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MASTER OF DEVELOPMENT COMMUNICATION

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**Social Media Users as the New Gatekeepers: Diffusion and Restriction of
COVID-19 Misinformation of Selected Facebook Users in Capas, Tarlac**

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20 July 2022

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ACCEPTANCE

This Thesis titled 'Social Media Users as the New Gatekeepers: Diffusion and Restriction of COVID-19 Misinformation of Selected Facebook Users in Capas, Tarlac' is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the degree Master of Development Communication (MDC).

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BIOGRAPHICAL SKETCH

Erwin Siron, born on January 5, 1995, is a social media producer at ABS-CBN. He received his BA in Communication from Tarlac State University. His exposure and training in digital media led him to be interested in researching the impacts of social media and information disorders in society.

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DEDICATION

Pro Veritate

ABSTRACT

This research explores the emerging gatekeeping roles of social media users, particularly on Facebook, and their influence on the information flow and spread of COVID-19 misinformation on the platform. Underpinned by the Network Gatekeeping Theory, data were gathered from October to December 2021 through an online survey of 76 Facebook users who are Top Fans of the Capas Information Office page. Data were analyzed using descriptive statistics and rank-biserial and Spearman's rank-order correlations to test the association between the gatekeepers' characteristics and their gatekeeping activities.

Results show that the participants are not just consumers of the information they receive from posters through Facebook features but are also information controllers. Though armed with verification methods, they are exposed to COVID-19 misinformation through the Facebook newsfeed and pages, mainly from public figures and friends. Subsequently, they restrict the entry of misinformation into their network by cutting off their connection to the source (withholding) and ignoring the content (disregarding). However, the users sometimes participate in spreading misinformation by incorporating a response to the post using Facebook reactions (integration), exposing their gated network to false information. In addition, whether restricting or diffusing COVID-19 misinformation, the respondents tend to choose information control activities requiring less effort. Moreover, the research only found very weak to weak associations between the gatekeepers' characteristics and the gatekeeping activities they use. Finally, recommendations to address the emerging roles of users as gatekeepers and a typology of the characteristics of gatekeeping activities on legacy media and social media are proposed.

Keywords: Health communication, information and communication technology, network gatekeeping, fake news, spread and diffusion of misinformation, Gen Z

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Chapter 1

INTRODUCTION

Rationale and Background

With 4.2 billion active users worldwide (Kemp, 2021a), social media¹ has become part of the everyday discourse. It has created a new stream of communication, becoming a fundamental source of news and information (Radcliffe, 2021). However, social media is not a pristine stream: it is vulnerable to information disorders like misinformation. Scholars even argue that these platforms amplify the narratives of information disorders (Törnberg, 2018; Vosoughi et al., 2018).

Social media's features ironically render it to be, at times, a source of misinformation, disinformation, news distortion, and manipulation. This may be due to the Web 2.0 and 'User Generated Content' (UGC) aspects of social media that allow consumers of information to be its producers, giving a voice to their stories in the online space. As a participatory platform, social media has elevated the consumer of information as the producer of content (Kaplan & Haenlein, 2010), placing people's narratives online (Johnson, 2018; Mazali, 2011).

Social media users actively engage in information production, information seeking, information transmission, information gatekeeping, and information consumption in the new digital environment; hence, at some point, they may produce, interact with, or share a piece of misinformation. Scholars point out that

¹ Social media is "a group of Internet-based applications that builds on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010, p.61).

social media platforms augment the narratives of information disorders (Törnberg, 2018; Vosoughi et al., 2018) and that users play a role in diffusing false information (Buchanan & Benson, 2019; Chen et al., 2015; Sterrett et al., 2019; Tandoc et al., 2019); and this is because the user is a central component of social media (Kaplan & Haenlein, 2010). Furthermore, false information can spread within their networks fast (Törnberg, 2018; Vosoughi et al., 2018).

Thus, in recent years, scholars have identified the emerging changes in information flow in social media through the lens of gatekeeping. For example, Mehrotra (2017) contends that social media platforms like Facebook are the new gatekeepers because of the dynamics and algorithms embedded in each platform. In contrast, Singer (2013) and Shoemaker & Vos (2009) point to the power the audience holds to gatekeep information online, and they argued that the participatory nature of the Internet makes the audience secondary gatekeepers.

The arrival of the Internet and social media not only democratized the role of gatekeepers but also introduced changes to the gatekeeping theory itself. Karine Barzilai-Nahon, in 2008, developed the network gatekeeping theory (NGT) that is interdisciplinary and adapted to new media technologies (Deluliis, 2015). According to Barzilai-Nahon (2008), gatekeeping is not just information selection but an exercise of information control, and the process happens at the macro level, like government and industry performing the roles of gatekeepers, as well as in the micro level, where individuals apply information control.

Users of social media partake in the gatekeeping process by deciding what to do with the information received (Deluliis, 2015; Shoemaker & Vos, 2009); they could extend or limit the reach of the post using social media actions (Buchanan & Benson, 2019), a process COVID-19 misinformation could also be subjected to when it enters social networks. This new angle requires a new theoretical lens adapted for the information environment of social networks like Facebook.

The COVID-19 Infodemic in the Philippines

The coronavirus disease 2019 (COVID-19), which first appeared in Wuhan, China, was declared by the World Health Organization (WHO) as a pandemic² on March 11, 2020 (Ducharme, 2020).

In light of the pandemic, the study of communication through social media has become crucial because health information and updates are now delivered also through different social media platforms. These platforms are indispensable tools in disseminating information about the pandemic (Tsao et al., 2021).

Moreover, the use of technology and social media allowed for the fast transmission of information about the pandemic, but it also magnified the effect of an infodemic or the saturation of unfiltered information online (WHO, 2020). In addition, critical information about COVID-19 also co-exists with misinformation in the guise of truth within the platforms (Brennen et al., 2020). Adding to this problem is the potential of social media to amplify misinformation (Acevedo, 2020; Cinelli et al.,

² The World Health Organization (WHO, 2010, par. 1) defines a pandemic as the “worldwide spread of a new disease.”

2020; Tandoc et al., 2019; Tuazon et al., 2020; Vosoughi et al., 2018; Zarocostas, 2020).

In essence, the infodemic is not just an information overload problem because information disorders like misinformation and disinformation co-exist with verified information within social media platforms in various forms (Brennen et al., 2020). Larson (2018, par. 3) even called this a “global public health threat.”

Threat because exposure to COVID-19 misinformation on social media might endanger the health and safety of users (Lee et al., 2020). And this will have an impact in a country such as the Philippines because of the widespread use of social media in general and the rise of different platforms as sources of news (Chua, 2021). Kemp (2021b) pointed out that Facebook is the most used social media platform in the Philippines with 83 million potential audience. In addition, Chua’s (2021) survey revealed that Facebook (73%) and Facebook Messenger (36%) are among the top platforms that Filipinos consider as sources of news. Also, Filipinos are much exposed to the threat of infodemic because of the lack of a comprehensive framework to fight misinformation (Dela Cruz, 2021). In fact, the Philippines is the seventh country worldwide and the first in Asia where false information spread is high (Macaraeg, 2020).

While there have been efforts of different international and national agencies to curb the global misinformation epidemic, including the social media platforms

themselves³, a large amount of misinformation is still circulating in social media platforms (Brennen et al., 2020).

