The impact of fake news on social media users during the COVID-19 pandemic: A deep look

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Abstract

The research employs the Uses and Gratification model to identify three key impacts of COVID-19 related misinformation on social media users: (1) an “infodemic” of health-related misinformation; (2) an increase in social media pastime; and (3) an increase in social, political, and religious conflicts. Several actions are proposed to limit the spread of fake news, involving entities such as government and health agencies, as well as social media companies.
The impact of fake news on social media users during the COVID-19 pandemic: A deep look

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Keywords: social media, fake news, COVID-19, infodemic, disinformation, misinformation

Abstract

In this new era of inter-connectedness, the COVID-19 outbreak has been characterized by a rapid surge of misinformation — or “fake news” — about the disease on social media, exacerbating its negative psychological impacts and hindering public health efforts. By providing easy access to and sharing of information in real time, social media is considered the main channel for the distribution of fake news. In this viewpoint, we try to find the main impacts of fake news related to COVID-19 on social media users, and propose strategies for limiting its spread. In this regard, we set out four key objectives: studying and evaluating the impact of fake news on social media audiences; analyzing fake news patterns; and recommending ways to stop its circulation. To achieve these objectives, we follow a review-based research methodology encompassing scholarly articles and reports from sources including JSTOR, Taylor & Francis, MDPI, Google Scholar, and the WHO, covering the period from 2016 onwards.

We employ the Uses and Gratification model to identify three key impacts of COVID-19 related misinformation on social media users: (1) an “infodemic” of health-related misinformation; (2) an increase in social media pastime; and (3) an increase in social, political, and religious conflicts. Several actions are proposed to limit the spread of fake news, involving entities such as government and health agencies, as well as social media companies.

1 Introduction

The coronavirus outbreak resulted in physical and mental health challenges across the world. Social media usage during the outbreak played a major role in aggravating the levels of stress (First et al., 2021), anxiety (Zhang et al., 2020), and overall poor wellbeing of young people (Liu et al., 2021). As the first variant of the virus was unknown to scientists and doctors, the information that circulated online was mainly based on people’s experiences and existing knowledge of SARS. Consequently, unchecked facts about the pandemic spread rapidly on social media platforms (Ahmad & Murad, 2020). This situation resulted in increased panic (Bukhari, 2020), fear, anxiety, confusion, and negative/depressing thoughts among people who relied on the shared information. On the other hand, content owners experienced increased popularity as a result of increased “likes, “shares”, and subscribers (Tandoc, 2019). Many people risked their lives as a result of relying on misleading information shared on social media, making it a significant contributor to the negative effect of the pandemic on individuals (Schuetz et al., 2021). Considering these factors, this study aims to investigate...
the impact of fake news on social media users, and present recommendations to overcome the challenges it poses.

After the coronavirus outbreak, numerous platforms began spreading inaccurate information on virus-related statistics, figures, symptoms, and treatments. Due to its novel nature, the lack of research and information about its symptoms and treatments led to numerous fake news reports worldwide. According to (WHO, 2020), campaigns for social distancing were spread widely using social media; however, the same platforms were used to spread . Khan & Idris (2019) state that social media serves as a conduit of misinformation, while Shearer (2018) claims that social media is one of the largest platforms used for spreading fake news about any topic. Social media platforms have a daily influx of users who share views and opinions regarding a particular matter. Due to the variety of content available on social media, the flow of information remained fast. As a result, many people relied on the information shared related to the pandemic, including any fake news or material. Also, it was noted by the International Press Institute (IPI, 2021) that only a few countries have regulations for verifying the news before sharing, which further adds to the problem.

According to Fransen et al. (2015), if awareness is provided to the wider audience about researching the news they find across the internet and especially on social media channels, it can help minimize the effects of fake news. Similarly, Al-Zaman (2021) highlighted that fake news on social media needs effective countermeasures, especially when almost 67.2 % of fake news on this platform is related to health. Coleman (2020), Trew (2020), and Islam et al. (2020) all stated that, in practice, online COVID-19 misinformation has indeed claimed lives.

