Chapter 3

Social Media, COVID-19, Misinformation, and Ethics

A Descriptive Study of American Adults' Perceptions

Tammy Swenson-Lepper and Heidi J. Hanson

Since the beginning of the COVID-19 pandemic, numerous hoaxes about the virus and its vaccine have been widely shared on social media, including YouTube videos stating that the vaccine includes a microchip that allows people to be controlled by the government or large corporations (Bond 2020), that 5G mobile phone service is causing the virus, that vaccines cause autism (Bond 2021), that the vaccine "will alter people's DNA" (Ramjug 2021), and that ivermectin is a treatment for COVID-19 (Alba 2021), among many others.[1]

While misinformation and fake news on social media may seem like a minor player in the fight again the COVID-19 pandemic, Ognyanova et al. (2021) found that "belief in vaccine misinformation is associated with lower vaccination rates and higher vaccine resistance" (4). A study by the de Beaumont Foundation (2021) found that people who "said social media was an influential source were *16 percent less likely* to report that they had received at least one dose of the COVID-19 vaccine" (emphasis in original). They were "far more likely to believe false information about vaccines." Research has shown that people who are politically conservative tend to believe conspiracy theories about the COVID-19 vaccine and are, therefore, less likely to be vaccinated (Ognyanova et al. 2021). This means that the red states of the South, Midwest, and West are more likely to have greater numbers of unvaccinated people. According to Wood (2021), residents of "the reddest tenth of

[1] Special thanks to Susan Byom, librarian in charge of Interlibrary Loan at Winona State University, without whom this chapter would not have been possible.

the country saw death rates that were six times higher than the bluest tenth" in the month of October 2021.

Misinformation about COVID-19, masking, and vaccines on social media has thus had a major effect on the spread of COVID-19 in the United States. However, little work has been done to examine how the general public views the ethicality of posts on social media about these topics. People have been asked to state their beliefs about the legal consequences that social media platforms should face for sharing misinformation or fake news (Jang and Kim 2018). Some people believe that misinformation should not be flagged because they believe it is censorship, while others believe that all misinformation should be flagged or removed from social media platforms. The reasons why people believe that information should be flagged or left alone are most likely part of people's value systems or perspectives on what is right or wrong, thus making it an ethical issue.

Investigating fake news and misinformation on social media is of significance in the current news situation of the United States. Slightly more than 80 percent of Americans use YouTube, while about 70 percent of adult Americans use Facebook (Auxier and Anderson 2021). Additionally, the majority of social media users say that they "visit these platforms [Facebook, Snapchat, and Instagram] on a daily basis" (Auxier and Anderson 2021). Most U.S. residents are getting at least some of their news from a digital device, and almost 51 percent sometimes or often get their news from social media (Matsa and Naseer 2021). Younger adults (ages 18–29) are most likely to get their news from social media (71%), with older adults (ages 30–49, 50–64) tending to get their digital news from news websites or apps (Matsa and Naseer 2021).

In the literature review of this project, we will discuss misinformation and fake news, psychological and demographic factors that contribute to belief in misinformation, the Third-Person Effect, methods for fighting misinformation, and perceptions of ethics in social media more generally.

LITERATURE REVIEW

Misinformation and Fake News

Since COVID-19 news started to spread in early 2020, people have become anxious because of exaggerated and "suspenseful headlines" regarding the pandemic. Consistent exposure to exaggerated information has many consequences for average news consumers (Bratu 2020). Various claims and narratives regarding COVID-19 have been spread on various forms of media, including written news, headline news, radio news, social media, and so on (Gerosa et al. 2021). Distinct factors affect a person's susceptibility to these

claims and the chances of the average person spreading them intentionally or unintentionally.

There are a variety of fake news claims that have circulated in the media since the beginning of the COVID-19 pandemic. One popular piece of misinformation that spread in multiple countries about the COVID-19 virus is that 5G technology caused the pandemic (Bruns, Harrington and Hurcombe 2020). According to Bruns, Harrington, and Hurcombe (2020), rumors circulated in countries such as Romania and China that the COVID-19 vaccine was deadly and would be activated by 5G radiation; another rumor circulated in the UK that stated 5G technology "destroys oxygen." Claims regarding 5G technology led consumers to believe that COVID-19 is a fraud, which causes behavioral and attitudinal changes. According to Germani and Biller-Andorno (2021), anti-vaccination claims and misinformation were spread on social media by former president Donald Trump; Trump's high profile caused more extensive belief in the fear-inducing claim that vaccines are associated with autism.

The concept of disinformation is important in understanding differing intentions social media users have when spreading information. Liu and Huang (2020) describe disinformation as "false or misleading information that is spread deliberately to deceive the public" (789). One reason people may intentionally mislead the public by spreading disinformation is the concept of freedom of speech. In a study done by Ardèvol-Abreu, Delponti, and Rodríguez-Wangüemert (2020) some people "appealed to their freedom of speech and argued that they may share the fake content just because they 'agree' with it 'even if the speech is wrong'" (789). Atehortua and Patino (2021) suggest that extremist movements have taken advantage of the pandemic to spread hateful messages, some affiliated with anti-vaccination strategies. The 5G claims made on social media appear to be a product of conspiracist beliefs from before the pandemic; these beliefs led to suspicions of many others, including people from China and global elites (Bruns, Harrington and Hurcombe 2020). Bruns, Harrington, and Hurcombe (2020) also state that, in general, conspiracy theories, specifically on Facebook, are spread to exploit the fears of users and push "conspiracist narratives" so that the posts will be shared more often.