Of all the communication phenomena in which social media and its users' gatekeeping function may be most applicable is the COVID-19 pandemic. First of all, misinformation about the pandemic could come in different forms and from different sources (Brennen et al., 2020). This research focuses on social media features (e.g., Facebook pages, groups, and messenger) and communication actors (e.g., personalities, family, or friends) who attempt to transmit misinformation to the gates of users. Second, users encounter different COVID-19 misinformation narratives, and they have different strategies in identifying these information disorders. And third, users engage in the gatekeeping process by deciding what to do with the information they receive from the sources (Deluliis, 2015; Shoemaker & Vos, 2009). As gatekeepers, they could engage in the "selection, addition, withholding, display, channeling, shaping, manipulation, repetition, timing, localization, integration, disregard, and deletion of information" (Barzilai-Nahon, 2008, p. 1496). Doing these different gatekeeping processes can influence the movement of COVID-19 misinformation in the network.

Hence, there is a need to consider all these new changes brought by social media and frame the research within the network gatekeeping theory conjectured by Barzilai-Nahon (2008) and conceptualized for social media by Deluliis (2015).

³ WHO created an information platform and partnered with social media companies (Zarocostas, 2020). In the Philippines, the Department of Health (DOH, 2020) instituted the *DOH Emergency Operation Center* (DOH EOC) for COVID-19 information and updates. Social media platforms Facebook, Twitter, TikTok, and YouTube, also made measures to check content and update policies (Singh & Bagchi, 2020).

Statement of the Problem

This study explores the emerging gatekeeping role of social media users - receiving, controlling (gatekeeping), and diffusing mis(information) in the online platform Facebook.

Specifically, study aims to answer the following questions:

1. What are the characteristics of the participants of the study in terms of a) some socio-demographic profile, and b) social media use (Facebook)?
2. Who are the communication actors that act as posters or sources of COVID-19 misinformation on Facebook?
3. What Facebook features do posters use to transmit COVID-19 misinformation to the platform's users?
4. What are the COVID-19 misinformation narratives that social media users receive on Facebook?
 - 4.1. What are the COVID-19 misinformation themes that attempt to enter the gates of Facebook users?
 - 4.2. How do Facebook users as individual network gatekeepers identify misinformation?
5. How do some Facebook users as gatekeepers influence the flow of COVID-19 misinformation?
 - 5.1. What are the gatekeeping activities employed by Facebook users that restrict the flow of COVID-19 misinformation?
 - 5.2. What are the gatekeeping activities employed by Facebook users that diffuse COVID-19 misinformation within the network?

6. Who comprises the gated network of the gatekeepers who see the interactions from the diffusing gatekeeping activities?
7. How are the characteristics of the participants as gatekeepers associated with the gatekeeping activities they employ on COVID-19 misinformation?

Objectives of the Study

The general objective of the study is to explore the emerging gatekeeping role of social media users - receiving, controlling (gatekeeping), and diffusing mis(information) in the online platform Facebook.

Specifically, it aims to:

1. Describe the characteristics of the participants of the study in terms of a) some socio-demographic profile, and b) social media use (Facebook);
2. Identify the communication actors that act as posters or sources of COVID-19 misinformation on Facebook;
3. Determine the Facebook features that serve as channels of COVID-19 misinformation on the social media platform;
4. Discuss the COVID-19 misinformation narratives that social media users receive on Facebook in terms of:
 - 4.1. The COVID-19 misinformation themes that attempt to enter the gates of Facebook users.
 - 4.2. The verification methods employed by the users to check for COVID-19 misinformation.
5. Discuss the gatekeeping activities employed by Facebook users in their networks that can restrict or diffuse COVID-19 misinformation, such as:

- 5.1. restricting gatekeeping activities (disregarding, deletion, channeling, and withholding)
- 5.2. diffusing gatekeeping activities (manipulation, localization, integration, repetition, addition, and display)
6. Analyze who are the members of the gated network of the gatekeepers;
7. Analyze the relationship of the characteristics of gatekeepers and the gatekeeping activities they employ with COVID-19 misinformation within their network; and to
8. Develop a typology of networking characteristics of legacy and social media, distinguishing what constitutes the individual level of network gatekeeping on social networking sites.

Significance of the Study

Theoretical Contribution

This research reframes the study of gatekeeping in social media because, as mentioned earlier, the user is the central component of social media platforms (Mazali, 2011). Users play a role in the diffusion of misinformation in social media (Törnberg, 2018; Vosoughi et al., 2018) because of the Web 2.0 and UGC foundations of the platforms (Kaplan & Haenlein, 2010). They have the power to send and receive as well as create or control the content, which may lead to the diffusion of misinformation in the network.

Most past studies about misinformation on social media mostly focused on Twitter (Cinelli et al., 2020; Kolluri & Murthy, 2021; Törnberg, 2018; Vosoughi et al., 2018), and literature about the COVID-19 pandemic also reflected this trend, as

confirmed by the review of Tsao et al. (2021). This research focuses on misinformation on COVID-19 on Facebook, expanding the literature on the social networking site.

In addition, past studies on the diffusion of misinformation were framed using the uses and gratifications theory (Basilisco & Cha, 2015; Chen et al., 2015; Tandoc et al., 2019): hence, providing knowledge behind the users' motivation for their actions towards misinformation. This study takes on a different approach and uses the lens of network gatekeeping theory proposed by Karine Barzilai-Nahon (2008) and conceptualized for social media by Deluiliis (2015). This study takes into account the information control applied by Facebook users to COVID-19 misinformation as this could play a part in the discourse and formation of strategies on media and information literacy. In short, the study attempts to understand the users' roles as individual gatekeepers or information controllers of misinformation to their network to acquire a bigger picture of the movement of misinformation.

Moreover, the research examines the dispersal of COVID-19 misinformation through the identification of the gated network of the gatekeepers. The study likewise explores the relationship between the utilization of gatekeeping activities on COVID-19 misinformation and its subsequent effects on misinformation diffusion.

Understanding the role of social media users in receiving, gatekeeping, and diffusing misinformation could contribute to the larger discourse about information disorders on social media platforms.

Health Communication

This study also seeks to contribute to the understanding of the COVID-19 infodemic on Facebook. Lessons can be integrated in planning and implementing information campaigns for other pandemics or controversial health issues (e.g., Dengvaxia vaccine controversy).

Development Communication

The results could serve as a background to help in the development of comprehensive media and information literacy programs in communities. The research also answers the call of Quebral (2012) to expand research on digital media for development communication.

Hopefully, the study contributes to the body of knowledge of development communication as we progress towards becoming an information society (Flor, 2009).

Scope and Limitations of the Study

The prime interest of the research is to look at the flow of misinformation about the pandemic on Facebook. The researcher did not focus on the salience of the gated in relation to the gatekeepers in this study.

On the other hand, the researcher designated the role of gatekeepers in this study to the Top Fans of Capas Information Office Facebook page. These Top Fans were chosen because a) they are in the locale of the study, b) their high interaction with the contents of the page gives them the affordances to be exposed to verified

COVID-19 information, which they can use to identify false information about the pandemic, c) this high Facebook page activity aligns with the conceptualization of Deluiis (2015) of gatekeepers, and d) the list is publicly available. There may be other social media users who act as gatekeepers to their networks in the locale of the research whose perspectives and information control could not be captured by this study. Furthermore, participants in the study were gathered using convenience sampling; thus, the results cannot be generalized for the whole population.

Lastly, the research relies on self-reported data gathered through an online questionnaire. Respondents may have different perceptions of misinformation about COVID-19; thus, the research depended on the COVID-19 misinformation themes identified by the International Fact-Checking Network (IFCN) Coronavirus Alliance Database, summed up by Macaraeg (2020). These themes capture the COVID-19 misinformation narratives that the respondents encounter in their networks from an objective view of fact-checked misinformation about the pandemic worldwide.

Moreover, data collection and analysis were conducted during the pandemic. Therefore, further research might change the current understanding of COVID-19 and misinformation about the pandemic.

