

Chapter

The Risks and Opportunities Associated with Social Media During the COVID-19 Pandemic and the War in Ukraine

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Abstract

The popularity of social media has significantly contributed to its widespread use by different age groups of users, including children and seniors. In the online environment, especially on social media, users can encounter many threats, mainly fake news and disinformation. Although fake news and disinformation have been around for a long time in the Internet environment, the COVID-19 pandemic and the war in Ukraine, as well as other crises, have highlighted the dangers of their spread through the Internet, especially on social media, their impact on individuals, on the economy, and on society. This chapter discussed the main risks, but also the opportunities provided by social media during the last crises. It brings closer the change in media behavior and the use of social media during COVID-19 and the military conflict in Ukraine, the shift of paradigm in using social media, as well as the possible methods to fight disinformation.

Keywords: COVID-19, disinformation, fake news, media, social media, Ukraine

1. Introduction

The popularity of social media has significantly contributed to its massive use by different age groups of users. The overall rate of social penetration in 2020 reached a level of 49%. The highest rate was recorded in East Asian and North American countries at 71%. In the countries of Northern Europe, it reached a level of 67% [1]. The number of active users of social media in January 2022 reached 4.62 billion active users, which represents 58.4% of the world population. The most popular social media include Facebook (2910 million active users in January 2022), YouTube (2562 million active users in January 2022), WhatsApp (2000 million active users in January 2022) and Instagram (1478 million active users in January 2022). Recently, however, new social media, such as Tik-Tok (1000 million active users in January 2022) [2], are gaining more and more users.

The COVID-19 pandemic, and later the war in Ukraine, have largely highlighted the risks associated with the Internet and social media, especially in spreading fake

news and propaganda. Although both fake news and propaganda have been around for much longer than the events mentioned, it was during these crisis events that they began to spread more intensively than at any time before. This caused several negative aspects related to the use of social media and the need not only for a professional discussion about the possibilities of eliminating the spread of fake news, but also for the regulation of social media itself and the spread of content on the Internet.

On the other hand, the Internet and social media in times of crisis represent an important tool through which it is possible to inform the audience about current information, events, or measures. The use of social media thus presents opportunities as well as risks that must be known in order to be used as effectively as possible.

This chapter addresses the importance, role and status of social media during the COVID-19 pandemic and the war in Ukraine. It approximates the impact of these two crises (COVID-19 and the war in Ukraine) on the use of media in general, changes in social penetration and the way they are used. Special attention is paid to the change of paradigm and perception of social media by users and the phenomenon of the spread of fake news. In the context of the spread of fake news, it approximates the risks and opportunities associated with the use of social media, especially during a crisis. It focuses on the occurrence of fake news and the possibility of eliminating its spread, as well as current scientific knowledge about the impact of social media on critical thinking and the ability to identify fake news.

2. Methodology

This chapter has been prepared based on a search of professional literature, scientific studies and research focused on the impact of the COVID-19 pandemic and the war in Ukraine on the use of social media and the spread of fake news. The author has processed extensive research and analysis of current studies and offers an overview of the latest knowledge about the opportunities and risks associated with the use of social media, as well as the results of his own scientific and research activities, focused on the use of media, the spread of fake news and their impact on recipients. In addition, it brings together important information from national surveys on media **behavior** and the spread of fake news, as well as framework documents of the European Union and institutions dedicated to the fight against disinformation.

3. The influence of the latest crises on media behavior and the use of social media

The new type of coronavirus SARS-CoV-2, which appeared at the end of December 2019 in the Chinese city of Wuhan and subsequently spread to other countries, caused a global pandemic during the following months. The illness is characterized primarily by fever, dry cough, and fatigue and was named by the World Health Organization (WHO) as COVID-19.

By the end of 2020, the World Health Organization recorded 79 million cases of COVID-19 and 1.7 million deaths due to the new coronavirus. At the beginning of August 2022, there were already 578,142,444 cases of COVID-19 and more than 6.4 million deaths [3].