But what if the sharing of misinformation is unintentional? According to Apukea and Omara (2021), altruistic people, who they define as those who "enjoy the act of helping others" are more likely to unintentionally share misinformation. Altruistic people who do not pay close attention to the information they are sharing may share the information in hopes of making a positive impact. Altruism is known to be a cultural trait in the country of Nigeria, where the dissemination of fake news and misinformation has been shown to be a prevailing issue (Apukea and Omara 2021). Many people

spread misinformation because they do not pay close attention to the original source of the information being shared (Ardèvol-Abreu, Delponti and Rodríguez-Wangüemert 2020). Ardèvol-Abreu, Delponti, and Rodríguez-Wangüemert (2020) ran a study that found that warning labels made by social media platforms on misinformation or fake news merely stand as "one more piece of information to consider" to social media users, rather than a reason to stop or reconsider sharing (5). They also found that many social media users believe that "truth is provisional" in terms of COVID-19, which they explain as believing "something that is found to be false today might be true tomorrow" (8). Not putting in the time to fact-check information and to make sure it comes from trustworthy sources perpetuates the spread of misinformation.

Whether people spread misinformation intentionally or unintentionally, a sizable percentage of the population has believed claims such as the 5G conspiracy theory (Tiffany 2020). General mistrust of the government is a factor in believing misinformation and fake news; for example, Greene and Murphy (2020) found that government warnings against misinformation did not impact the behavior of social media users and did not decrease the impacts of fake news exposure. Some social media users and other individuals tend to believe the government is hiding or fabricating key information regarding the COVID-19 pandemic (Quinn, Fazel and Peters 2021). Emotional intelligence is a factor in the susceptibility to fake news. Preston et al. (2021) found a significant positive correlation between fake news detection and high emotional intelligence test scores. In another study, a higher education level was positively correlated to general knowledge, which can assist in fake news detection (although the fake news beliefs cannot be predicted) (Gerosa et al. 2021). However, other factors such as age, sex, and race do not appear to play a part in fake news detection (Abraham and Mandalaparthy 2021; Wright and Duong 2021). Overall, fake news is widely spread both intentionally and unintentionally (Atehortua and Patino 2021). Thus, the dissemination of fake news overwhelms trustworthy news sources, which leads to greater levels of public confusion and "counterproductive reduction of COVID-19 transmissions" (Bratu 2020, 129).

Because of the easy access to fake news and misinformation, individuals with poor mental health may resort to "compulsive pursuance of COVID-19 information to reduce their anxiety" (Bratu 2020, 129). This media-fueled trauma affected healthcare facilities already swamped by a large volume of COVID-19 patients. Bratu (2020) found that in addition to people unnecessarily traveling to healthcare facilities because of their fears about COVID-19 (fears stoked by fake news), people also resorted to panic buying essential items because media platforms reported the undersupply of resources (129). Since the onset of the pandemic took place in China, xenophobia has risen in the United States (Wright and Duong 2021). They found that being white was

associated with higher levels of xenophobia caused by fake news regarding COVID-19.

Fake news dissemination also contributes to increasing anti-vaccination efforts; claims mentioning microchips, autism, and so on have increased public condemnation of vaccine use. Anti-vaccination communities on Twitter had very few original posts but significantly higher numbers of retweets, in comparison to the pro-vaccination pages with higher amounts of original content but lower retweet numbers. They found that anti-vaccination communities on Twitter act as echo chambers of misinformation and disinformation, where the users share common beliefs and attitudes with a smaller number of profiles. This also contributes to the polarization of the vaccine debate, which can sway the hesitant into believing misinformation about vaccines and reducing the vaccination rates (Germani and Biller-Andorno 2021).

Finally, the dissemination of fake news and misinformation creates a cycle of misinformation on social media platforms. Many social media platforms have an algorithm that presents posts based on what a user has liked and interacted with before; with the polarization of social media feeds, counter-arguments and factual information may not be seen by people who interact with misinformation often (Germani and Biller-Andorno 2021, 9). Ironically, content removals and bans, rather than decreasing the spread of misinformation, have the unintended impact of "strengthening the beliefs of conspiracy theorists for whom such interventions are proof that they are in the process of uncovering deeper secrets that the establishment does not want them to see" (Bruns, Harrington and Hurcombe 2020, 26). The cycle of misinformation perpetuates itself through public confusion and the attempts to decrease the impact of fake news on the public, which makes solutions difficult to find.

Psychological and Demographic Characteristics

Many psychological factors contribute to the viewing, understanding, and spreading of fake news. Political viewpoints can increase bias, thus increasing incivility in social media users; this can also reduce the effectiveness of mitigation strategies regarding COVID-19 transmission. Bumsoo (2020) states that incivility occurred in multiple forms, including name calling, aspersions, vulgarity, and pejorative speech, which all depend on the audience for the comments. Individuals with larger network sizes, specifically on Twitter, are less likely to use uncivil language. He explains that individuals with smaller social media networks may have less of an opportunity to understand viewpoints different from their own. Bumsoo (2020) also states that partisan media encourages the use of uncivil language, especially during political elections (524).

When viewing news regarding COVID-19, Calvillo et al.(2020) found that conservative participants were significantly more likely to perceive themselves as less vulnerable to the risks of the COVID-19 virus. The polarization of news shapes the way that news consumers perceive it, as conservatives seem to be less accurate in discerning between real and fake news (Calvillo et al. 2020). Lawson and Kakkar (2021) found that low-conscientiousness conservatives have a greater desire for chaos than liberals and are more likely to share fake news.

Confirmation bias, along with other biases, also play a role in the sharing and understanding of fake news. Westerwick, Johnson, and Knobloch-Westerwick (2017) define confirmation bias as "the phenomenon that individuals select messages more frequently that align with preexisting opinions over information that challenges preexisting views." This, partnered with selective exposure, which "denotes that individuals selectively attend to messages they can choose from and do not spend equal time with all available messages" (343), led to the conclusion that participants in this study "favored attitude-consistent content over attitude-challenging content," meaning they agreed with information that aligned with their existing opinions (359). However, individuals with different information processing systems may respond in diverse ways, and selective exposure may impact them differently in terms of political messages (359). Van der Meer, Hameleers, and Kroon (2020) have found that confirmation, source, and negativity bias all have significant roles in selective exposure, but confirmation bias is the main factor in determining an individual's selective exposure. Ven der Meer, Hameleers, and Kroon (2020) define source bias as "when people show a tendency to avoid engaging in repeated active news selection" (938) and explains that negativity bias is the idea that "audiences might exhibit a (unconscious) preference for negative over positive political news" (939). They also note that individuals who are more skeptical and less critical of the news they consume are more likely to foster polarized divides in their views on specified issues, such as COVID-19 (957).

