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WR122

25 March 2023

### Social Media's Impact on Misinformation During the COVID-19 Pandemic

Social media can be used in both positive and negative ways and have both positive and negative impacts on people. While social media can be used to connect with friends and family and stay up-to-date with current events, it also allows for a vast amount of misinformation to be spread at an alarming rate. This is especially true in regard to the COVID-19 pandemic.

Throughout the pandemic, social media played an integral role in the dissemination of misinformation, which has led to the hospitalizations and deaths of many people.

Before diving further into this exploration of COVID-19 misinformation on social media, it is important to understand the difference between misinformation and disinformation.

Misinformation is inaccurate information that is not necessarily meant to deceive or misinform others (Pazzanese p 5). Disinformation is when false information is intentionally spread by people pushing a political agenda (Pazzanese p 5). Social media has been used to spread both misinformation and disinformation about COVID-19 (Gisoni et al. p 1).

During the pandemic, people did their best to try to manage the flood of developing information from different sources trying to provide explanations about this new virus. Amongst all of this information, it may have been difficult to know who to turn to for accurate information about the pandemic. The author of *The Harvard Gazette* article "Social Media Used to Spread, Create COVID-19 Falsehoods," Christina Pazzanese, a staff writer for the journal, makes a similar case. Pazzanese argues that during the onset of a new virus there is a struggle to sort

through accurate information from medical professionals and separate it from questionable or inaccurate advice, theories, and information from non-professionals (p 1). Pazzanese explains that although this has happened with other diseases, the COVID-19 pandemic was different because social media played a major role (p 3).

The spread of misinformation and disinformation on social media is such a large issue partly due to people's social media use and how often they turn to social media for information. In regard to the new COVID-19 vaccines, one 2021 study from Pew Research Center found that, "...roughly half of Americans say that they have been getting some (30%) or a lot (18%) of news and information about these vaccines on social media" (Mitchell and Liedke p 1). The article was written by a former director of journalism research at Pew Research Center, Amy Mitchell, and a research assistant at Pew Research Center, Jacob Liedke. This study surveyed 11,178 adults about their use of social media platforms to get news about COVID-19 vaccinations (Mitchell and Liedke). According to the title of the study, "About four-in-ten Americans say social media is an important way of following COVID-19 vaccine news" (Mitchell and Liedke). The number of Americans who acquired COVID-19 information from social media also varies depending on the social media platform (Mitchell and Liedke pp 5, 7). For example, one graph in the study revealed that of the 31% of Americans who often receive news from Facebook, 35% explained they get "a lot of" and 46% said they get "some" COVID-19 vaccine news on social media (Mitchell and Liedke). Alternatively, the graph showed that of the mere 7% of people who routinely received news from Reddit, 27% reported getting "a lot of" and 44% explained they get "some" COVID-19 vaccine news via social media (Mitchell and Liedke).

In light of a new disease, non-professionals have tried to offer their own reasoning in order to provide an explanation, even if it is completely absurd, about new concepts and ideas

they do not understand. There are many different false claims, speculations, and conspiracy theories that have been made regarding the COVID-19 pandemic. Some speculations about COVID-19 question the origin of the virus (Gisondi et al. pp 3, 7 and Klepper p 2). The article “COVID-19 conspiracies soar after latest report on origins” by David Klepper explains how COVID-19 conspiracy theories and misinformation were disseminated online and on social media (pp 2, 3, 13, 16). The author talks about a report from the Energy Department which sparked more conspiracy theories and misinformation about its origin (Klepper pp 3, 4, 11, 13). One example given includes a tweet from the Republican U.S. Representative Marjorie Taylor Greene from Georgia who tweeted that COVID-19 was a “man made bioweapon from China,” while a follower soon retorted that it was actually from Ukraine (Klepper pp 13). These are examples of arguments perpetuating COVID-19 misinformation where the arguer has come to a poorly informed conclusion probably based on faulty reasoning and non-credible sources. The article also gave an example of the spread of disinformation, explaining that “Chinese government officials have...used their social media accounts to amplify anti-U.S. conspiracy theories, including some that suggested the U.S. created the COVID-19 virus and framed its release on China” (Klepper p 16). This is one example of COVID-19 disinformation people may have viewed where the inaccurate information was spread intentionally by those pushing a political agenda.