Chapter 2

REVIEW OF RELATED LITERATURE

It is crucial to survey past studies to understand better what misinformation is in social media and its subsequent effect on communication. The first section of this chapter tackles social media and its usage. The second section discusses the spreading COVID-19 infodemic online. Meanwhile, the third section covers the propagation of COVID-19 misinformation in social media platforms. On the other hand, the fourth section examines the history of gatekeeping and introduces the new gatekeepers, the social media users, while the fifth section presents studies that show the influence of these users in the movement of misinformation. Lastly, the sixth section looks at measures to control the spread of information disorders.

Moreover, this chapter contains the theoretical and conceptual frameworks, and the operational definition of terms of the study.

Social Media

Kaplan & Haenlein (2010) used theories of social presence and media richness with social processes of self-presentation and self-disclosure to divide social media platforms into six types: social networking sites, content communities, virtual social worlds, blogs, collaborative projects, and virtual game worlds. For example, Facebook, one of the largest social media channels, is a social networking site that allows its users to connect with other users and share information within the platform (Kaplan & Haenlein, 2010).

Social media's two defining characteristics are *Web 2.0* and *User Generated Content* or *UGC* (Kaplan & Haenlein, 2010). Social media is built on the principles and technology of Web 2.0 that allow the continuous and collaborative participation of users (O'Reilly, 2005), while UGCs could be considered as the output of users' collaboration. UGCs could be in the form of text, photos, images, music, audio, video, film, opinions, and advice (OECD, 2007). Consequently, the Web 2.0 and UGC aspects of social media allow information consumers to be its producers and give a voice to their narratives in the online space.

In an article by Mazali (2011), the researcher observed megaphone.net, an open-platform project based on Web 2.0, and found that marginalized members from different communities did not just use it to represent themselves and connect with other people within the platform, but it also became a channel to tell their stories. The paper forwarded that digital communities emanate from real communities, but their online counterpart strengthened and widened the reach of narratives.

From a sociological perspective, social media is a digital town square (Rudkowski, 2020) where people from different backgrounds can participate and collaborate to amplify the reach of their stories (Johnson, 2018).

In the Philippines, the advertising audience profile reveals that social media users mainly belong to the age groups 18-24 years old (31.7%), 25-34 years old (29.4%), and 35-44 years old (14.2%), while the average time spent on social media is four hours and 15 minutes. The largest platform in the country is Facebook, with 83 million potential audience, where 53% of these users are females (Kemp, 2021b).

In an article by Basilisco & Cha (2015), the researchers investigated Filipino Facebook users' motives in spending time on the social media platform within the uses and gratifications framework. Using an online survey questionnaire sent to Facebook users by the researchers through a messaging application, they gathered valid data from 243 respondents. The survey results indicated that the main reason the respondents used Facebook was to seek convenience from the platform's features. For the researchers, the capabilities and features of Facebook were meaningful for the survey respondents. On the other hand, information-seeking was the second motivation that drove users to access the social networking site. This is supported by the findings of Chua (2021), wherein Filipinos are considering Facebook (73%) and Facebook Messenger (36%) among their top sources of news. Basilisco & Cha (2015) suggested that the result could indicate that Filipinos are motivated to use Facebook for information exchange within their network.

Infodemic

The World Health Organization (WHO, 2010, par. 1) defined a *pandemic* as the “worldwide spread of a new disease.” The coronavirus disease 2019 (COVID-19), which first appeared in Wuhan, China, was declared by WHO as a pandemic on March 11, 2020 (Ducharme, 2020). During this crisis, social media platforms have the potential to become vital information sources about the pandemic (Tsao et al., 2021), but some literature concurred that they could also serve as an amplifier of misinformation (Acevedo, 2020; Cinelli et al., 2020; Tandoc et al., 2019; Tuazon et al., 2020; Vosoughi et al., 2018; Zarocostas, 2020). Moreover, technology and social media enabled the fast transmission of information about the pandemic, but it

magnified the effect of an infodemic or the saturation of unfiltered information online, which may include mis- and disinformation (WHO, 2020).

The diffusion of misinformation about COVID-19 shares traits with the pandemic. Cinelli et al. (2020) used epidemic models to explain the spread of misinformation on Twitter, Instagram, YouTube, Reddit, and Gab. The study gathered eight million comments and posts in 45 days from the platforms. Based on the study results, the researchers concluded that the reproduction rate of misinformation differs in each platform; it is dependent on algorithmic conditions and users' attitudes towards the topic. The researchers underscored the importance of understanding content consumption on social media platforms.

It is essential to look at how researchers have defined misinformation and how it behaves within social media platforms to grasp the magnitude of the infodemic.

Misinformation in the Social Network

Misinformation, Disinformation, and Fake News

Fake news has been used as an umbrella term for social media content that contains false information. Wardle (2017) commented that the term is insufficient to describe the complex misinformation and disinformation environment. The term was even used to discredit the reportage of media organizations (Tandoc et al., 2017; Vosoughi et al., 2018). To disassociate it from news, UNESCO's handbook for journalism education and training used the terms misinformation and disinformation (Wardle & Derakhshan, 2018). The handbook defined *disinformation* as content that

is false, and the propagator knows it is false, while in *misinformation*, the disseminator believes that the false information is accurate and valid. Wardle & Derakhshan (2018) created a typology of manifestations of misinformation and disinformation: satire & parody, false connection, misleading content, false context, imposter content, manipulated content, and fabricated content.

Wardle & Derakhshan's (2018) typology partly reflected the results of Tandoc et al.'s (2017) study on how previous research operationalized the term fake news, wherein Tandoc et al. surveyed 34 academic articles from Google scholar and databases and found out that fake news was used to describe news satire, news parody, news fabrication, photo manipulation, advertising and press releases, and propaganda. Tandoc et al. further classified the definitions within the dimensions of facticity and intention. For example, advertising and propaganda may have high levels of facticity, but their intention to deceive is high. On the other hand, a news parody may have low usage of facts, but its intention to deceive is low.

However, Tandoc et al. (2017) observed that the definitions from the studies did not take into account audience perception. The researchers asked: if the audience perceived the fake news item as true, is it still considered fake news? The question leads back to Wardle & Derakhshan's (2018) definition of dis- and misinformation. Thus, the audience has a role in creating and diffusing false information; the penetration of false information within a social network also depends on the audience (Wardle, 2017).

COVID-19 Misinformation

Misinformation about the COVID-19 pandemic could take different forms. Brennen et al. (2020) examined 225 pieces of misinformation gathered by First Draft News. They found that 59% of the sample had reconfigured content, meaning true information was manipulated (6%), had false context (24%), and were misleading (29%). Only 38% of the content fell under the fabricated category, and the 3% were either satire or parody. According to the researchers, prominent figures like politicians and celebrities only accounted for 20% of misinformation, but they captured 69% of the samples' total engagements.

On the other hand, Brennen et al. (2020) also discovered that most of the misinformation came from ordinary social media users (80%), even if the content generated produced lesser engagement (31%). The study of Guarino et al. (2021) likewise confirmed that prominent figures and ordinary users drive the diffusion of misinformation, albeit the two differ in their reach and engagement.

Exposure to COVID-19 misinformation on social media might endanger the health and safety of users. Lee et al. (2020) inferred that exposure is associated with belief, while belief is linked to insufficient knowledge about the pandemic and low engagement with preventive behaviors. Lee et al. surveyed 1,049 respondents from Seoul, South Korea and found that two-thirds (67.78%) reported they were exposed to COVID-19 misinformation at one point, and social media and instant messaging were the top sources of misinformation. In addition, misinformation contents about masks, like reusing and sterilizing the mask, were the top false information about the pandemic in the survey.