The primary goal of this study is to determine the foremost impacts of fake news related to COVID-19 on social media audiences, hence answering the question: “What were the main societal impacts of COVID-19-related fake news?” Researchers have put forward several possible impacts, but there is — to this author’s knowledge — no existing study which collates and extracts the key impacts from amongst the various suggestions; this is what the current study aims to accomplish. Similarly, the study aims to determine the main motives for sharing fake news on social media. In doing so, the study aims to achieve the following overall objectives:

1) To study the impact of COVID-19-related fake news on social media users.
2) To evaluate the impact of COVID-19-related fake news on social media users.
3) To analyze patterns of fake news on social media.
4) To recommend ways to stop fake news circulation on social media.

2 Material and Methods

A review-based research methodology was chosen for achieving the aforementioned objectives. According to Stockmann & Karnowski (2020), a review-based research methodology is highly effective for conducting qualitative research of data from past studies. Qualitative research, in turn, is highly effective for uncovering underlying trends and patterns in data, which in our case aided the examination of different factors and themes associated with fake news on social media. Using a review-based methodology, this research is dependent on secondary data for drawing results and presenting making final interpretations. Secondary data is beneficial as it has already been tested and used, which
enhances its credibility (Choy, 2014). To ensure that the most recent data is collected, inclusion and exclusion criteria were set beforehand. Articles were included if they were: (1) in English; (2) published between 2016 and 2022; (3) included an abstract that contains the keywords from Boolean search (described shortly); and (4) freely available (at least for institutions) on the Internet. Data was collected from research journals including JSTOR, Taylor & Francis, and MDPI, as well as databases from Google Scholar and the WHO. To further narrow down the search space and collect only relevant data, a Boolean keyword search was conducted for “fake news on social media” OR “fake news during COVID-19” AND “coronavirus” OR “misinformation” OR “disinformation” OR “rumor” OR “SARS-CoV-2”. Other types of articles such as notes, conference abstracts, short surveys, erratum, and print media were excluded. The selection of papers was checked again by two reviewers to ensure that only relevant papers were included.

3 Literature Review

The concept of fake news has been described by Watson (2018) as dating back to the late 1890s. According to Meneses (2018), the term refers to false information that is intentionally circulated to mislead the audience. Pennycook et al. (2018) define “fake news” as fabricated information that mimics news content in form, but not in organizational process or intent. Wendling (2018) states that the term “fake news” gained immense popularity in recent years, during and after the 2016 US presidential election. Hillary Clinton played a role in bringing this term to the public during the campaign. Donald Trump used the term quite frequently, especially on social media platforms like Twitter (Baptista & Gradim, 2020). The term then gained popularity and became viral, particularly to support false propaganda against the opposing party. According to Zaryan (2017), the term “fake news” was one of the most searched items on the Google search engine in the year 2016. On the other hand, Fallis & Mathiesen (2019) claim that fake news is an attempt to counterfeit or change information in order to deceive or lie to the reader or audience. However, Habgood-Coote (2019) argues that the term “fake news” has no definite meaning yet, and mostly refers to the disinformation that misleads followers of said news. Allcott & Gentzkow (2017) describe fake news as a piece of news with fake content, intentionally circulated to mislead readers. According to Lazer et al. (2018), a rise in fake news and its circulation has been noticed during contemporary political activities. Hence, the overall goal of fake news is to manipulate information.