Fake news on social media can affect the behaviors of social media users; COVID-19 conspiracy theories may indirectly influence individuals' compliance with the best mitigation practices that prevent COVID-19 (Vitriol and Marsh 2021). More specifically, positive perceptions and beliefs regarding scientific statements were related to increased mitigation behaviors regarding the pandemic (Vitriol and Marsh 2020, 7). When people are more influenced by qualified, high-quality information, the total infection rate is likely to go down. Because individuals commonly rely on their peers' health statuses to infer infection risk, this can lead to them being unaware of the actual risk they are facing during the pandemic. For example, if an individual's neighbor does not have COVID-19, the individual may base their perception of the overall

infection rate on their neighbor's health status (Du et al. 2021). Du et al. also state that the total infection rates may go down when people view high-quality social media posts because high-quality posts increase awareness of disease risk and promote behaviors that mitigate the spread of disease.

However, using social media as the prime source of news tends to be detrimental to not only understanding the risks of COVID-19 and effective mitigation behaviors, but also increases the intake and belief in fake news and conspiracy theories. Individuals who trust news from social media are more likely to believe in COVID-19 fake news and conspiracies; those with a higher education who trust governmental information sources are less likely to believe COVID-19 fake news and myths (Melki et al. 2021). Stecula and Pickup (2021) have found that using Facebook and YouTube for news makes individuals with low cognitive reflection levels more likely to believe conspiracies. Stecula and Pickup (2021) state that it is those who succumb to gut reactions who are significantly more likely to believe in conspiracy theories, while those with high cognitive reflection levels, who can slow down and resist the incorrect intuitive answers, are unaffected by Facebook use and are less likely to endorse conspiracies. The majority of individuals on social media believe sources such as doctors, medical practitioners, and other competent people are trustworthy (Tayal and Bharathi 2021). Tayal and Bharathi also found that people are more likely to share information they have fact-checked, but people rarely fact or cross-check the information they find on social media with other news sources.

Third-Person Effect

Davison began the study of Third-Person Effect in 1983. He defined Third-Person Effect as "people will tend to overestimate the influence that mass communications have on the attitudes and behaviors of others" (3). Perloff (1999) defines it more comprehensively and says that the Third-Person Effect

> is the belief that communications exert a stronger impact on others than on the self. . . . A key assumption of the TPE [Third-Person Effect] is that perceptions of media effects on the self and others are distinct entities, that is, individuals can and do separate out in their minds perceptions on communication effects on others and the self. (355)

Thus, people assume that mass communication affects other people's beliefs, attitudes, and behaviors, but not their own. Over the intervening years since these original papers were written, scholars published dozens of studies about the Third-Person Effect, examining areas related to advertising (Xie 2016), disasters (Wei et al. 2015), the influence of poll results on opinions (F. L. Lee

2010), political participation (Banning 2006), television violence (Salwen and Dupagne 2001) and many more. In this review of literature, we will focus on select studies related to Third-Person Effect and misinformation, social media, and health information, including COVID-19. This chapter primarily focuses on misinformation in online sources, especially social media.

There are two types of misinformation in online sources: fake news and general misinformation. Fake news is misinformation that is designed to look like it was produced by a news organization, can be proven untrue, and the mistruths are designed to influence people with specific persuasive intents, be they to sell you a product, candidate, or political perspective (Baek, Kang, and Kim 2019, Hwang and Kwon 2017). Misinformation, on the other hand, is still intentionally false, but the information is not presented as being created by a news organization (Liu and Huang 2020). Liu and Huang (2020) found that "fake news exposure on social media . . . is linked to the perception of disinformation effects on close others, but not on distant others" (792), meaning that individuals don't believe that they are susceptible to misinformation, but they believe that their close friends and family members are; they also believe that distant others are even more susceptible to misinformation (Ştefăniţă, Corbu and Buturoiu 2018). Thus, as in previous Third-Person Effect work, individuals do not feel personally susceptible to lies about COVID-19 online, but believe others are susceptible to them.

In general, people believe that they are better at assessing misinformation than their peers, but they are more likely to believe that they are better at it than those who are close to them if they have greater education, are more interested in politics, and have greater levels of confirmation bias, "which translates into people being more confident about being able to quickly understand and evaluate a situation" (Corbu et al. 2020, 171). They also found that "less Facebook dependent, higher educated people, who are more interested in politics, estimating to encounter misleading information more often are more affected by third person perceptions about the ability to detect fake news" (Corbu et al. 2020, 173–174) Thus, people with more education who reported not using Facebook very often strongly believed that others would believe fake news and misinformation much more than they would. As Corbu et al. point out, this makes social media users believe that they are less likely to be misled by fake news than their friends, family, and distant others (173–74).

Political affiliation also ties into the Third-Person Effect for people's perceptions of others' ability to evaluate fake news and misinformation, especially in relation to the 2016 election. Given the strength of the partisan divides that still exist, it is likely that the findings that follow are still relevant and relate to COVID-19. Jang and Kim (2018) have found that Democrats are more likely to believe Republicans are susceptible, while Republicans believe Democrats are more susceptible, thus making the divide between members

of the political parties even greater. As they point out, "American voters are more likely to think that they are smarter than others and that they are not easily influenced by false attempts at persuasion" (299).