A study by Allington et al. (2020) in the United Kingdom found a positive relationship between increased social media usage for information and holding a conspiracy belief. The researchers also gathered that these beliefs were mainly associated with YouTube, followed by Facebook. Allington et al. also shared that COVID-19 protective behavior declines with one's belief in COVID-19 misinformation. Both studies by Allington et al. (2020) and Lee et al. (2020) shared the same finding that social media propagates misinformation about the pandemic, and younger users are more exposed to the infodemic.

Thus, social media users come across different COVID-19 misinformation from multiple sources. Likewise, it is essential to scrutinize the diverse narratives of information disorder about the pandemic to have a clear view of what users encounter in social media platforms.

Themes of COVID-19 Misinformation

Journalists and media organizations are at the forefront of examining the trends of COVID-19 misinformation. For example, the article of Macaraeg (2020), which drew from the data of the International Fact-Checking Network (IFCN) Coronavirus Alliance Database, revealed that globally the top three themes of misinformation during the COVID-19 pandemic were about *cures and preventive measures, conspiracy theories and predictions, and policies*. The other themes could be categorized into these primary classifications: *the spread of the virus and COVID-19 deaths* (spread and deaths, spread and deaths among public figures, and statistical report of spread and deaths); *nature of the disease* (causes, symptoms, exaggeration of the COVID-19 pandemic, and denial or downplaying the pandemic);

statements (false attribution of statements, and false and misleading statements); *opposing beliefs* (anti-masks and anti-vaccines); and *pandemic response* (violations and violence, abuse of power, and free stuff and aid); the remaining two themes were *religion* and *other*.

In the Philippines, Macaraeg (2020) shared that the common misinformation that Rappler debunked are about conspiracies about the pandemic, discrediting World Health Organization, and false claims about masks and vaccines. Macaraeg added that false attribution like 'fake quote cards' and false/misleading claims by authorities are also common misinformation themes in the country.

On the other hand, Fleming (2020) suggested different ways to identify COVID-19 misinformation. The audience can start by verifying the credibility of the source and author of the information, checking if the social media account or website is legitimate or fake, searching if other sources report the same information, and identifying if the messaging of the story triggers strong emotions. People can also check if the story contains spelling, punctuation, and grammar errors. Fleming added that it is essential to read the full story, check if fact-checking websites have already debunked the information, and discern who will gain if the people believe the story's claim.

The COVID-19 pandemic, its narratives and its relationship with social media have also piqued the interest of scholars. According to the scoping review of 81 studies by Tsao et al. (2021), the role of social media during the COVID-19 pandemic can be summarized into four overarching themes: social media as

surveillance monitoring (public attitudes, mental health, and detection or prediction); social media as disease control (information quality and government responses); and social media as contagion and vector (infodemics). In addition, Tsao et al. observed that Twitter and Sina Weibo (the two platforms offer open data) were the most studied platforms with 45 and 16 articles, respectively.

Misinformation about the COVID-19 pandemic is present and prevalent in social media, and the role that the users of these platforms play in deciding and influencing the direction of misinformation should be examined under a new theoretical lens.

New Gatekeepers and Gatekeeping

According to Shoemaker & Vos (2009), the term gatekeeping was first elaborated to explain the process of food selection and consumption in the posthumous publication of Kurt Lewin's unfinished manuscript in 1947, "Frontiers in Group Dynamics II: Channels of Group Life; Social Planning and Action Research." Lewin's work formed the core concepts of gatekeeping such as the gatekeeper, the regulator of food supply and consumption; channels, pathways of the food (e.g., supermarkets to households); the gate, the entrance to a channel; and forces, factors affecting the passage of food into the gates (Shoemaker & Vos, 2009). However, Lewin concluded that the process of gatekeeping could be utilized to examine media consumption (Shoemaker et al., 2013).

David Manning White applied gatekeeping in the context of communication in his research on the work of "Mr. Gates," a wire editor in a newspaper, in selecting

and rejecting news stories. The observations of White formed gatekeeping's basic premise in communication, wherein information travels through gated channels; gatekeepers sort through vast amounts of information, and these gatekeepers allow or constrain information flowing through the gates to the audience (Shoemaker & Vos, 2009). In essence, gatekeeping was viewed as a function of information selection.

The control of selecting information for the audience has been concentrated on communication workers in the media; they determine what the audience sees, and as a result, the gatekeeping molds the reality of the audience (Shoemaker & Vos, 2009).

However, the new digital environment provided by the Internet and social media has prompted scholars to posit new communication actors to a gatekeeping position or role. Rusdi & Rusdi (2020) and Welbers & Opgenhaffen (2018) forwarded that the publishers of information online are the holders of this role, while Mehrotra (2017) positioned social media platforms like Facebook as the new gatekeepers because of the dynamics and algorithm embedded in each platform that determine the flow of information.

In contrast, Singer (2013) and Shoemaker & Vos (2009) also saw the power that the audience holds to gatekeep misinformation online. They argued that the participatory nature of the Internet has made the audience secondary gatekeepers.

In a study of 138 newspapers, Singer (2013) found that the websites of the newspapers offered different ways for their audience to execute gatekeeping. An interesting finding was that users acted as gatekeepers and determined the visibility of the content of the website to their networks. Majority of the newspapers (93.5%) gave users the ability to share news to at least one social bookmarking or social networking tool. Singer concluded that even if news content passed the gatekeeping process of the media, the audience could significantly affect its diffusion online.

The arrival of the Internet and social media not only democratized the role of gatekeepers but also introduced changes to the gatekeeping theory itself. Karine Barzilai-Nahon developed the network gatekeeping theory (NGT) to make gatekeeping theory and its concepts interdisciplinary and adapted to new media technologies (Deluliis, 2015). According to Barzilai-Nahon (2008), gatekeeping is not just information selection but an exercise of information control. NGT also gave gatekeeping solid theoretical grounding by defining its constructs and framing gatekeeping as a process present in the communication environment of the Internet. Furthermore, Barzilai-Nahon (2008) theorized that gatekeeping could happen at the macro level, like government and industry performing the roles of gatekeepers, and at the micro level, where individuals apply information control. [The theory will be discussed in detail in the Theoretical Framework.]

Deluliis (2015) applied the theoretical constructs of NGT to build conceptual frameworks for three social media sites: Digg, Twitter, and Facebook. For Facebook, users apply network gatekeeping by deciding “what information to add, withhold, and disregard, and how to shape, localize, and manipulate the information they channel

through their profile” (Deluliis, 2015, p. 18). The researcher theorized that within a network of Facebook friends exists a small number of users that consistently share links of news stories, and their friends follow these users for information. Whether voluntary or involuntary, this small group of users performs network gatekeeping with their connections. The paper inferred that by performing different social media actions, users are executing gatekeeping functions (Deluliis, 2015).

To sum, considering the changes in the information landscape and the gatekeeping process, social media users are at the heart of the information travel happening on the platforms. Past research has examined how misinformation moves in social media and how users influence this movement.

Movement of Misinformation in Social Media

There is a considerable volume of misinformation interaction on platforms like Facebook and Twitter (Allcott et al., 2019), and researchers have been studying how the audience receives and diffuses misinformation in social media. Vosoughi et al. (2018) examined 126,000 narratives tweeted more than 4.5 million times by approximately 3 million Twitter users from 2006 to 2017. The researchers defined *news* as ‘assertion with claims’ (Vosoughi et al., 2018, p. 1), and the stories included in the differential diffusion study were then divided into true, false, and mixed using data from six independent fact-checking groups. The researchers found out that verified information took six times longer than a false story to reach 1,500 people. In addition, the top 1% of false stories included in the study can diffuse from 1,000 to 100,000 Twitter users, and the diffusion of these stories relied on peer-to-peer viral

branching. The study also took into account the presence of bots on Twitter, but the results showed that humans drive the diffusion.