3.1 Types and Themes of Fake News During the Pandemic

According to Al-Zaman (2020), six main themes of fake news circulated during the pandemic. These themes were health-related, political, criminal, religiopolitical, religious, and miscellaneous content. Almost 67.2% of fake news was related to health. During the pandemic, four main types of fake news were generated: text & video, dominating with almost 47.2%; text & photo; audio; or video only. The authors also stated that when shared, pandemic-related news has three types of intention: positive, negative, or unknown. The Social Science in Humanitarian Action Platform (SSHAP, 2020) states that there are certain types of fake news content circulating on social media during the pandemic. This includes information seemingly provided by the WHO, related to coronavirus preventive measures, as well as incomplete or biased information that is misleading but cannot be regarded as inappropriate, e.g. out-of-date or out-of-context information, or humorous content that is merely uploaded for entertainment purposes but which contains mis- and dis-information related to the pandemic.
In this regard, Rodriguez et al. (2020) gathered and classified almost 1923 fake news about the coronavirus after the pandemic hit the world. They revealed that most of the fake news shared on the internet during the pandemic was related to health, whereas fake political news was also widely shared. Alvarez-Risco et al. (2020) have also highlighted that during the pandemic, the coronavirus itself was one of the top themes for fake news since the area lacked proper research and scientific investigation. Similarly, Tapia (2020) also claims that fake news regarding crime and political turmoil was widely circulated during the pandemic. Because the world was already going through health crises, it offered an opportunity to examine the efforts of numerous states as they counter an emergency such as the pandemic (Shu et al., 2020). Thus, the pandemic has offered various themes, and types of fake news shared on social media.

3.2 Sources and Aims of Fake News

According to Duffy et al. (2020), social media can be regarded as a “double-edged sword” since numerous users rely on shared information. There is no social approval needed before sharing. Considering this in view, social media is one of the fastest sources of sharing fake news in the contemporary era.

When considering the aims and motivations of sharing fake news, Galeotti (2019) claims that most people want to share their ideological beliefs, disseminate their emotions, especially with friends and other contacts, to gain social attention. Similarly, Vosoughi et al. (2018) claim that circulating fake news aims to disseminate a thrilling and sensational headline and seek attention. Correia et al. (2019) has also supported this concept stating that one of the aims to share fake news is to create a drama and surprise the audience with something they were not expecting in a regular setting. Bright (2016) stated that another aim of sharing fake news is to increase the social reputation and increase a person’s social status. This objective is usually fulfilled by reinforcing the idea through personal contacts such as friends, colleagues, and public groups. Talwar et al. (2019) offer a different perspective, claiming that creating and sharing fake news promotes gossiping and damages social peace by contributing to chaos in society.

In this regard, Uscinski et al. (2016) revealed that one of the objectives of sharing fake news is to create a socio-political divide. Bernal (2018) highlighted that sources such as YouTube, Instagram, Twitter, and Facebook have a vast audience that easily gets connected to news closer to their religious or political belief system. Further, Waszak et al. (2018) added that especially adults are found actively manipulating information compared to young users. O'Connor & Murphy (2020), Wang et al. (2019), and Weigmann (2018) stated that the sharing of fake news messages is related to drawing attention behavior and conspiracist ideation. Moreover, Adnan et al. (2020) found that conspiracy theories enjoy more support, on average, than misinformation about dangerous health practices. The authors listed three findings:

Finding 1: Beliefs in COVID-19 conspiracy theories and misinformation vary in support.

Finding 2: Beliefs in COVID-19 conspiracy theories and misinformation are mostly associated with political motivations and distrust in scientists.

Finding 3: The various types of misinformation and conspiracy theories are differentially related to the propensity to get the eventual vaccine, participation in public leisure activities, and optimism about the immediate future. Bukhari (2020) stated that social media is the source of the conspiracy theory that
the coronavirus was developed to launch a biological war against China with the purpose of suppressing their economic growth.

3.2.1 Video-based fake news:

A study by Shu et al. (2019) reveals that videos for spreading fake information have the highest impact on users, when compared to other sources. Videos tend to engage people and make them believe that the fake news shared is true. Naeem et al. (2021) stated that various miscreants engineered videos of the past to spread rumors regarding COVID-19 during the pandemic. These videos became a source of anxiety and stress for social media users. Video content regarding mass deaths and burial was faked and shared extensively on social media through videos. According to (Shearer, 2018), misinformation can be spread through YouTube as people share their opinions and suggestions based on either limited data or insufficient sources.