In the past decade or so, scholars have started studying the third-person effect as it relates to social media use. In their survey of people who primarily get their news from social media, Yang and Horning (2020) found that participants believed others were more affected by fake news than they were. Further, they found that "the more individuals perceived that fake news influenced others, the more they thought fake news was socially undesirable" (6); counterintuitively, they were also less likely to approve of censoring news that was fake. Tsay-Vogel (2016) found that people believe others used Facebook for longer periods of time and more intensively than they did (1965). Schweisberger, Billinson and Chock (2014), using experimental methods, learned that users believed that low relevance stories affected others more than themselves, but that higher impact stories affected the users more. This study is of particular note because it examined stories presented on social media or the internet that were of high or low relevance to the participants. The more relevant the story, the more likely participants were to believe it had more of an effect on them than on others. People tend to believe that others are more susceptible to fake news than they are, but they do not want fake news censored. Yang and Horning (2020) propose people oppose governmental censorship for a variety of reasons, including a free press or not having a clear understanding of what fake news is (7).

Consistent with previous research, the Third-Person Effect occurs when users interact with information about health information (Stavrositu and Kim 2014), pandemic flu (not COVID-19) (Lee and Park 2016), and COVID-19 on social media (Yang and Tian 2021). Stavrositu and Kim (2014) found typical results when they showed participants information about cancer that had low metrics (few shares and likes); people believed others would be more influenced than the participants, but when the metrics were high (lots of shares and likes) the Third-Person Effect was not significant, suggesting that likes and shares are perceived to influence both the self and others (65). Lee and Park (2016) used an experimental design to examine participants' responses to cable news stories about the H1N1 flu, controlling for the story's presentation of the severity of the pandemic, how able participants were to prevent the illness (efficacy), and the credibility of the source. Their results showed typical Third-Person Effect findings, in that participants believed others would be more affected by the messages than they were. The Third-Person Effect was related to the participants' willingness to be vaccinated; the greater the Third-Person Effect, the less likely they were to consider getting vaccinated against the H1N1 influenza virus. When the virus was perceived as severe and there were effective ways to control its spread, the message

from the media was perceived as having more effect on the self. Yang and Tian (2021) have found, as did Corbu et al. (2020), that participants believe their friends and family are susceptible to fake news about COVID-19, but that those that are socially more distant are even more susceptible to fake news and that the fake news would change both their thoughts and behaviors.

Fighting Misinformation on Social Media

Misinformation is rife on social media, especially in the context of the COVID-19 pandemic. Some scholars have researched the best ways to combat misinformation and found mixed results. Pennycook et al. (2020) found that a "nudge" toward accuracy or truth by reminding them to think about accuracy led to less willingness to share false headlines, while replication of the study by Roozenbeek, Freeman, and van der Linden (2021) found a much smaller effect. Roozenbeek, Freeman, and van der Linden (2021) almost doubled their sample size for their second round of data collection because their first round of data collection showed no effect from a "nudge" toward the truth (1174). When people are like those they follow or interact with on social media (homophily), they are less likely to fact-check what others are posting; "users were more careful by fact checking COVID-19 related news on [social media] when they were in less homophilous [social media] environments and generally aware of the circulation of COVID-19 fake news on [social media]" (Schuetz, Sykes, and Venkatesh 2021, 382).

Perceptions of Ethics in Social Media

Since social media became a major force in people's lives, the key ethical issues that scholars have studied have dealt with issues where individual users affect other individuals most directly, like cyberbullying, trolling, and stalking (Swenson-Lepper and Kerby 2019). Social media users also consider privacy a significant concern, but often they are concerned about how organizations with which they are affiliated might use their data, either their university or their workplace (Drouin et al. 2015, O'Connor, Schmidt, and Drouin 2016). Since the publication of our article in 2019 (Swenson-Lepper and Kerby 2019), little quantitative work has been done on social media users' perceptions of ethical issues in social media use; a search of the EBSCO databases for the term "social media" and "ethics" or "normativity" in scholarly articles found very few new articles have been published in recent years. The articles we found are discussed below.

Current research in ethics and social media tends to fall into multiple categories; research on professional standards and discussion of ethical standards for using social media as a research tool is among the most discussed. For

instance, articles have been written about how nurses (Grace 2021), therapists (Wu and Sonne 2021), social workers (Cartwright 2017), and meteorologists (Mulvey, Deleon, and Sowder 2020) use or should use social media. Scholars are also concerned with using social media as a research tool and have worked to create ethical guidelines for research in a variety of fields, including public health (Hunter et al. 2018), human subjects research (Hokke et al. 2020), and bioethics (Rattani and Johns 2017).

A small amount of research has been conducted specifically on how users view the ethicality of behavior on social media. For instance, a study of nurses used hypothetical cases to examine nurses' evaluations of "ethical violations to hypothetical case studies involving social media use" (Demiray et al. 2020, 84). They found that more highly educated nurses were more able to perceive ethical issues in some of the cases with which they were presented. Michaelidou and Micevski (2019) examined consumers' perceptions of the use of social media analytics by organizations and found that consumers are less concerned about ethical issues like privacy when they perceive the organization to be trustworthy. Berriman and Thomson (2015) did in-depth interviews with nine teenagers to examine their views of how they manage ethical issues they face online and found that the teens are concerned about risking privacy and experiencing trolling, among other issues. Bagdasaraov et al. (2017) found that undergraduate students with more exposure to ethical issues in social media were more likely to be able to identify ethical issues in the scenarios about social media in a survey, even when the original ethical issues participants were exposed to were not identified. They posit "that ethical norms, though not described in our scale or probed about directly, may have driven participants to connect the themes and transfer to the scenarios presented in our study" (557). Thus, most current studies have not asked participants to identify ethical issues in social media, but instead have placed ethical issues identified by the researchers in front of participants.