The fast spread of false information shows the connectedness of people on social media. The computational model by Törnberg (2018), which compared misinformation spread as a complex contagion, showed that clustering of social media users has a positive relationship with misinformation diffusion. The higher the connectedness (network polarization) of one user to others increased the chance of spread. Further, Törnberg concluded that an echo chamber of people with similar views (opinion polarization) could increase the likelihood of virality, and this effect is amplified by network polarization. When the researcher tested the findings on empirical data from Twitter, the findings from the computational model were verified.

Different papers have studied the factors and motivations behind the diffusion of misinformation in social media. Two separate studies by Buchanan & Benson (2019) and Sterrett et al. (2019) explored the role of trust in the spread of misinformation. Buchanan & Benson's (2019) survey of Facebook users from 44 countries ($n = 357$) showed that a respondent would extend the organic reach of a post by reacting, commenting, or sharing if he/she considers the sharer trustworthy. The findings of Sterrett et al. from an experimental manipulative method using a health news story also showed that the sharer of the story positively impacts the respondents' engagement with the content regardless of the source or publisher of the story. Both studies showed that trust plays an essential role in the reception and diffusion of misinformation; higher perceived trustworthiness increases the chance of engagement.

Researchers likewise delved into the decision-making process of social media users when they encounter misinformation online. The results from Tandoc et al.'s (2019) research presented a different scenario on the spread of false information. The study combined a survey ($n = 2501$) and an in-depth interview ($n = 20$) to examine Singaporean's attitudes towards misinformation. The researchers found that a great majority (73%) ignored misinformation they encountered in social media, but the in-depth interview revealed that some respondents would correct the misinformation if the topic was relevant to them, they had a close relationship with the sharer, and they had confidence in correcting the false information. Moreover, smaller groups of respondents exhibited proactive approaches and social media actions towards the misinformation like reporting the post, commenting on the post saying it is wrong, unfollowing or blocking the source, messaging the source of information, and posting a correction on their site (Tandoc et al., 2019).

In contrast to the findings of Tandoc et al. (2019), Chen et al. (2015), who surveyed 171 students from two public universities in Singapore, found that almost all of the participants (94.7%) reported that they have seen their friends share misinformation on social media and 67.8% admitted that they have shared misinformation. In addition, the researchers found that the women shared more misinformation than men. Using the concepts from the Uses and Gratifications Theory, the researchers created 29 sharing reasons on why the respondents diffused false information. The top three reasons were they found the content a good conversation topic, the information presented was interesting, and the information caught the respondents' attention. The reasons 'the information seems accurate' and 'the information comes from authoritative sources' fell on the 24th and 26th spot,

respectively, which indicates their opinion about authorities (Chen et al., 2015, p.589).

The studies in this section show that social media users could influence how misinformation will move and spread in their network through their actions on the platforms.

On the other hand, the pervasiveness of misinformation in social media has prompted different sectors of society to act and stop the transmission of false information, primarily in this time of a health crisis.

Curbing the COVID-19 Infodemic

Measures to Curb the Infodemic

Different organizations, government agencies, and groups have formulated strategies to curb the global misinformation epidemic. WHO created an information platform and partnered with social media companies (Zarocostas, 2020). In the Philippines, the Department of Health (DOH, 2020) instituted the *DOH Emergency Operation Center* (DOH EOC) for COVID-19 information and updates.

Researchers have also proposed ways to mitigate the effects of infodemic. Kolluri & Murthy (2021) created the web application CoVerifi that combined machine learning and human feedback to evaluate COVID-19 news. The application gathered data from Twitter, Reddit, and Bing News. This application displayed contents like articles and tweets in a feed where users can check the authorship of the article, the authenticity of the content, the credibility votes of other users, and the credibility

classification. However, the system was limited only in determining robot-created misinformation, and the crowd-based labeling system could be vulnerable to coordinated attacks (Kolluri & Murthy, 2021).

Social media platforms have also joined the fight against the infodemic. Singh & Bagchi (2020) reviewed the efforts of different platforms to curb the infodemic. Facebook, Twitter, TikTok, and YouTube made efforts to connect users to reliable and fact-checked information about the pandemic; their content policies were also updated to police and remove COVID-19 misinformation. Despite these changes, a large amount of misinformation is still circulating in social media platforms. For example, Facebook had contents that have been rated as false, but the posts remained active and without a clear warning sign that the information contained was false (Brennen et al., 2020).

Even with the actions of the social media platforms, advertising can be another path to diffuse false information about the pandemic. In an experiment by Waddell (2020), seven scheduled test ads containing COVID-19 misinformation (e.g., claiming the disease is a hoax) were created using a fake organization's page, and they were all approved by Facebook's automated ad-screening system. In another investigation by Sankin (2020), Facebook allowed online advertisers to target people interested in pseudoscience, which contained 78 million people. After reaching out to Facebook for comment, Sankin (2020) reported that the category had already been removed.

On the other hand, the infodemic is hard to eliminate because approaches to curbing it are content-based (Marin, 2020), and stakeholders are not considering the reconfiguration of information prevalent on social media (Brennen et al., 2020). For Marin (2020), it is also essential to address the three informational contexts in social media: strong emotional context, weak epistemic context, and strong normative context. The article stated that social media strongly appeals to emotion, and it can be used to elicit a reaction and fulfill the need for consensus. It then creates an environment with a weak epistemic context where information is shared to affirm one's opinion and seek affirmation from others or call for action. Epistemic beliefs of the users could also play a role to further diffuse misinformation; those who believe it is easy to procure information are more likely to share misinformation (Chua & Banerjee, 2017). Marin also asserted that the presence of a prescriptive and evaluative information environment (normative context) could be challenging to address because it targets to change users' behavior.

Dela Cruz (2021) conducted a thorough review of policies from literature, laws, and social media to create an anti-misinformation framework for the Philippines. Dela Cruz suggested that a centralized participatory information agency comprising representatives from different sectors should be created to deliver COVID-19 information. Further, the author recommended strengthening legal frameworks and social media literacy in the country.

Media and Information Literacy

Since user-generated content (UGC) is a central component of social media platforms (Kaplan & Haenlein, 2010), using and sharing high-quality information

(Vraga et al., 2020) and developing fact-checking habits (Dela Cruz, 2021) are essential skills to shield users from social media misinformation. Deriving from the concepts and intersections of media, information, digital, and ICT literacy, UNESCO (2013) developed the concept of media and information literacy (MIL), which is defined as:

Set of competencies that empower citizens to access, retrieve, understand, evaluate and use, to create as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities. (p. 29)

However, there are challenges for MIL education in the Philippines, e.g., lack of understanding and training about this literacy and focusing efforts on MIL for mass media (Tuazon et al., 2020). These challenges call for a need to update Filipinos knowledge and understanding of MIL because in 2019, more households own cellular phones (86.8%) than television (79.9%) and radio (40.1%) (Philippine Statistics Authority, 2021).

In summary, the body of literature reviewed helped shape the direction of this study. It was established that social media is a participatory platform elevating the consumer of information as the producer of content (Kaplan & Haenlein, 2010), which result in the existence of people's narratives online (Johnson, 2018; Mazali, 2011).

However, social media is not a pristine stream of information: it is vulnerable to information disorders like misinformation. Scholars even argue that these platforms amplify the narratives of information disorders (Törnberg, 2018; Vosoughi et al., 2018). But it is important to note that users play a role in diffusing the spread of false information (Buchanan & Benson, 2019; Chen et al., 2015; Sterrett et al., 2019; Tandoc et al., 2019), which can spread within their network (Törnberg, 2018). This study sought to contribute to the understanding of the role of social media users in the diffusing and restricting information online.