The new coronavirus pandemic also attracted considerable attention from the media, which provided up-to-date information daily concerning the number of active

cases, as well as the number of hospitalizations and deaths. The media reported on measures to prevent the spread of the new coronavirus, but also on the situation in neighboring countries and the entire world. In addition to news programs, the media also covered the topic in specialized journalistic programs. These were primarily discussion shows in traditional media and special editions of television or radio news programs. They alternated between guest experts in epidemiology and virology, but also focussed on the diagnosis and prevention of COVID-19.

Online media also paid a lot of attention to this topic, especially news portals, which set up separate sections on their pages dedicated to the coronavirus. As emphasized by Panasenko et al. [4], the media's increased interest in this topic was related on the one hand to the effort to inform the public about the current situation, on the other hand to the interest of the viewers, readers and listeners themselves and on the provision of current information.

According to the analysis prepared by the Faculty of Mass Media Communication at UCM in Trnava [5], more than 407,000 articles on the topic of "COVID-19" and "coronavirus" were published in the Slovak media in 2021. The highest number of contributions were published in online media (355,356), followed by print media (28,402) and agency news (13,199). 7835 contributions were broadcast on television and 2642 on the radio.

The COVID-19 pandemic also affected media behavior to a large extent, and above all, the time spent using certain media. Thanks to the audience's interest in current information, but also as a result of anti-pandemic measures, which included also restrictions on going out, there was a gradual increase in the time spent using individual media. According to research by the agency MEDIAN SK [6], over the period 16 March – 19 April 2020, compared to the period 01–29 February 2020, i.e., before and after the outbreak of the corona crisis in Slovakia, Slovaks spent 6 minutes and 35 seconds more time using mobile apps, 35 minutes more using the Internet and 6 minutes and 30 seconds more watching TV. On the contrary, there was a decrease in the case of radio broadcasting, namely by 11 minutes.

According to the Nielsen agency [7] during the height of the nationwide shelter-in-place orders across the U.S. amid the COVID-19 pandemic, weekly time spent watching connected TVs grew significantly, rising by more than 1 billion hours as the weeks passed. And while this rise in total media consumption was to be expected, the consistently high levels of CTV use across smart TVs, internet-connected devices, and game consoles suggests that life in the new normal includes a heavier dose of connected TV use than ever before (**Figure 1**).

Watching the media worldwide was not only related to spending free time, but also to obtaining information about the new coronavirus, current measures, or restrictions. The results of a global survey from March 2020 [8] showed that the coronavirus had a direct impact on media viewing around the world. The increase in the use of media was in several categories: watching more news coverage (+67%), watching more shows/films on streaming services (+51%), watching more TV on broadcast channels (+45%), spending longer on messaging services (+45%), spending longer on social media (+44%), spending more time on computer/video games (+36%), reading more books/listening to more audiobooks (+35%), listening to more streaming services (+35%), listening to more radio (+18%), reading more magazines (+16%), reading more newspapers (+14%), creating/uploading videos (+14%), listening to more podcasts (+12%).

A separate chapter presents social media through which users shared posts about the new coronavirus, but at the same time also commented on these posts, shared

Media consumption due to the coronavirus outbreak	Worldwide	Italy	Spain	France	Germany	China	USA	UK
Watching more news coverage	67%	67%	63%	50%	60%	77%	43%	50%
Watching more shows/films on streaming services (e.g. Netflix)	51%	53%	58%	31%	21%	63%	42%	32%
Watching more TV on broadcast channels	45%	55%	43%	53%	35%	46%	42%	32%
Spending longer on messaging services (e.g. WhatsApp, Facebook Messenger, etc)	45%	60%	61%	24%	22%	59%	17%	24%
Spending longer on social media (e.g. Facebook, Instagram, Twitter, etc)	44%	52%	49%	27%	21%	50%	32%	21%
Spending more time on computer/video games	36%	41%	48%	39%	21%	29%	29%	20%
Reading more books/listening to more audiobooks	35%	36%	42%	24%	19%	44%	25%	19%
Listening to more streaming services (e.g. Apple Music, Spotify, etc)	35%	25%	27%	14%	13%	49%	18%	14%
Listening to more radio	18%	29%	32%	23%	24%	16%	16%	17%
Reading more magazines	16%	23%	22%	14%	17%	14%	12%	15%
Reading more newspapers	14%	18%	14%	14%	10%	17%	12%	9%
Creating/uploading videos (e.g. on Tik Tok, YouTube, etc)	14%	10%	15%	7%	5%	17%	6%	6%
Listening to more podcasts	12%	8%	10%	6%	6%	13%	10%	11%

Figure 1. Public media behaviour due to the coronavirus pandemic and belongs to the results of a global survey from March 2020 [7].

them, and created their own content. The spread of unverified information, but also the operation of various entities in the social network environment, was a prerequisite for the spread of fake news and misinformation. The World Health Organization even declared that false information was spreading faster than the virus and called the situation “an infodemic of planetary proportions” [9].