Research Questions

Based on our previous research about communication ethics and social media (Swenson-Lepper 2011, Swenson-Lepper, and Kerby 2019), we wanted to know what people believe to be the greatest ethical issues or most unethical social media posts related to the COVID-19 virus, vaccines, and masking on social media. Some of these issues are likely tied to freedom of speech (Ardèvol-Abreu, Delponti, and Rodríguez-Wangüemert 2020) and misinformation or fake news itself (Germani and Biller-Andorno 2021).

RQ1a: What do participants believe to be the greatest ethical issue related to the COVID-19 virus, vaccine, or masking on social media?

RQ1b: What do participants believe are the most unethical ways that they have seen social media used related to the COVID-19 virus, vaccine, or masking?

While scholars have found that some people share misinformation because they are altruistic (Apukea and Omara 2021) or because they do not closely check sources (Ardèvol-Abreu, Delponti and Rodríguez-Wangüemert 2020), we wanted to know whether people will acknowledge that they have shared false information. Based on research about the Third-Person Effect (Ştefăniţă, Corbu and Buturoiu 2018), we thought that respondents might believe that their friends and family have shared false information about COVID-related topics. This leads to two research questions and a hypothesis.

RQ2a: Do participants believe that they have shared false information about the COVID-19 virus, vaccine, or masking?

RQ2b: Do participants believe that they or their friends and family have shared false information about the COVID-19 virus, vaccine, or masking?

H1: Based on the Third-Person Effect, participants will believe that their friends and family members have shared more false information about the COVID-19 virus, vaccine, or masking than they have.

In general, recent research shows that conservatives are more likely than liberals to believe and thus share fake news or misinformation about issues related to COVID-19 (Calvillo et al. 2020; Lawson and Kakkar 2021). On the other hand, since Republicans and Democrats tend to view each other as distant others, the Third-Person Effect would suggest that they will not perceive they have shared misinformation. (Jang and Kim 2018). This information leads to the following research question:

RQ3: Who is more likely to believe that they have shared false information about the COVID-19 virus, vaccine, or masking, Republicans or Democrats?

Third-Person Effect (Ştefăniţă, Corbu and Buturoiu 2018) would suggest that most people will believe that others have shared more misinformation/ fake news about issues related to COVID-19, though they will see their friends and family in a better light than distant others, so there may not be a difference between how they perceive themselves and how they perceive their friends and family. This study only examines their views of friends and family, not distant others.

RQ4: Do participants believe that they or their friends and family members have been verbally attacked in the comments when they state their beliefs about the COVID-19 virus, vaccine, or masking?

Some research has suggested that when people are in social media environments where they are exposed to more diverse ideas, they are more likely to check facts (Schuetz, Sykes and Venkatesh 2021). On the other hand, other researchers have found that most people use social media within an echo chamber (Germani and Biller-Andorno 2021; Westerwick, Johnson and Knobloch-Westerwick 2017), where most people share the same beliefs. Given this information, we propose the following research questions:

RQ5a: How well do participants believe they evaluate their sources before sharing information about the COVID-19 virus, vaccine, or masking?

RQ5b: What perceptions do participants have for their own sharing of information or disbelieving of shared information?

The popular press has provided a lot of news about conflict between family members about their responses to the COVID-19 virus, vaccine, and masking policies. For instance, Wolf (Wolf 2021) reported that readers of *The New York Times* have had family relationships torn apart because of disagreements about what the best (most ethical) way is to behave during the global pandemic. Since many family members are seeing each other's beliefs play out on social media, we asked the following research question:

RQ6: Do participants perceive that their own or their family and friends' postings about COVID-19 have affected the participants' perceptions of their friends and family?

Twitter has been called out specifically in scholarly research as a significant source of misinformation (Germani and Biller-Andorno 2021), as have Facebook (Bruns, Harrington and Hurcombe 2020) and YouTube (Stecula and Pickup 2021). Instead of directly looking at the fake news and misinformation promulgated on social media platforms, we wanted to know which platforms users believed were more likely to be the source of shared misinformation or fake news.

RQ7: What platform do participants believe is the greatest source of misinformation about the COVID-19 virus, vaccine, or masking?

METHODS

Participants

We used a convenience sample of respondents who received access to the survey from posts to social media platforms, requests via email to faculty, and

through a posting to an emailed newsletter sponsored by the National Communication Association. The majority of the participants who reported demographics were female (67%, N = 133), 32 percent (N = 64) were male, and 1.5 percent (N = 3) were gender nonconforming or preferred not to say. The vast majority of participants reported their race as white (82.8%, N = 173), with 11 (5.2%) reporting they were African American, 6 (2.9%) as Asian, 5 (2.4%) as other, 8 (3.8%) as Hispanic or Latino, 1 (.05%) as American Indian, Native American or Alaskan Native, and 5 (2.4%) who preferred not to disclose.

The age range of the participants was 18–73, with the majority of participants being in the 18–23-year-old age group (N = 101, 55.4%). This age range is likely the most common because the vast majority of the participants in the study were students (N = 236, 80.1%) and many students had the opportunity to earn extra credit if they participated in the study. In the student group (N = 143), 29 (20.3 percent) reported they were first year students, 4.4 percent (N = 14.7) reported they were sophomores, 16.1 percent (N = 23) were juniors, 35.7 percent were seniors (N = 51), 10.5 percent (N = 15) were M.A. students, and 2.8 percent (N = 4) were PhD students. Of the nonstudent population (N = 55), 5.5 percent (N = 3) reported some college credits, but no degree, 34.4 percent (N = 19) reported a bachelor's degree, 24.4 percent (N = 15) noted a master's degree, and 29.1 percent (16) reported they had doctoral degree.

Half (50.1%, N = 220) of participants reported that they had used social media for ten or more years, with 36.2 percent (N = 159) reporting they had used it for six to nine years. Only 13.7 percent (N = 60) reported using it for five or fewer years.