On the other hand, the COVID-19 pandemic has created a saturation of information online and offline, resulting to an infodemic (WHO, 2020). Social media is a crucial tool in disseminating information (Tsao et al., 2021), but critical information about the pandemic is co-existing with misinformation in the guise of truth within the platforms (Brennen et al., 2020). Most studies about misinformation on social media have focused on Twitter (Cinelli et al., 2020; Kolluri & Murthy, 2021; Törnberg, 2018; Vosoughi et al., 2018), and literature about the COVID-19 pandemic also reflect this trend, as confirmed by the review of Tsao et al. (2021).

This study aimed to expand the body of literature about the sources of infodemic on Facebook, which is the most used social media platform in the Philippines with 83 million potential audience (Kemp, 2021b). Hence, it identified the sources and channels encountered by Facebook users during the reception of COVID-19 misinformation. Moreover, the study attempted to recognize the COVID-19 misinformation themes provided by these sources and how Facebook users as gatekeepers verified these information disorders.

In addition, the studies reviewed about the diffusion of misinformation were framed on the uses and gratifications theory (Basilisco & Cha, 2015; Chen et al., 2015; Tandoc et al., 2019). These studies revealed the users' motivations on their actions towards misinformation. However, this study took a different approach and looked at the process of diffusion using the lens of network gatekeeping theory proposed by Karine Barzilai-Nahon (2008) and conceptualized for social media by Deluijs (2015). Further, this study considered the information control applied by Facebook users to COVID-19 misinformation as this could play a part in the discourse and formation of strategies on media and information literacy.

Theoretical Framework of the Study

The Network Gatekeeping Theory (NGT) by Karine Barzilai-Nahon (2008) elucidates the different constructs of gatekeeping and presents the dynamism of the gatekeeping process. Barzilai-Nahon articulated the need to update gatekeeping theory to suit the information environment brought by the advent of the Internet and new media technologies. In addition, the theorist also broadens the scope of gatekeeping from information selection to information control to incorporate different types of information treatment. The theory comprises two components: network gatekeeping identification and network gatekeeping salience.

Network Gatekeeping Identification

The first component, network gatekeeping identification, lays the foundation for the nomenclature and concepts of network gatekeeping. Barzilai-Nahon (2009) identified and defined the vital concepts of the theory, namely: the *gate*, the passageway of information to and from a network; *gatekeeping*, the control

exercised by a gatekeeper on information as it moves through the gates; *gatekeeping mechanism*, tool, or process utilized for information control; and *network gatekeeper*, an entity that carries out information control.

Barzilai-Nahon (2009) also introduced the term *gated* to refer to the entity subjected to the process of information control. Barzilai-Nahon (2008) pointed out that past gatekeeping literature ignored the gated and rendered them powerless to the gatekeepers. However, the theorist forwarded that the gated can bypass the gatekeeping process and create information themselves.

Network Gatekeeping Salience

On the other hand, network gatekeeping salience attempts to shed light on the relationships of gatekeepers, and gatekeepers to their gated networks. It examines attributes possessed by the gated: political power, information production capability, the relationship between the gated and the gatekeeper, and the alternative available (Barzilai-Nahon, 2008). These constructs provide dimensions to describe the gated.

Information Control and Movement

Barzilai-Nahon (2008) posited that network gatekeepers could be classified into two dimensions: the authority dimension and the functional dimension. The authority dimension deals with the scope of an entity to perform gatekeeping functions from the micro (individual) to the macro level (government). In contrast, the functional dimension classifies gatekeepers according to their role in the process. The theorist expounded that gatekeepers can exist in both dimensions.

According to Barzilai-Nahon (2009), gatekeepers can subject information to different gatekeeping activities, such as: selection (choosing information or alternative), addition (the joining of information), withholding (keeping information from the gated network), display (the visualization of information), channeling (leading information through a channel), shaping (forming information), manipulation (changing information to serve the gatekeeper's goals), repetition (restating the information), timing (choosing the time of release), localization (adapting the information to a target audience), integration (mixing of information to form a new piece of information), disregarding (ignoring the information), and deletion (eliminating the information).

The gatekeeping bases expand into gatekeeping mechanisms that fulfill the information control process. These mechanisms could be a structure or dynamics in a network resulting from the performance of gatekeeping activities. Gatekeeping could result to mechanisms of channeling, censorship, internationalization with localization and translation, infrastructure, editorial, security mechanisms, cost-effect mechanisms, value-adding mechanisms, user interaction mechanisms, and regulation meta-mechanism (Barzilai-Nahon, 2008).

Barzilai-Nahon's (2008, 2009) Network Gatekeeping Theory describes information as being subject to the influence of the gatekeepers' activities from different dimensions of society. Barzilai-Nahon sees the gatekeepers in an information society as part of the community and not an elite group separate from the gated (Deluliis, 2015). The passage of information through the gates depends on the gatekeeping activities and mechanisms employed by the information controller.

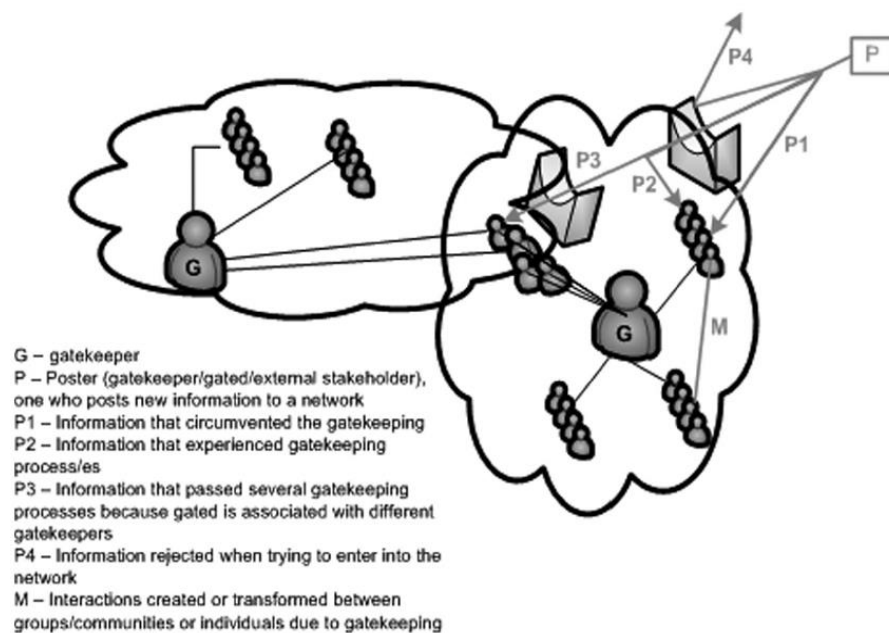
Network gatekeeping's goals are to contain the gated within the network, protect the gated from outside forces, and maintain the information flow within the boundaries of the network (Barzilai-Nahon, 2008).

The Gatekeeping Process

Network gatekeeping identification and networking gatekeeping salience converge to form the Network Gatekeeping Theory (NGT). The theory, as seen in Figure 1, illustrates a gatekeeping process that is multi-layered and dynamic.

Figure 1

Illustration of Network Gatekeeping



Note. The figure shows how information control happens on networks. From “Toward a theory of network gatekeeping: A framework for exploring information control,” by Barzilai-Nahon, 2008, *Journal of the American Society for Information Science and Technology*, 59(9), p.1508 (<https://doi.org/10.1002/asi.20857>). Copyright 2008 by Association for Information Science and Technology.