The term “fake news” refers to the publication of information that imitates news and other journalistic formats, is intentionally and demonstrably false, and aims to manipulate, mislead, obtain financial profit or entertain the recipient [10]. It is the diversity of the form and content of fake news that causes problems in their identification by ordinary Internet users. They often copy the trend of journalistic posts with catchy headlines, perex, or emotional photos. Lazer et al. [11] emphasize that fake news overlaps with other information disorders, such as misinformation (false or misleading information) and disinformation (false information that is purposely spread to deceive people).

We can observe a similar situation in connection with the military conflict in Ukraine. Although fake news and propaganda about the political situation and political interests have been around for a long time in the Internet environment, the war in Ukraine, like COVID-19 and also other crises, have highlighted the dangers of the spread of fake news through the Internet and social media, their impact on individuals, on the economy, and on society, as well as the risks of social media themselves, issues of policy setting and possible options for eliminating harmful content.

4. Social media and the COVID-19 pandemic

In connection with the coronavirus, various hoaxes and fake news have appeared in the Internet environment. Most often, it was information related to the use of medicines, information about the origin of the coronavirus, news about the closure of places, information about various preventive measures and options to protect oneself from the virus, and news about the earlier opening of schools or the return of dolphins to Venice [12]. These messages were spread mainly in the environment of social media in the form of sharing in private groups, but also among friends in the form of sending private messages. Users discussed them, commented on their content, and often consciously or unconsciously spread them further.

In addition, enormous amounts of partially or often completely distorted, unverified, or completely fabricated information related to the coronavirus pandemic were released to the public [13]. In this context, Mičuda [14] adds that with the advent of the COVID-19 pandemic, new problems have come into focus, which, although they have been present in our society since time immemorial, always start to come to the surface during certain world events.

According to the Police Service’s Disinformation Report [15], the primary goal of the creators of disinformation was to cause chaos in society and undermine trust in the state, which was directly related to inciting hatred and distrust of state institutions. Disinformation has become a hybrid tool as a form of attack on the country’s interests and the security of its citizens.

A special group opened user accounts that outwardly presented themselves as accounts of individual activists, but were in reality a well-thought-out communication tool behind groups of people or organizations. The hiding of several concentrated groups behind one individual account of a specific person is one of the communication tactics of disinformation creators, as the public is more attracted to a specific person acting independently than to an anonymous group.

The spread of fake news and misinformation has also been facilitated by various chat applications that offer their users a higher degree of anonymity than public profiles and, based on the absence of any moderation tools, guarantee the free spread of extremist views promoting violence.

According to the results of a survey conducted by the author of this chapter between 29 March and 20 April 2020 on a sample of 429 respondents, almost 80% of respondents encountered hoaxes or fake news during the first wave of the pandemic. Respondents in all age categories encountered such types of information. An interesting finding is that only 52% of respondents were able to immediately identify hoaxes. Almost 38% did not know it was a hoax, but the content of the information was suspicious to them. The rest of the respondents (10%) could not identify that it was fake news and only realized it afterwards. Respondents in all age categories were able to identify hoaxes, although a surprising finding is that a relatively high percentage of young people (in the age group of 15–24 years) only realized that it was a hoax afterwards. Almost half of the respondents (47%) who encountered hoaxes in connection with information about the coronavirus caused concern. A fifth of the respondents (20.6%) even began to doubt the correctness of the steps taken by the competent authorities in the fight against the coronavirus due to hoaxes. This underlines the danger of such messages, and although the addressee may not believe them, they may undermine their confidence in the measures taken by the state or other authorities. Confidence in the measures taken and compliance with regulations can be key to eliminating risks or stopping the spread of a threat.