Measures

For the current study, we updated a survey first created by Swenson-Lepper (2011) to examine student perceptions of ethical issues in the use of Facebook and updated in 2019 (Swenson-Lepper and Kerby 2019) to examine communication ethics in a wider variety of social media platforms. Consistent with the previous two surveys, the survey asked for participants to identify how long they have used social media in general, the social media platforms they use and how often they use them, along with basic demographic information. The updated survey asked open-ended questions about the biggest ethical issue they notice related to COVID-19, the vaccine for COVID-19, and masks on social media, along with what they perceived to be the most unethical ways that they've seen social media used in relationship to COVID-19 issues. The survey also asked Likert-type questions about whether they had accidentally shared or believed misinformation about COVID-19, masking, or vaccinations. For instance, one item is "I have believed something about COVID-19 on social media that I believed to be true, but later learned was false" (rated strongly disagree to strongly agree). Further questions asked whether they have felt attacked for sharing opinions about COVID-19, mask wearing, or vaccinations, along with asking them how much they check their sources. Finally, the survey asked participants to identify their political affiliation in order to examine whether there was a relationship between the types of ethical issues they noticed and their political perspective. The complete survey is in the appendix.

Procedure

The Winona State University Institutional Review Board (IRB) approved the Qualtrics survey and research method, and we shared the survey using IRB-approved messages on COMMNotes (the daily message system of the National Communication Association), via email with colleagues at Winona State University and at other universities, and on a wide variety of social media platforms, including Facebook, Instagram, and LinkedIn. After clicking on the link, participants saw a description of the study and they were asked to agree to participate, with their agreement to participate serving as their consent. The median time it took for participants to complete the survey was 19.35 minutes, which means it was a lengthy survey. At the end of the survey participants were asked if they were university students. If they were students in participating classes, they could click on a link at the end to go to a separate survey to identify themselves, their course, and their professor in order to receive extra credit. Nonstudent participants were thanked for their participation and the survey ended.

RESULTS AND DISCUSSION

RQ1a: What do participants believe to be the greatest ethical issue related to the COVID-19 virus, vaccine, or masking on social media?

The primary ethical issues that participants mentioned were misinformation, freedom of speech and other rights, lack of tolerance, politicizing COVID-19, and the rights of the individual versus the needs of the community. Participants were concerned about the spread of misinformation on social media platforms. They talked about this in a variety of ways, but the following are representative quotes:

- *I think the spreading of misinformation is a huge social media issue and it leads to more conflicts between people.*

- *I think the biggest ethical issue is spreading things related to covid (sic) that they have not confirmed true or untrue. It is an issue because too many people use social media as their main source of information.*
- *The biggest misconceptions I have seen pertaining to the vaccine and its relation to the government. I have seen a lot of conspiracies about the government putting harmful chemicals into the vaccine, people saying the vaccine doesn't work at all, or that it causes infertility when there is no evidence to support those claims. I have also seen the controversy between vaccinating young kids and not. I think these are ethical dilemmas as it causes a lot of arguments on social media and in the public. Especially when fear is introduced, people are influenced heavily by their fears.*

People often reference rights or freedom of speech when talking about the COVID-19 vaccine and masking. Some refer to the First Amendment right of freedom of religion, or freedom of speech.

- *Infringing on rights that are covered by the bill of rights (sic). I think there are some things like masks that can and should be enforced. Vaccines on the other hand may blatantly violate religious rights which is protected by the first amendment (all capitalization and punctuation are as they were in the original response).*

People view tolerance or the lack thereof in different ways when thinking about COVID-19, the vaccines, and masking.

- *The biggest ethical issue I have noticed regarding COVID on social media is the intolerance of other opinions and beliefs. Certain narratives have been pushed that those who get the vaccine are ignorant, scared, or brainwashed. Certain narratives have been pushed that those who do not get the vaccine are ignorant, selfish, or entitled.*
- *Many people [assume] their view is the correct and ethical one, allowing for no possibility that others may have good points, too, or that they may be wrong about some of the data they believe they have interpreted correctly.*

The politicizing of COVID-19 and other pandemic-related issues was the key ethical issue discussed by many participants.

- *That Covid-19 in the United States was ever political. It is public health information for a global pandemic—we the people should only be getting information from health experts in the related fields and our government should support our scientists.*

- *The biggest ethical issue is the interest of politics that go along with this virus. There's very obviously two sides that take two different stances on this topic, but it's terrible that these two opinions have very different consequences concerning the virus.*

Some participants noted that there was tension between those who want to protect the community and those who are focused on individual freedoms.

- *I think the biggest ethical issue is the value of health for oneself and others. To many, wearing a mask symbolizes the value of personal health and community health. To others, not wearing a mask symbolizes Americanness and exercising the freedoms of the government. Either way, social media magnifies these two stances because one instance or confrontation with mask-wearing policies can spread like wildfire to those who were never there.*
- *I think it's the question of individual versus community and which should we help? One, both, or neither?*

Another statement, which does not fit the categories of most of the themes, is particularly relevant when talking about communication ethics:

- *The biggest ethical issue is the misunderstood belief that there is nothing more important than an individual's self-defined concept of Personal Freedom (sic), to the extent that there are no consequences for doing ANYTHING wrong, and that my personal freedoms are more important than the health and well-being of any other person.*

RQ1b: What do participants believe are the most unethical ways that they have seen social media used related to the COVID-19 virus, vaccine, or masking?

While many of the responses to this question are similar to the responses found for Research Question 1a, there are some differences worth noting. The key difference is that participants named former president Donald Trump as someone who acted unethically on social media related to the COVID-19 pandemic and focused on the role organized religion played in sharing misinformation. See below for representative quotes.