Social media misinformation has also encouraged people to oppose quarantining. The study “Social media and COVID-19” presented research on anti-quarantine social media comments and “...collected and analyzed near 80,000 tweets...” (Karami and Anderson p 1). Regarding certain tweets that discussed “...the order of governors to close businesses and impose self-quarantine” (Karami and Anderson p 8), the study found that, “These tweets argued that the

order was unconstitutional because it was against people's liberty and freedom" (Karami and Anderson p 8). There were also tweets that discussed "...physical and mental health issues due to quarantine" (Karami and Anderson p 8). In a table that gave examples of anti-quarantine tweets, one post argued that people had "...lost their lives during this dangerous lockdown due to addiction, suicide & other reasons, all due to the extended unnecessary lockdown" (Karami and Anderson). This is another example of inaccurate COVID-19 information where someone has come to a false conclusion. The virus, not quarantine, was what caused the loss of so many lives. As many who experienced the pandemic would agree, the lockdown was necessary to prevent the further spread of COVID-19.

Social media misinformation has also discouraged mask wearing. The peer-reviewed study "Why do people oppose mask wearing?" revealed findings from analysis of tweets discussing mask wearing: "While the majority of the tweets supported mask wearing, the proportion of anti-mask tweets stayed constant at about a 10% level throughout the study period" (He et al. p 3). It also said, "The results show that the opposing tweets often cited user-created YouTube videos arguing against mask wearing" (He et al. p 31). This once again demonstrates peoples' lack in critical thinking skills when assessing information, in this case online. They can come to seemingly ridiculous and poorly informed conclusions as they are basing their opinions on non-reputable and non-credible sources of information.

Some conspiracy theories that have gained popularity during the pandemic include the QAnon movement, the 5G theory, and the anti-vaccination movement (Kuźelewska and Tomaszuk p 1). One peer-reviewed paper, "Rise of Conspiracy Theories in the Pandemic Times," explains that social media played an integral role in circulating these theories (Kuźelewska and Tomaszuk pp 11, 14, 16, 20, 23). The paper also specifies some of the social

media platforms used by these movements and explains that some of these conspiracy theories gained followers via these social media platforms or had an increase of social media users engaging in their discussions.

As *The New York Times* article “What Is QAnon, the Viral Pro-Trump Conspiracy Theory?” by Kevin Roose explains, “QAnon is the umbrella term for a set of internet conspiracy theories that allege, falsely, that the world is run by a cabal of Satan-worshipping pedophiles” (p 7). The QAnon movement gained traction on platforms such as Twitter and Facebook (Kuźelewska and Tomaszuk p 11). Moreover, in March 2020, engagement in QAnon groups and discussions with users on Facebook “...increased from an average of 344 unique users per day between March 2 and 8, to 898 between March 22 and 29” (Kuźelewska and Tomaszuk p 14).

Twitter and Facebook were also integral in circulating the 5G theory, which theorized that the 5G network was the cause of the virus or had advanced the spread of COVID-19 (Kuźelewska and Tomaszuk p 23). The article “Rise of Conspiracy Theories in the Pandemic Times” explains, “The linking part of 5G and COVID-19 was, due to the theory believers, the fact that Wuhan, where the coronavirus originated from, was the first location around the world which widely introduced 5G technology” (Kuźelewska and Tomaszuk p 24). Another unsupported 5G theory was that 5G played a “...role as activator of microchips hidden in vaccines...” which contributed to misinformation about vaccinations (p 25).

As for the anti-vaccination movement, profiles connected to this movement have gained one million followers on Instagram since the announcement of the COVID-19 pandemic (Kuźelewska and Tomaszuk p 20). Similar events took place on Facebook, which had a growth of about one million followers for “anti-vaccine groups and fan pages,” and YouTube, with a gain of 5.8 million followers (Kuźelewska and Tomaszuk p 20).