According to the final survey report on the prevalence of fake news in the global environment [16], 60% of UK 16–24-year-olds have used social media to search for information about the coronavirus, and 59% have come across fake news related to the topic. 30% of the population aged 15–18 in France also used social media as a primary source of information about the coronavirus. The global survey itself revealed that while the majority of social media users belonging to Gen Z and Millennials ignored or reported fake news they encountered while browsing social media, some of them shared the news further.

According to a study published by the Reuters Institute for Journalism Research [17], most misinformation about the disease COVID-19 includes various forms of so-called reconfiguration of information, in which existing and often true information is purposefully changed, modified, or distorted. Less misinformation was completely fabricated. The study also revealed that the amount of disinformation spread from top to bottom, through politicians, celebrities, or other prominent figures, was relatively small and represented a minority of the overall sample, but in the social network environment, it was recorded, on the contrary, as the majority. The largest categories of disinformation include misleading or false claims about the actions of public authorities, including governmental or international bodies such as the World Health Organization or the United Nations.

According to a report by the European Police Office (EUROPOL) [18], the spread of disinformation or fake news is a key element of the hybrid threat landscape. The impact of the COVID-19 pandemic on cybercrime was the most visible and significant compared to other crimes last year. Cybercrime fraudsters have been able to quickly adapt and exploit users' fears of various frauds and crimes. Criminal organizations, states, and state-sponsored entities seek to exploit public health crises to achieve or increase profits or to advance their geopolitical interests. According to EUROPOL [19], more and more misinformation and fake news are spreading around the world regarding COVID-19, which can have harmful consequences for public health and effective crisis communication.

In connection with the pandemic of the new coronavirus, fake news related to the offer of fake or non-standard personal protective equipment, disinfectants, as well as various tests or test kits for home use was most frequently encountered in the online environment on a pan-European scale. Vaccines, following their development, were

added later. However, according to Europol, with the increasing amount of time spent by minor users in the online environment, cyber-sexual violence has also increased.

During the crisis caused by the COVID-19 pandemic, the European Union also intensified work aimed at informing citizens about risks and strengthening cooperation with other international participants in the fight against disinformation. In the action plan against disinformation [20] from December 2018, it lists four pillars of the EU's fight against disinformation: 1. improving capabilities for detection, analysis, and detection of disinformation; 2. strengthening coordinated and joint responses, inter alia, through an early warning system; 3. mobilization of the private sector in the fight against misinformation and 4. raising awareness and improving the resilience of society. In June 2021, it subsequently presented a joint statement by the Commission and the High Representative [21], in which it intensifies these efforts.

5. Social media and the war in Ukraine

With the attack of Russian troops on Ukraine in February 2022, disinformation and fake news related to Russian propaganda began to spread significantly in the environment of social media. According to the European Digital Media Observatory (EDMO) report [22], Ukraine-related disinformation in March 2022 was the biggest disinformation phenomenon ever recorded by the EDMO monthly briefs.

As stated by The Select Committee on Intelligence of the United States Senate [23], such messages have been circulating in the online environment for a long time. The severity of their impact, for example, resonated significantly in 2016 in the case of the US presidential elections. As further stated by Húsková [24], this was not the first case of destabilization of the domestic political situation of individual states by foreign participants using targeted disinformation. Back in 2007, Russia attacked Estonia with a combination of cyber-attacks and disinformation campaigns. An extensive disinformation campaign was also visible in the case of the Ukrainian crisis in 2014. A similar scenario was also repeated before the British referendum on withdrawal from the European Union in 2016 when Russian communication agencies such as Russia Today and Sputnik published several hundred anti – EU articles contributing to influencing public opinion through rhetoric and other methods.

Helmus et al. [25] pointed out, that Moscow blends attributed, affiliated and unattributed elements and exploits new realities of online and social media to conduct information warfare at a perhaps unprecedented scale and level of complexity. These information operations appear to be a growing priority within the Kremlin, which spent 1.1 billion US dollars on mass media in 2014 and increased its spending on foreign-focused media in 2015.