3.2.2 Image-based fake news:

Besides videos, images of fake facts were shared during the pandemic, causing panic among people. Kurfi et al. (2021) revealed that fake digital images were created which distorted facts shared by authentic sources like the WHO. This distorted information caused people to become highly fearsome about the pandemic, which led to major impacts on their social and economic lives. According to Fallis & Mathiesen (2019), false information can be shared through number of ways including false images. These images can be created to deceive people and bring forward false content. Talwar et al. (2019) also highlighted that social media now uses memes and images that spread false information as demonstrated by Thompson et al. (2020) (Figure 1). These lead to social and cultural conflicts on the internet where the images leaked reveal a fake post. Moreover, Apuke & Omar (2020), claimed that people may create wrong information based on the images and pictures just for entertainment and/or passing time. Therefore, these sources of fake news on social media depict a grave need for verification of content so that the harmful effects can be mitigated.
Figure 1: Images such as this, taken from the 2011 Hollywood film Contagion, have been posted as being related to COVID-19.

Table 1: Studies related to the sources and aims of fake news

<table>
<thead>
<tr>
<th>Reference</th>
<th>Results and Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khan &amp; Idris (2019)</td>
<td>• Social media serving as a conduit of misinformation</td>
</tr>
</tbody>
</table>
| Al-Zaman (2021)             | • Six main themes were identified related to fake news, the main ones being health and politics  
                                 | • 67.2% of fake news was related to health                                                                                                                                                                            |
| SSHAP (2020)                | • Information is distorted to serve as fake news by some people  
                                 | • Incomplete and biased information is also found to be a contributor to fake news                                                                                                                                 |
| Rodríguez et al. (2020)     | • Data about 1923 fake news stories was gathered  
                                 | • Most of the data was based on health and politics                                                                                                                                                                   |
| Duffy et al. (2020)         | • Social media can be regarded as a “double-edged sword”.  
                                 | • No social approval is required before sharing information, which aids the spread of fake news                                                                                                                                 |
| Galeotti (2019)             | • Most people share their emotions and ideological beliefs. This leads to the sharing of information contrary to facts                                                                                                                                                         |
| Vosoughi et al. (2018)      | • Fake news aims to disseminate a thrilling and sensational headline. Others do it for attention-seeking                                                                                                                                                                    |
| Correia et al. (2019)       | • Fake news aims to create drama and panic among the audience                                                                                                                                                           |
| Bright (2016)               | • People share fake news to enhance their social reputation or impress their social circle                                                                                                                                                                        |
| Talwar et al. (2019)        | • Fake news is done to promote gossip  
                                 | • People do it for damaging social peace through contributing to chaos in society                                                                                                                                        |
3.3 Impact Created by Sharing of Fake News on Social Media

Researchers agree that sharing fake news on social media has had various negative impacts on users, particularly during the pandemic (Table 2). According to Apuke & Omar (2020), the Uses and Gratification theory helps determine the impact of fake news on social media during the pandemic. The theory attempts to present the mindset of people as they use a particular social media platform. Furthermore, it also explains the consequences and impacts of social media on users, thus depicting the motivation of social media audiences. The SSHAP (2020) noted that the three most significant negative impacts that emerged with the rise of fake news spreading on social media include a health infodemic, increased pastime and entertainment, and increased religious and political conflict.

This theory is related to the present research in a sense that some people publish fake news on social media to mislead individuals within a society. On the other hand, some people obtain satisfaction from sharing fake news on social media, while others use the same social platform to alert friends and family when they detect fake news about COVID-19. Thus, gratification is obtained using social media in the form of information sharing, health education, and communal health protection.