As the anti-vaccination movement attained much traction on social media during the COVID-19 pandemic, it may come as no surprise that social media has also influenced COVID-19 vaccine hesitation. The peer-reviewed paper, “Vaccine Hesitancy in Parents” says that social media impacts parents’ vaccine hesitancy and explains that social media enables users to share and create content that spreads misinformation about vaccinations (Shneyderman et al. 94, 96). In regard to the COVID-19 vaccine, the paper suggested that “...parents may be even more hesitant to a novel vaccine than to existing vaccines...” (Shneyderman et al. 98-99). The paper also referred to a study that “...found that in the USA overall, intentions to receive the COVID-19 vaccine [had] decreased between April 2020 and December 2020” (Shneyderman et al. 99). Another peer-reviewed paper, “Lack of Trust, Conspiracy Beliefs, and Social Media Use Predict COVID-19 Vaccine Hesitancy,” also reported that social media influenced COVID-19 vaccine hesitancy. The paper explained that “...those who obtain information from relatively unregulated social media sources—such as YouTube—that have recommendations tailored by watch history, and who hold general conspiratorial beliefs, are less willing to be vaccinated” (Jennings et al. p 1). The paper went on to explain that many people now receive “health information” via social media which is a growing issue (Jennings et al. p 1) especially since social media is where, “The main sources of vaccine misinformation...” are found (Jennings et al. p 5). This could continue to impact how many people view, create, and spread COVID-19 misinformation and will therefore continue to influence the views and opinions people form based on the possibly inaccurate information they are receiving from social media.

Some of this misinformation and disinformation has led to deaths, as some may have been convinced that getting vaccinated was unnecessary. As one paper put it, “This online *COVID-19 infodemic* has deadly consequences” (Gisondi et al. p 1). The same peer-reviewed

paper titled “A Deadly Infodemic” stated, “COVID-19 misinformation and disinformation on social media increases vaccine hesitancy, lowers vaccination rates, and causes preventable deaths, especially among certain demographic populations” (Gisoni et al. p 4). According to the same paper, both misinformation and disinformation concerning COVID-19 via social media platforms heavily influenced “vaccine hesitancy and vaccine refusal” and a large number of unvaccinated people died (Gisoni et al. p 1).

Dangerous misinformation about COVID-19 treatments and cures also has led to hospitalizations and deaths. The BBC article, “ ‘Hundreds dead’ because of Covid-19 misinformation,” written by BBC Monitoring journalist Alistair Coleman reported, “A study published in the American Journal of Tropical Medicine and Hygiene also estimates that about 5,800 people were admitted to hospital as a result of false information on social media. Many died from drinking methanol or alcohol-based cleaning products” (pp 2, 3). People consumed these products because they falsely believed these products could treat COVID-19 (Coleman p 4). The serious consequences that COVID-19 misinformation had for people further supports the importance of knowing how to evaluate the reasoning of online information and apply critical and creative thinking skills when examining arguments and source credibility.

There is an extensive amount of COVID-19 misinformation (and disinformation) on social media. This misinformation could be spread with innocent intentions, or it may be circulated as disinformation with a certain political agenda in mind. From speculations about the origin of the virus to more serious and outrageous conspiracy theories such as QAnon, the extensive amount of inaccurate information perpetuated on social media combined with a lack in critical and creative thinking skills, has led people to come to poorly informed conclusions supported by unsound arguments with flawed reasoning. This circulation of misinformation and

disinformation has had a tremendous impact on many peoples' opinions about the COVID-19 pandemic and in some cases has led to more harmful outcomes. Some people decided to reject precautions like mask wearing, quarantining, and vaccination, which caused more people to get COVID-19 and lead to preventable deaths. From this, it should be learned how important critical and creative thinking skills are when assessing arguments and information—especially on social media or online in general. While certain information and arguments may seem obviously inaccurate or ridiculous to some, to others they may seem valid, especially if those in their family or the political party they support agree with that information. Thus, it is imperative that one learns how to effectively understand, evaluate, and critique the arguments, evidence, and information with which a person may be presented. In that way, they may become well-informed and make reasonable judgments and conclusions based on reputable sources and sound arguments.



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