Russia's disinformation and propaganda ecosystems are described in the Global Engagement Center (GEC) report at the U.S. Department of State [26]. According to this report, these disinformation and propaganda ecosystems are a collection of official, proxy, and unattributed communication channels and platforms that Russia uses to create and amplify false narratives. The ecosystem consists of five main pillars: official government communications, state-funded global messaging, cultivation of proxy sources, weaponization of social media, and cyber-enabled disinformation.

According to a study requested by the European Parliament's Committee on Civil Liberties, Justice and Home Affairs [27] elements of disinformation and propaganda are such that information is designed to be wholly or partly false, manipulated or misleading; regards an issue of public interest; has the intention to generate insecurity; it

attempts to disrupt democratic processes; is disseminated and/or amplified through automated and aggressive techniques (such as social bots, artificial intelligence, micro-targeting or paid human ‘trolls’). Disinformation and propaganda often use unethical persuasion techniques, hostility or polarization and are often used to boost public visibility.

The main narratives detected in disinformation circulating in the EU after the beginning of the war in Ukraine and the four false stories with the widest circulation were: (1) Ukraine hosts secret US bio-labs; (2) Mariupol’s hospital was not bombed by Russia and the attack was staged by the Ukrainians forces; (3) Victims in the Ukraine war are actually actors; and (4) CNN is spreading false news about the war in Ukraine [28].

However, compared to previous decades, more sophisticated ways of spreading fake news can be observed, mainly thanks to technological development and artificial intelligence. As pointed out by Wooley and Howard [29] while some of these disinformation campaigns are carried out directly by individuals, most are waged by software, commonly known as bots, programmed to perform simple, repetitive, robotic tasks. Some social media bots collect and distribute legitimate information, while others communicate with and harass people, manipulate trending algorithms, and inundate systems with spam. Campaigns made up of bots, fake accounts, and trolls can be coordinated by one person, or a small group of people, to give the illusion of large-scale consensus.

Hodgson [30] in her study explains the use of bots on Twitter. This research has shown that viewers are more likely to believe the information they are consuming if multiple validating arguments support the same constantly repeated conclusion. In the example of Twitter, the author explains how the bots and their target audiences make social media easy to manipulate. She emphasizes that there exist also true believers, who really believe that the bot and its tweets are real. According to Hodgson, these users act as a humanized mouthpiece for an otherwise fake account whose only goal is large-scale content distribution. This is another risk of social media in connection with spreading fake news and disinformation.

6. Disinformation on social media and possibilities for its regulation

The occurrence of fake news and hoaxes is regularly monitored by national and international institutions, such as the World Health Organization [31], which monitors false claims about COVID-19 on its website. It focuses on claims about the nature of the virus and potential treatment and prevention measures. The European External Action Service [32] provides regular information on current trends and insights into disinformation activities. A useful fact-checking tool is offered by Google [33] through its Fact Check Explorer. Various private companies, non-profit organizations, or social media themselves are also active in the fight against misinformation and fake news.

The largest social media, such as Facebook and Twitter, as well as Google, have begun to cooperate with the World Health Organization in the fight against the spread of misinformation. For example, Facebook removes posts flagged by global health organizations as violating their misinformation content policy [34]. Twitter started issuing warnings on messages containing misleading information about COVID-19 [35].

The European Union also fights against disinformation, and publishes an overview of the most common myths and half-truths in connection with the COVID-19 pandemic. According to the EU, more than 300 disinformation messages about the coronavirus have been reported, published, and updated so far [36].

scams and scam sites	96
coronavirus	71
testing	33
vaccination	28
mask/respirators	22
5G, radiation	19
measures against the coronavirus	12
medicines and medical devices	6
other	176
SUM	463

Figure 2.
The most frequent categories of posts shared via the page Hoaxes and frauds - Slovak Police on Facebook in the period March 1, 2020 – April 30, 2021 and it is own processing.

According to the latest report published on June 1, 2022, by the European Commission [37] in March and April 2022 Twitter suspended 527 accounts and removed 6712 pieces of COVID-related content, TikTok removed 1026 videos with a COVID-19 tag and 2203 medical misinformation videos, Meta removed 78,000 COVID-related pieces of content from Facebook and 9800 on Instagram for violations of their misinformation policies. According to the Google Ads Safety Report [38], in March and April, 33,882,679 coronavirus-related ads have been blocked.