The process of gatekeeping starts with the *poster* (P) or the origin/source of information that tries to enter the network; it could come from another gatekeeper, a gated, or an external force (Barzilai-Nahon, 2008), which shows the interchangeability of roles in a network.

The information travels towards the gates of the *gatekeepers* (G), who would then choose a gatekeeping activity that would be applied to the information before transmitting it to the gated (P2). Moreover, information undergoes multiple information control processes because of the presence of multiple gates and gatekeepers in overlapping networks (P3). Nevertheless, information could be rejected by the gatekeeper and never enter the network (P4). However, information could circumvent the process and be received directly by the gated (P1) because, according to Barzilai-Nahon (2008, 2009), the gated could also possess power and have a relationship with the gatekeeper, as well as the ability to choose alternative sources.

The whole process of network gatekeeping is to achieve the following goals: contain the gated within the network, protect the gated from unwanted outside forces, and maintain the information flow within the network (Barzilai-Nahon, 2008).

NGT covers the technical and social aspects of gatekeeping (Barzilai-Nahon, 2009) and captures the information control and flow within a network. Moreover, the theory situates the process of gatekeeping in communication environments present in new media (Deluliis, 2015), like social networking sites. The theory is suited to

examining the flow of COVID-19 misinformation on Facebook and the information control applied by users.

Conceptual Framework of the Study

The theoretical framework depicts gatekeeping as a dynamic and multi-layered process, and it captures the subtleties of information movement and control within social networking sites. Given these complexities, this study focused on the individual level of network gatekeeping as applied by Facebook users on COVID-19 misinformation in their networks, where users could influence the movement of the information disorder.

For easier reference, the variables are divided into the following groups: *transmission*, where misinformation is sent to the gates of the gatekeepers; *reception*, where the gatekeepers encounter misinformation on Facebook; and *diffusion*, where misinformation spreads within the network of the gatekeeper.

Transmission

The poster (P) is the source of misinformation about the pandemic; P could be another gatekeeper, member of the gated network, or an external force (Barzilai-Nahon, 2008). In social media platforms like Facebook, COVID-19 misinformation could originate from politicians, celebrities, other public figures, and ordinary social media users (Brennen et al., 2020). For this study, the identified sources from Brennen et al. (2020) were designated as the P. However, ordinary social media users were broken down into family members and friends due to the prioritization of the Facebook algorithm for these sources (Mosseri, 2018). The identification of the

poster is essential to illustrate that the process of gatekeeping happens in different dimensions (Barzilai-Nahon, 2008) and that Facebook users partake in what Singer (2013) called secondary gatekeeping.

Next, misinformation from P is channeled through the social media features of Facebook (F). The transmission of misinformation on Facebook could happen through the following: Facebook Groups, Facebook Pages, News feeds, Facebook Messenger, and Facebook stories.

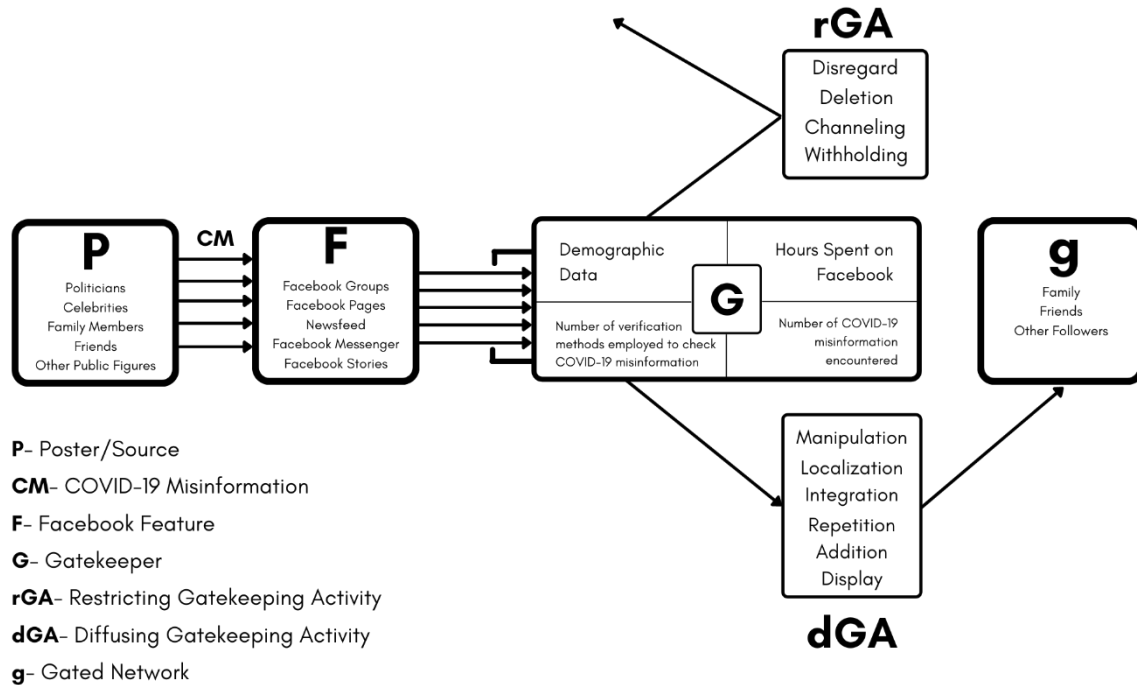
Reception

Reception begins when the information arrives at the gates of the Gatekeeper (G). G is a variable that responds to the misinformation delivered from P using F, acting as a secondary gatekeeper to the information already processed by P. For this research, the G is a Facebook user who acts as an individual information controller and encounters COVID-19 misinformation in the social media platform. Deluiis (2015) conceptualized G as a small number of users who consistently share news stories links, and their friends follow these users for information. Since the number of the following is hard to track on individual Facebook users, G is determined by Facebook users with high interaction; the 'Top Fans' of a Facebook page provides insight on users who actively interact with the contents of a particular page (Facebook, n.d.-b).

As seen in Figure 2, G is described further by the following variables: background, which includes demographic data and hours spent on Facebook,

Figure 2

Individual Level of Network Gatekeeping on Facebook



Note. The conceptual framework of the study shows the individual level of network gatekeeping a Facebook user can apply. Adapted from “Toward a theory of network gatekeeping: A framework for exploring information control,” by Barzilai-Nahon, 2008, *Journal of the American Society for Information Science and Technology*, 59(9), p.1508 (<https://10.1002/asi.20857>). Copyright 2008 by Association for Information Science and Technology.

misinformation encountered, and verification methods. These characteristics of G constitute the independent variables of the study.

In addition, in reception, G encounters a variety of COVID-19 misinformation (CM) channeled through F. While Wardle & Derakhshan (2018) defined misinformation in UNESCO’s Handbook for Journalism Education and Training as false information that a user or disseminator believes as true, many studies relied on fact-checking organizations to identify the false information narratives about COVID-19 (Brennen et al., 2020; Cinelli et al., 2020; Lee et al., 2020; Vosoughi et al., 2018). Thus, the study conceptualized misinformation as false information that has

undergone rigorous fact-checking by reputable organizations, but the user or disseminator still believes it is factual.

In line with this, the research used the themes of COVID-19 false information fact-checked by the International Fact-Checking Network (IFCN) Coronavirus Alliance Database summed up by the article of Macaraeg (2020). Themes of misinformation about the pandemic include cures and preventive measures, conspiracy theories and predictions, policies, spread and deaths, spread and deaths among public figures, statistical reports of spread and deaths, causes, symptoms, exaggeration of the COVID-19 pandemic, denial or downplaying the pandemic, false attribution of statements, false and misleading statements, anti-masks, anti-vaccines, violations and violence, abuse of power, and free stuff and aid (Macaraeg, 2020).