- *Trump tweets for sure. Any politician using their audience and platform to misinform.*
- *Trump and others like him who have outright denied what scientists and other experts say and who push for others to call names and incited violence on people who disagree with them.*

- *Spreading misinformation is the most obvious answer. But I would also say using it to shame or fame people for wearing masks and getting vaccinated. Trump telling people to drink bleach to get rid of symptoms or expressing that covid isn't that bad is a good example.*
- *Political trumpers (sic) who spread inaccurate vaccine information and risk, while they themselves are getting vaccinated.*

Another area of difference are responses that point out different religious organizations' culpability as sources of misinformation. One person noted:

- *The weaponization of organized religion against vaccination status. Recently, my aunt read posts from an anti-vax Facebook page to me that proclaimed that those who did not "get the jab" were "following God's will" and were part of the "pure blood" race. The posts continued with anti-vaccination rhetoric, based on Christianity, which is incredibly unethical.*
- *To me the most unethical way that social media has been used to misinform people about COVID-19, is the way the religious sectors place fear in their parishioners out of the hope that religion will sway then (sic) to believe the pandemic is a hoax, was created by democrats (sic) or in the ways that religious leaders have swayed people to not get vaccinated.*

RQ2a: Do participants believe that they have believed false information about the COVID-19 virus, vaccine, or masking?

More respondents believe that they have shared information they initially thought was true about COVID-19 (43.4% either strongly or somewhat agreed) but later learned was false than believed that they had done so for either the vaccines for COVID-19 (33.9% either strongly agreed or somewhat agreed) or masking (33.1% either strongly agreed or agreed). In general, participants tend to strongly or somewhat disagree that they have believed misinformation related to the coronavirus (44.3%), the vaccines to prevent COVID-19 (53.1%), and masking (52.4%).

RQ2b: Do participants believe that they or or their friends and family have shared false information about the COVID-19 virus, vaccine, or masking?

Less than 5 percent of respondents strongly or somewhat agreed with statements that they have unintentionally shared fake news or misinformation about the COVID-19 virus, the COVID-19 vaccines, or masking. On the other hand, 61.7 percent (N = 176) strongly or somewhat agreed that

their family or friends have shared fake news or misinformation about the COVID-19 virus and COVID-19 vaccines on social media, and 57.5 percent (N = 168) strongly or somewhat agreed that their friends and family have shared misinformation about masking as a preventative strategy against COVID-19.

H1: Based on the Third-Person Effect, participants will believe that their friends and family members have shared more false information about the COVID-19 virus, vaccine, or masking than they have.

The results for a one-tailed t-test were significant (t=(290) -21.03, p <.001), indicating that respondents believed that their friends and family members were more likely to share false information than they were.

Research questions 2a and 2b and Hypothesis 1 focused on whether participants believe they or their friends and family have shared false information about the COVID-19 virus, the COVID-19 vaccines, or masking. As the Third-Person Effect (Corbu et al. 2020, Ştefăniţă, Corbu and Buturoiu 2018) would suggest, most people believe that they are less likely to have shared fake news or misinformation than their friends or family members. But, as demonstrated by the descriptive statistics in RQ2a, many people are willing to admit that they may have accidentally shared information they later learned was false. Additionally, when participants responded to the item about the most unethical ways that they have seen social media used, many of them cited "Donald Trump" or his followers. This is consistent with what Evanega et al. (2020) note from their quantitative study of misinformation, where they write "the President of the United States was likely the largest driver of the COVID-19 misinformation 'infodemic'" (4).

RQ3: Who is more likely to believe that they have shared false information about the COVID-19 virus, vaccine, or masking, Republicans or Democrats?

There was no significant difference between Republicans and Democrats in their self-reporting of sharing fake news about COVID (t(165) = -.67, p = .503). Consistent with the Third-Person Effect, the results of RQ3 found Republicans and Democrats showed no difference in their self-reported sharing of fake news or misinformation. Recent research has shown, however, that the most conservative posters are the most likely to share misinformation (Hopp, Ferrucci, and Vargo 2020).

RQ4: Do participants believe that they and their friends and family members have been verbally attacked in the comments when they state their beliefs about the COVID-19 virus, vaccine, or masking?

About a quarter of participants (26.7%) either strongly agree (N = 30) or agree (N = 47) that they have been attacked for posting their beliefs about COVID-19 on social media, but approximately two-thirds (N = 185, 64.0%) either strongly agree or agree that they have witnessed verbal attacks on their friends or families for posting their views about COVID-19. The same holds true for their perceptions of whether they have been attacked (N = 74, 25.7%) for opinions about mask wearing versus whether their friends and family have been attacked (N = 176, 60.9%) and whether they have been attacked for stating their opinions about COVID-19 vaccinations (N = 73, 25.3%) versus whether their friends and family have been verbally attacked (N = 94, 59.7%). Additionally, the majority of participants (N = 185, 64.2%) agree that they have refrained from sharing information related to COVID-19, masking, or vaccines on social media because they feared a negative response from others on social media.

Third-Person Effect would suggest that most people will believe that others have shared more misinformation/fake news about issues related to COVID-19, though they will see their friends and family in a better light than distant others, so there may not be a difference between how they perceive themselves and how they perceive their friends and family. This study only examines their views of friends and family, not distant others.

RQ5a: How well do participants believe they evaluate their sources before sharing information about the COVID-19 virus, vaccine, or masking?

In response to the statement, "If a social media post related to COVID-19 provides sources, I research the sources to ensure their validity," 65.4 percent of respondents either strongly agree (N = 84, 29.4%) or somewhat agree (N = 103, 36.0%) general, participants believe that they research the sources cited on social media. Additionally, the majority (83.9%) of respondents either strongly (N = 156, 54.5%) or somewhat agreed (N = 84, 29.4%) with the statement "I question shared information on social media regarding COVID-19 rather than immediately taking it as face value."

RQ5b: What perceptions do participants have of their own sharing of information or disbelieving of shared information?

Most respondents denied posting information about COVID-19 on social media because their peers or family members posted that information (N = 178, 62%) either strongly or somewhat disagreed), and 81 percent (N = 233) strongly or somewhat disagreed with the statement that they had shared information they didn't agree with because many of their peers or family members had posted the same information. Most (N = 165, 57%) also

strongly or somewhat disagreed with this statement: "When information on social media related to COVID-19 does not align with my previous views about COVID-19, I assume it is unimportant or incorrect." Nearly 20 percent (18.8%) somewhat or strongly agreed that they would reshare information that was aesthetically pleasing, though 41 percent strongly disagreed with this statement.