Despite these activities, there is still much fake news on social media. [15–19, 22–28]

One of the most significant activities in the fight against the spread of fake news and hoaxes in Slovakia is carried out by the Police of the Slovak Republic. Through their profile page Hoaxes and Frauds - Slovak Police [39] regularly shares and explains fake profiles, pages, or information. The page had more than 122,000 fans at the end of 2021.

For the period from 1 March 2020 to 30 April 2021, 463 posts dealing with fake news and hoaxes were published via this page on Facebook. Posts dealing with scams and scam sites were most represented (96), followed by fake news and disinformation about the coronavirus (71). **Figure 2** shows more detailed results.

A team of experts dedicated to monitoring disinformation identified a total of 189 hoaxes in 2021, with 151 of them only related to the pandemic, while the variety of hoaxes spread in connection with this topic increased compared to the previous year. Disinformation affected all areas directly or indirectly related to the ongoing pandemic. The intensity of the spread of hoaxes corresponded to the curve from 2020 - online disinformation occurred primarily in spring and autumn, that is, during the second and third waves of the pandemic. The calmest period was again during the summer months [15].

The main disinformation narratives for 2021 featured the following themes:

- vaccination is harmful, ineffective, unnecessary, and/or health/life threatening
- false deaths as a result of vaccination (abuse of deaths of specific persons)
- medical personnel killing patients (e.g. on pulmonary ventilation)
- the situation is not serious, state institutions are exaggerating

- the situation is much better abroad (concealment of the number of people vaccinated there)
- the pandemic is a secret plan by the powerful to control/exterminate humanity

According to the report by the Police Force [15], the intensity, cadence, reach and mass of disinformation, the organization of its creators, the effective use of social media unable to monitor dangerous content, and new communication methods have created a significant security threat from disinformation. The power of the influence of disinformation was shown not only on the vaccination rate of the population but also resulted in verbal and physical attacks against rank-and-file representatives of state institutions (healthcare workers, police officers, hygienists, vaccination teams, etc.).

7. Discussion

The popularity of social media has significantly contributed to its massive use by different age groups of users. Almost 62% of seniors over 65 who actively use the Internet also use Facebook. In the 50–64 age group, it is up to 72%. The largest number of users is naturally within the younger generation. About 88% of people aged 18–29 who actively use the Internet also use Facebook. In the 30–49 age group, it is 84% [40]. The mentioned age structure of social network users proves that even the most vulnerable groups of users can encounter fake news. It is seniors who are learning to work with the Internet and whose digital skills are not developed enough to be able to face the attacks of fake news and hoaxes.

The phenomenon of fake news is also becoming relevant in the context of the development of the so-called “groundswell”, which represents a way of using various technologies, including social media, to obtain information from their users themselves instead of using official sources [41]. It is precisely in the environment of social media that fake news is created very often and quickly, the authors of which are often their regular users who need to publicly express their often-unqualified opinions. The groundswell phenomenon is also characterized by the fact that users of social media also use them as a source of information [42, 43]. Li and Bernoff [41] define the groundswell as a social trend where people use technology to achieve what they need from each other rather than from traditional institutions such as businesses. Through the mentioned technologies, we understand precisely social media, blogs, applications, or other tools that permit obtaining the necessary information or sharing it.

According to Westerman [42], social media is increasingly used as an information source, including information about risks and crises. Sutter [43] points out that social media have also been used, for example, to find information on important topics, such as spreading current information about cholera outbreaks in Haiti and identifying sources of clean water during this outbreak. This way, they can encounter fake news much sooner than ever before, especially when they are looking for answers to their questions.

In the context of the use of social media as a source of information, several specific questions arise that affect not only the acquisition of information, but also its relevance, and at the same time bring a range of changes in the field of the basic communication process and the relationship between the sender of the message and its recipient. Due to these factors, the established paradigm of passively receiving

information is changing and an active approach in the field of search and subsequent dissemination of information is beginning to prevail.

Another significant change related to technological interference is the gradual development of communication platforms and the possibility of social engagement of individual users. Based on this principle, several social media were created, which, however, gradually became for many users not only a place for social interaction, but also an active exchange of opinions, sharing experiences, and also searching for information. On the other hand, it was social media that made it possible to quickly inform about the risks of fake news that spread through them.