In this regard, the impacts created by sharing fake news on social media can be summarized as follows:

### 3.3.1 Increased health infodemic

According to the WHO (2020), “health infodemic” refers to inappropriate information that misleads individuals, especially when shared on a digital platform, during a disease outbreak. According to the SSHAP (2020) and Verma et al. (2022), fake news shared during the pandemic had a detrimental impact on health-related information. Public health information, especially related to COVID-19 preventive measures, vaccination, and other standard operating procedures, was compromised due to fake news. Similarly, disinformation related to the treatment of the coronavirus and its variants created panic among the public. Al-Zaman (2020) states that health-related disinformation resulted in health crises for developing nations, which do not have enough resources to counter manipulated information and its consequences. Verma et al. (2022) investigated the relationship between sharing and consuming misinformation, and its impact on mental health. Through a quantitative analysis on a large online social media dataset, they demonstrated that users who shared COVID-19 misinformation experienced, approximately, a twofold increase in anxiety when compared to similar users who did not share misinformation. Other studies (Taylor, 2019; Choi et al., 2020) speculated that the use of misinformation can aggravate the mental health of users. It can cause
psychiatric symptoms such as fear and anxiety in people without mental illness, and trigger panic attacks, phobias, and obsessive-compulsive disorders for those with a pre-existing mental illness. It can also lead to developing manias, to the point that it can endanger the user and others (Telles-Garcia et al., 2020; Banerjee et al., 2020; Pan American Health Organization, 2021; Pereira-Sanchez et al., 2020). Rocha et al. (2021) also mentioned panic, fatigue, depression, and fear as a potential consequence of misinformation. Thus, one of the greatest negative impacts of sharing fake news on social media is the health infodemic that accompanies it.

3.3.2 Increased pastime and entertainment

According to Apuke et al. (2020), fake news on social media has negatively impacted users. Social media is now commonly used for pastime and entertainment purposes. As per Kim & Dennis (2019), there is a strong correlation between social media platforms such as Facebook, and individuals’ entertainment and leisure duration. People are more inclined to spend long hours in unproductive activities on social media, including gossiping about public groups, commenting, and sharing fake or perhaps false news. Talwar et al. (2019) and Di Domenico et al. (2021) further stated that the motivation to share memes, spread humor, and false information has poorly damaged the social media network worldwide. Due to the lack of social accountability, spreading false news has negatively impacted people’s productivity, as they use social media for pastime and entertainment purposes (Brindha, 2020).

3.3.3 Increased religious and political conflict

According to Al-Zaman (2021), spreading false news on social media has resulted in the increase of religious and political conflicts. According to Orso et al. (2020), fake videos and photos have been widely used to create hype and seek the attention of social media users, while relating them to the pandemic. Al-Zaman (2020) stated that numerous unrelated videos went viral claiming that Italian police had arrested people during the lockdown in the country. As people saw these videos and content, they raised their concern by either supporting or opposing the fake news, which resulted in conflicts. In some cases, the state administration was widely criticized for its poor and slow preventive measures for stopping the spread of the disease (Naeem et al., 2021).

Table 2: Studies related to the impact of fake news on social media users during the pandemic

