared or developed with the transition to online schooling, namely various eye conditions, eye pain head, back, exhaustion (Curelaru et al., 2021). The same study identifies the problem of deepening discrimination between those without skills or digital equipment and those with advanced digital skills and modern equipment, resulting in even greater digital inequality.

So, the online teaching-learning process seems to be an area of inferiority compared to the classic, face-to-face system. The reality, however, has shown us that, on the one hand, many of the identified limits have found their solution (including in local and international educational strategies and policies, objectified in important documents and educational realities), and on the other hand online teaching has come with a tremendous innovation in the ways of understanding learning, with a paradigm shift in terms of new forms of teaching technology-mediated learning. The learning efforts of teachers and students had positive consequences the formation of new sets of skills, the opening of horizons for new ways of interaction, authentic knowledge and understanding of digitization, and increased responsibility for teachers and students (Muste, 2020.)

Undoubtedly, investment in digital infrastructure and good teacher training programs (both in the initial and continuing training stages), as well as the consistent and creative call for blended learning are ways to offset the risks and maximize the advantages of online education.

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