The algorithm for displaying messages based on “likes” or other emoticons, as well as sharing itself, creates the assumption of an effective intervention of a wide user group. The speed of identifying fake news and the subsequent sharing of a warning can thus be one of the tools to combat disinformation in the environment in which it spreads most often and fastest. However, as we stated in the previous chapter, despite the efforts of social media providers to remove content for violations of their misinformation policies, there is still much fake news on social media.

According to the latest survey of MEDIAN [44], more than 10% of the respondents declare that vaccination is used to microchip the population. Theories about chemtrails are believed by a fifth of the adult population, and the theory about the ordering of the attacks on the WTC by the US government is believed by a quarter. At least two of the investigated alternative theories are trusted by 21% of the population. Compared to the general population and those who do not tend to trust alternative theories, we can find people who tend to trust alternative theories more often among those aged 30–59, but also among people with lower levels of education. People who tend to believe in alternative theories are more often found among the unemployed compared to the general population, but also compared to those who do not believe in these theories. On the contrary, only a minimum can be found among students. The direct impact of misinformation can be seen, for example, in the other findings from this study, according to which people who tend to believe in alternative theories are significantly more likely not to be vaccinated than those who do not believe in such theories.

Another survey of MEDIAN [45] shows the influence of propaganda spread through social media. According to the findings, almost 12% of the inhabitants of the Slovak Republic consider the theory that Russia came to liberate Ukraine from the fascists through an attack to be true. According to 9% of respondents, there is no Russian war in Ukraine and it is a lie invented by the USA. A third of the population of the Slovak Republic declares that the media exaggerates the situation in Ukraine.

As Kačínová further points out [46], the current phenomenon of massive dissemination of alarm messages and the search for social tools to immunize the individual against their influence in a wider social context re-actualizes the topics of media education and its necessity. The need for a critical view of information mediated by the media is also pointed out by Hossová [47], who emphasizes that media literacy and the ability to critically approach published media content is a basic prerequisite for combating the pitfalls associated with information overload and the spread of false or distorted information. Critical thinking is also pointed to as an important factor by Graca [48], who states that with insufficient critical thinking, young people are often subject to manipulation by various interest groups, which not only hurts them, but is also detrimental to our society.

Systematic and purposeful dissemination of disinformation is one of the main tools used in hybrid operations. Defense and prevention against the effects of subversive information operations are strategic communication and active building of

the population's resilience through the development of media education and critical thinking [49].

Another important aspect in protecting against misinformation is more rigorous control of the content by social media providers. Due to recent significant technological progress and the development of artificial intelligence, we can expect increasingly frequent occurrences of more sophisticated fake news, which we will be able to distinguish only with great difficulty. On the other hand, this progress also presents opportunities for the development of tools capable of identifying fake news and preventing it from appearing directly in the social media environment.

8. Conclusion

This chapter addressed the impact of the latest crises (COVID-19 and the war in Ukraine) on the use of social media and the main risks associated with their use, mainly regarding the spread of fake news and misinformation.

The author described the main changes in media **behavior** and the use of social media during these crises. The new coronavirus pandemic and the war in Ukraine attracted considerable attention not only from the audience but also from the media, which provided up-to-date information daily. The most visible change in media **behavior** is that people spent more time with the media, especially online media (within social media) and used them for actively searching for information about the pandemic or military conflict. For this reason, they have encountered fake news and misinformation that appeared especially on social media.

Disinformation has become a hybrid tool as a form of attack on the country's interests and the security of its citizens. Thus, the author focused on the occurrence of fake news and the possibility of eliminating its spread, as well as current scientific knowledge about the impact of social media on critical thinking and the ability to identify fake news. This chapter provided some examples of the most shared fake news and its characteristic features. The author also described the main activities of social media providers and national institutions in fighting disinformation and eliminating its spread. Despite these activities, there is still much fake news on social media. For this reason, media education is very important in the process of an effective fight against disinformation and social media literacy. It is necessary to educate students, adults and elderly people about the risks of using social media, learn how to **recognize** fake news and develop more sophisticated tools to prevent its spread.

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