<table>
<thead>
<tr>
<th>Reference</th>
<th>Results and Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>First et al. (2021)</td>
<td>• Exacerbates levels of stress</td>
</tr>
<tr>
<td>Liu et al. (2020)</td>
<td>• Causes anxiety</td>
</tr>
<tr>
<td>Liu et al. (2021)</td>
<td>• Poorer wellbeing, for young people in particular</td>
</tr>
<tr>
<td>Bukhari (2020)</td>
<td>• Causes panic</td>
</tr>
<tr>
<td>Tandoc (2019)</td>
<td>• Causes negative impacts on society as uncertainty increases; people become unhealthy</td>
</tr>
<tr>
<td>Source</td>
<td>Impact</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Schuetz et al. (2021)</td>
<td>• Leads to gossip&lt;br&gt;• Causes negative impacts on pandemic management</td>
</tr>
<tr>
<td>WHO (2020)</td>
<td>• Causes negative health impacts, harming people physically and mentally</td>
</tr>
<tr>
<td>Al-Zaman (2021)</td>
<td>• Leads to increased religious and political conflict&lt;br&gt;• Creates panic</td>
</tr>
<tr>
<td>Coleman (2020); Trew (2020); Islam et al. (2020)</td>
<td>• Causes deaths</td>
</tr>
<tr>
<td>Lazer et al. (2018)</td>
<td>• Impacts political behavior (for example, whether and how to vote)</td>
</tr>
<tr>
<td>Al-Zaman (2020)</td>
<td>• Spreading false news on social media has contributed to increased religious and political conflicts</td>
</tr>
<tr>
<td>SSHAP (2020)</td>
<td>• Fake news leads to a health infodemic&lt;br&gt;• Fake health news creates panic and negative outcomes for people’s health</td>
</tr>
<tr>
<td>Alvarez-Risco et al. (2020)</td>
<td>• Causes chaos and uncertain conditions</td>
</tr>
<tr>
<td>Tapia (2020)</td>
<td>• Limits the capacity and success of the Ministry of Health’s response to the pandemic</td>
</tr>
<tr>
<td>Shu et al. (2019)</td>
<td>• Videos for spreading fake information have the highest impact on users</td>
</tr>
<tr>
<td>Talwar et al. (2019)</td>
<td>• Peace is destroyed through the sharing of fake news on social media&lt;br&gt;• People pass more time and become panicked</td>
</tr>
<tr>
<td>Enders et al. (2020)</td>
<td>• Beliefs in COVID-19 conspiracy theories and misinformation vary in support&lt;br&gt;• Beliefs in COVID-19 conspiracy theories and misinformation are mostly associated with political motivations and distrust in scientists</td>
</tr>
<tr>
<td>Study / Source</td>
<td>Summary</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
</tr>
<tr>
<td>Kurfi et al. (2021)</td>
<td>- The various types of misinformation and conspiracy theories are differentially related to the propensity of getting the eventual vaccine, participating in public leisure activities, and being optimistic about the immediate future.</td>
</tr>
<tr>
<td>Apuke &amp; Omar (2020)</td>
<td>- Fake digital images were created by people who distorted facts shared by authentic sources like the WHO.</td>
</tr>
<tr>
<td>The Uses and Gratification theory is helpful in determining the impacts of fake news on social media.</td>
<td></td>
</tr>
<tr>
<td>- One of the critical impacts of fake news on social media is increased pastime and entertainment.</td>
<td></td>
</tr>
<tr>
<td>- It causes negative impacts on people’s lives and health.</td>
<td></td>
</tr>
<tr>
<td>Verma et al. (2022)</td>
<td>- Users who shared COVID-19 misinformation experienced approximately two times additional increase in anxiety when compared to similar users who did not share misinformation.</td>
</tr>
<tr>
<td>Taylor (2019); Choi et al. (2020)</td>
<td>- Aggravates the mental health of the users.</td>
</tr>
<tr>
<td>- Causes psychiatric symptoms such as fear and anxiety in people without mental illness.</td>
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<tr>
<td>- Triggers panic attacks, phobias, and obsessive-compulsive disorders for those with a pre-existing mental illness.</td>
<td></td>
</tr>
<tr>
<td>Telles-Garcia et al. (2020); Banerjee et al. (2020); Pereira-Sanchez et al. (2020)</td>
<td>- Panic, fatigue, depression, and fear as a potential consequence of misinformation.</td>
</tr>
<tr>
<td>Rocha et al. (2021)</td>
<td>- Infodemic can cause psychological disorders, panic, fear, depression, and fatigue.</td>
</tr>
<tr>
<td>Loomba et al. (2021)</td>
<td>- Misinformation has led to a decline in COVID-19 vaccination intent.</td>
</tr>
<tr>
<td>- Some sociodemographic groups are differentially impacted by exposure to misinformation.</td>
<td></td>
</tr>
<tr>
<td>Pierri et al. (2022)</td>
<td>- A negative relationship between misinformation and vaccination uptake rates.</td>
</tr>
</tbody>
</table>
Online misinformation is correlated with vaccine hesitancy rates, as shown by survey results