RQ6: Do participants perceive that their own or their family and friends' postings about COVID-19 have affected their perceptions of their friends and family?

About 30 percent of participants (N = 85) either strongly or somewhat agreed that their social media posts about COVID-19 have caused conflict with their family members or friends, while 62 percent (N = 179) either agreed or strongly agreed that postings by friends or family members have caused negative feelings for them. Respondents were much less likely to believe their own posts had caused conflict, compared to the posts of their family and friends (t = (287) –12.02, p <.001). While this may have happened because respondents are comparing themselves (one person) to their network (many people with many opportunities to post offensive posts), another explanation for this difference is Third-Person Effect.

Consistent with the Third-Person Effect, the results for research questions five and six showed that almost half of participants believe that their friends and family members have been attacked for posting information about COVID-related issues, but only 30 percent believe that this is true for themselves. This result may occur because participants have opinionated family and friends, or because their networks on social media give them more opportunities to see examples of this behavior. The most interesting finding to come from RQ5b is that almost 20 percent of participants believed that they would reshare information based on its appearance. This is in contrast with the 85 percent who believe that they question shared information.

While we were unable to find scholarly sources about the effects of social media postings about COVID-related issues on family relationships, the popular press (Wolf 2021) has provided examples of this, and this was also supported by our results, where more than a third believed that their own social media posts have caused conflicts with family and friends, and approximately two-thirds of participants believe they have negative feelings toward family and friends because of their postings. This finding shows the relational toll that the pandemic has taken on relationships.

RQ7: What platform do participants believe is the greatest source of misinformation about the COVID-19 virus, vaccine, or masking?

Overall, respondents view Facebook as the social media platform most likely to be a source of misinformation about issues related to COVID-19. Over two-thirds of participants ranked it the number one source of misinformation, while 20 percent ranked it as the second greatest source of information (see table 3.1). Surprisingly, and in contrast to Stecula and Pickup (2021), participants rated YouTube as the second lowest source of misinformation, with Snapchat ranked the lowest source of misinformation by almost all respondents. However, these results are similar to those found by Newman et al. (2021), where they found that in the U.S. Facebook was the greatest platform of concern for misinformation, followed by Twitter, and then YouTube. Their survey did not ask participants about TikTok, Instagram, or Snapchat, but did include WhatsApp, which is not used as widely used in the United States as it is in the rest of the world.

Table 3.1 Social Platforms Ranked by Participants as Sources of Misinformation

Platform	N	*Rated Greatest Source of Misinformation (%)*	N	*Rated Second Greatest Source of Misinformation (%)*
Facebook	174	66.9	51	19.6
Twitter	29	11.2	68	26.2
TikTok	26	10.0	43	16.5
Instagram	19	7.3	52	20.0
YouTube	10	3.8	29	11.2
Snapchat	2	0.8	17	6.5

CONCLUSION

Strengths and Weaknesses

The study has significant challenges in terms of its sample; a better sample would be randomly selected from the entire U.S. population and represent all demographic groups. Additionally, our sample consists primarily of college students, who tend to live and work with people like them, amplifying the echo chamber of social media (Germani and Biller-Andorno 2021, Westerwick, Johnson, and Knobloch-Westerwick 2017). Additionally, the survey was probably too long, with the average person completing the survey taking roughly twenty minutes; a considerable number of people started the survey but stopped prior to answering the open-ended questions near the beginning of the survey. Being able to compensate participants would have made it more likely that people would have completed all components of the survey. Another weakness is that we conducted this survey almost two years into

the pandemic, during the Omicron wave, when people were cynical about whether the pandemic would end and about the effectiveness of vaccines and masking.

On the other hand, one of the major strengths of this study is that it asks people directly what they believe are the most important ethical issues related to social media and the COVID-19 virus, the vaccines, and masking. As in our previous work (Swenson-Lepper 2011, Swenson-Lepper and Kerby 2019), we believe it is important that the voices of average Americans be heard. Additionally, the open-ended questions provided in-depth insight into the perspectives people have about ethical issues related to the pandemic. Responses show that there is a deep division between people; they believe their rights are threatened or that others are unethical because they are not putting the community first. They also believe misinformation is widespread and that high-quality information is hard to come by. Respondents seem to believe that if enough voices are heard, the truth will rise to the top. They also believe that certain voices have been unethical during the pandemic, including Donald Trump and religious leaders, among others.

Directions for Future Research

One of the interesting findings from this research is the role aesthetics plays in some people's willingness to repost information on social media. Since the aesthetics of social media postings are valued by users, it may work in harmony with their ethical values or serve as a tension for ethical decision-making. Additionally, had we known the pandemic would stretch on so long, it would have been interesting to see how Americans' views of ethics and misinformation changed over time in relation to the COVID-19 virus, vaccines, and masking. More work also could have been done to examine political ideology and ethical perspectives in this context.

In sum, we examined U.S. residents' perceptions of misinformation and ethics in social media related to the COVID-19 pandemic, which has not been studied in the current literature. In an online survey, participants (N = 290) noted their perceptions on the ethics of posting about COVID-19, masking, and the COVID-19 vaccines. They were also asked open-ended questions about their perspectives on misinformation and fake news as they relate to COVID-19, masking, and vaccines. Consistent with the main ideas of the Third-Person Effect, most people believe their friends and family are more likely to share misinformation than they are. Participants believed that the most important ethical issues about social media and the pandemic were misinformation, freedom of speech and other civil rights, lack of tolerance, politicizing COVID-19, and the rights of the individual versus the needs of

the community. People hold widely varying views of their own and others' rights, which leads to ethical tensions that should be studied further.

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