Associations between vaccine outcomes and misinformation remain significant when accounting for political as well as demographic and socioeconomic factors

- Negatively affected healthy practices
- Promoted wrong practices
- Led to mental health problems

Considering this in view, the present research fills a gap in the literature by building the context of fake news on social media during the pandemic. The study employs the Uses and Gratification theory to exhibit further the impact of fake news on social media during the pandemic, as described by the theoretical model shown in Figure 2.

Figure 2: Theoretical model

4 Results and Discussion

The analysis shows that fake news shared on social media during the pandemic culminated in several negative societal impacts, namely: a health infodemic, increased social media pastime and entertainment, as well as increased religious and political conflict. The most common themes of fake news were health-, political-, criminal-, and religious-related content. The Uses and Gratification theory suggests that people share fake news to seek social attention, pass the time, and to entertain themselves; this ultimately resulted in the previously mentioned impacts.
The health infodemic caused through the sharing of fake news had several negative psychological impacts. For example, it contributed to people becoming panicked and depressed (WHO, 2020). One such element was fake news related to the preventive measures of coronavirus. The WHO Coronavirus guidelines and recommendations for preventing the spread of coronavirus were manipulated to mislead people. As a result, certain concerns were raised regarding the use of sanitizer, getting vaccinated, and wearing the mask (SSHAP, 2020). This resulted in severe trust issues and rumors circulating about the guidelines. Loomba et al. (2021) studied the impact of misinformation relating to COVID-19 and vaccines in the US and the UK. They found that misinformation played a key role in changing people’s mind and contributed to a lower intent in accepting a vaccination against COVID-19.

Furthermore, Pierri et al. (2022) provided evidence of geographical regions in the US with a low level of COVID-19 vaccine uptake, which may be driven by online misinformation. Romm (2020) argues that people have been sharing fake news regarding deaths, active cases of the virus, containment activities, treatment suggestions, and other public health activities. Al-Zaman (2020) also supported the claim that the health infodemic created challenges for developing and under-developing countries. These countries were already struggling to provide basic health facilities to people, and so public resistance to getting vaccinated made matters worse. Even within developed countries such as the United States, the national lockdown disrupted supply chains and aggravated the demand-supply gaps, causing food insecurity among the vulnerable and low-income population (Spencer, 2020).

The spread of fake news and misinformation also affected the practice of healthy behaviors such as social distancing and handwashing, and promoted wrong practices which increased the spread of the virus (Tasnim & Maumder, 2020).

A rise in unproductive activities and entertainment was also observed. Adnan et al. (2021) claim that entertainment gratification refers to the usage of social media for amusing and satisfying oneself. In other words, the purpose of entertainment and timepass is to release stress and anxiety. Thompson (2019) claims that there is a linear correlation between (a) entertainment gratification, and (b) social media trolling. According to the authors, social media trolling aims to pass the time and express opinions that aren’t necessarily based on facts. Since all these efforts do not require any hard work, people tend to share fake news and consequently kill their time (Adnan et al., 2021). Curtis (2020) also claims that sharing fake news on social media has destroyed people’s peace.

Another negative impact of sharing fake news on social media is the observed increase in social, religious, and political conflicts. According to Al-Zaman (2020), social media has divided internet users based on religious beliefs, social values, and political ideology. This is aligned with the contribution of Orso et al. (2020), who claim that fake photos, videos, and text circulated on social media are merely for creating hype and seeking public attention. Adnan et al. (2021) argue that the purpose of fake news on any platform, including social media, is to mislead and spread misinformation. When such an act is performed, rumors against the ruling parties, task forces, and other official institutions are spread. Consequently, it contributes to the political divide between supporters and opposers of the ruling party. According to the SSHAP (2020), fake news on social media had previously created a socio-political divide with the outbreak of Ebola in the Democratic Republic of Congo. It was also noted that fake news sharing on social media increased political mistrust between the USA and Russia and contributed to rising anti-Chinese sentiment, with the Trump administration calling the recent pandemic as “the Chinese Virus”. Fidler (2019) claims that distrust was also sowed among members of the state administration when rumors about the task forces were circulated on social media. As a result, socio-political divides were observed.
The findings indicate that the sharing of fake news on social media resulted in three major negative impacts. The literature and key findings both indicate that as fake news on social media was circulated during the pandemic, a health infodemic arose, accompanied with an increase social media pastime, and an increase in religious and political conflicts worldwide (Di Domenico, 2021). The authors revealed that fake news on social media has been circulated through different sources such as Twitter, Facebook, Instagram, and YouTube. Similarly, almost all types of fake news including videos, photos, and text have been used to share content on social media.

5 Conclusion

The sharing of fake news on social media has created a health infodemic, increased the time that users spend on social media platforms, and contributed to social, religious, and political divides at both the domestic and international levels. The Uses and Gratification theory reveals that fake news on social media causes both entertainment gratification and social and cultural divides among users.

This study offers key recommendations to overcome and minimize challenges which emerged from fake news sharing on social media during the pandemic. Firstly, social media platforms should be regulated to minimize the sharing of false and misleading content. If authorities fail to take necessary actions, authors of fake news will seek every opportunity to mislead audiences on social media. States should sponsor fact-checking agencies which serve to identify and debunk false information circulating on social media platforms. Two such examples are Lupa and Aos Fatos, fact-checking agencies based in Brazil which are actively working to take strict actions against disseminating fake news on any platform, particularly social media. Another suggestion is for state authorities to send debunking messages to users to ensure that they are alarmed whenever false information is in circulation. It is also suggested that health experts utilize telemedicine to answer queries and help individuals obtain accurate health information. The WHO may even develop health discussion forums to substitute in-person interaction. By doing so, the health infodemic could be contained.

The solutions proposed for defeating the spread of fake news on social media are summarized in Figure 3.

Figure 3: Proposed solutions for decreasing the spread of fake news
The health infodemic may be mitigated by creating group forums where correct information is shared. Novetta’s open-source data feeds may also be utilized. These sources identify trends on WhatsApp, Facebook, Twitter, and other social media platforms. This technique has been used to quickly detect erroneous information on disease trends and alert relevant authorities. Moreover, automated tools such as Reveal allow for the verification of images, videos, and text against credible sources. If something fake is detected, the system alarms the network.

Advanced technologies such as natural language processing or data mining approaches could be applied for the detection and removal of online content with no scientific basis. To overcome religious, social, and political conflicts, rumors must be stopped, and the proper regulation of news sharing must be put in place. For this purpose, social media community feedback is required, as the public must show responsibility towards media shared on such platforms. Users must refrain from disseminating fake news and learn to verify, validate, and check the credibility of information. Thus, there is a need to create communication campaigns and interactive dashboards where misinformation — especially related to the virus — is highlighted. Respective authorities can be contacted to take strict and time-bound actions.

Overall, the negative impact of fake news shared on social media during the pandemic was the development of a health infodemic, increased usage of social media as a pastime, as well as increased religious, social, and political conflict. The findings and suggestions of the present study help to overcome the negative impacts caused by sharing fake news on social media during the pandemic. Nevertheless, the research has some limitations, as it only focuses on fake news shared on social media during the pandemic, using resources that are freely available on the Internet. Therefore, it is suggested that future research focuses on other dimensions, sources, and platforms of fake news using renowned resources such as Science and Nature publications, Scopus, and PubMed databases.

6 Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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