Moreover, G, as the gated of P, may possess salience attributes such as alternatives that allow them access to mechanisms to fact-check if the information received is COVID-19 misinformation. G can verify the credibility of the source and author of the information; check if the social media account or website is legitimate or fake; search if other sources report the same information; identify if the messaging of the story triggers strong emotions; check if the story contains spelling, punctuation and grammatical errors; read the full story; check if fact-checking websites have already debunked the information; and discern if who will gain if the people believe the claims of the story (Fleming, 2020).

Diffusion

G performing the role of network information controller and a secondary gatekeeper subjects the CM through one or more gatekeeping activity (GA) that determines whether the CM will enter and diffuse in the network or be rejected at the gates; thus, G influences the movement of CM.

G's response to CM is through gatekeeping activities. The researcher equated the activities based on the definitions of Barzilai-Nahon (2008) as related to the findings of Tandoc et al. (2019): ignoring the COVID-19 misinformation is disregard; posting a correction is manipulation; blocking or unfollowing the source is withholding; reporting the post is deletion; commenting on the post is addition; and messaging the source for correction is channeling.

Furthermore, the researcher proposes the equivalence of some of the gatekeeping activities to the following social media actions: display is creating a media out of the COVID-19 misinformation like memes; integration is reacting to the social media post; repeating is just sharing the misinformation on one's Facebook timeline; and localizing is adding a caption to the COVID-19 misinformation on the user's and their network's native language (see Table 13 for the summary and researcher's notes).

The GAs are divided into two groups based on their influence to limit or spread CM. Disregard, deletion, channeling, and withholding restrict CM from entering the gate of the network (rGA). On the other hand, manipulation, addition, display, integration, repetition, and localization diffuse CM within the network (dGA).

Therefore, different gatekeeping activities vary in their influence on the diffusion of COVID-19 misinformation within the network.

If G performs one or more dGA, misinformation diffuses into the network, and the gated (g) will see these interactions, thus exposing them to CM. The variable g represents the network members of G, like family, friends, and other followers, who do not belong to the first two categories.

As seen in Figure 2, the conceptual framework illustrates how different posters expose Facebook users to COVID-19 misinformation via the various features of the platform. After the reception of misinformation, the Facebook user as an individual gatekeeper can act on CM using social media actions articulated as GAs, and this determines if a piece of information diffuses in the network or not.

The conceptual framework of this study focused on the network gatekeeping identification component of NGT. It identifies and describes the posters and the gatekeeper, and the framework shows the possible information flow and control in social media that can happen. Moreover, it places the gatekeeping activities as the primary processes through which information control is executed.

Moreover, the researcher added the variable Facebook features because, through these channels, the gatekeeper receives information on Facebook. The variable also concretizes the technological aspect of NGT. Another unique feature of the framework is that the information trying to enter the network is misinformation about COVID-19.

Through this framework, the study examined the flow of COVID-19 misinformation on Facebook networks from the poster to the gatekeeper's network.

Operational Definition of Terms

Background – includes the socio-demographic profile and media use profile of the participants/gatekeepers (i.e., sex, age, education, and hours spent on Facebook). The various characteristics were used for measures of associations with gatekeeping activities.

COVID-19 Misinformation (CM) – the narratives or themes of false information about the pandemic based on the International Fact-Checking Network (IFCN) Coronavirus Alliance Database (Macaraeg, 2020), which are transmitted by P and encountered by G on Facebook. Different themes were presented on a nominal scale in a multiple choice question where the most common narratives were determined.

Diffusion (dGA) – the spread of COVID-19 misinformation in a network; it happens when a gatekeeper chooses to interact with the misinformation using the gatekeeping activities manipulation, addition, display/integration, repetition, and localization. The diffusing gatekeeping activity were measured by the frequency a gatekeeper applies a particular dGA. The responses were as follows: Always, Most of the time, About half the time, Sometimes, and Never.

Feature (F) – an interface of the social media platform Facebook where information is channeled, and these are Facebook Groups, Facebook Pages, News

feeds, Facebook Messenger, and Facebook stories. These features were ranked on an ordinal scale from 1 to 5, with 1 as the most frequent channel of COVID-19 misinformation and 5 as the least frequent channel of misinformation about the pandemic. Moreover, ranking data was aggregated using average rank formula.

Gated (g) – members of the Facebook network of G who could be subjected to information control and be exposed to CM by G. Members of the gated were presented on a nominal scale in a multiple choice question where the receivers of CM are determined.

Gatekeeping activities (GA) – information treatment or interaction performed by the gatekeepers to COVID-19 misinformation. It could be restricting such as disregarding, deletion, channeling, and withholding or diffusing such as manipulation, localization, integration, repetition, addition, and display (based on Barzilai-Nahon, 2008); these actions could influence the restriction or diffusion of misinformation.

Gatekeeper (G) – the entity that performs the gatekeeping in a network (Barzilai-Nahon, 2008) described by Deluiis (2015) as a small number of users that consistently share links of news stories. In the Facebook platform, Top Fans are active users on a page with high engagement with the page's content. These interactions would be visible to their networks. In addition, gatekeepers were described by their demographic data, Facebook usage, number of

COVID-19 misinformation encountered, and number of misinformation verification methods.

Misinformation encountered – the number of false information about the pandemic encountered by G, gauged using the following measures: none, 1-2 content/s per use, 3-4 contents per use, 5-6 contents per use, and others, where participants could supply a number higher than 6.

Poster (P) – the source of COVID-19 misinformation that tries to enter the network of the gatekeeper. In the Facebook platform, misinformation could come from politicians, celebrities, other public figures (e.g., social media influencers), family members, and Facebook friends (i.e., close friends and Facebook friends); these posters were ranked on an ordinal scale from 1 to 5, with 1 as the most frequent source of COVID-19 misinformation and 5 as the least frequent source of misinformation about the pandemic. Moreover, ranking data was aggregated using average rank formula.

Restriction (rGA) – the rejection of COVID-19 misinformation from entering the network; it happens when a gatekeeper chooses to interact with the misinformation using the gatekeeping activities disregard, deletion, channeling, and withholding. The restricting gatekeeping activity were measured by the frequency a gatekeeper applies a particular gatekeeping activity. The responses were as follows: Always, Most of the time, About half the time, Sometimes, and Never.

Verification Methods – the techniques used by G to distinguish factual information from false information about the COVID-19 pandemic. Different verification methods were presented on a nominal scale in a multiple choice question where the most common techniques were determined. The number of methods employed by the respondents were used for measures of associations with gatekeeping activities.

Chapter 3

METHODOLOGY

This research aims to explore the emerging gatekeeping role of social media users. This chapter outlines the research design of the study, the locale and period when the study was undertaken, the sample and sampling, the data collection instrument and data gathering, data analysis, as well as the ethical considerations and data management involved.

Research Design

This descriptive quantitative study used a cross-sectional survey design. Surveys are used to “gain knowledge about the attitudes, opinions, beliefs, knowledge, perceptions, intentions, and behaviors of individuals,” using quantifiable information that can describe a specific group of people and show the relationship of variables (Scharrer & Ramasubramanian, 2021, p. 123).

Since the respondents are already on Facebook, a self-administered online survey was considered to be cost-effective and time-efficient. The survey was used to gather the users’ demographic profile, the information flow of COVID-19 misinformation in their networks, and how they restricted or diffused the movement of this misinformation.

Locale of the Study

The study was conducted in the municipality of Capas. It is a first-class municipality in the province of Tarlac, and according to the Cities and Municipalities

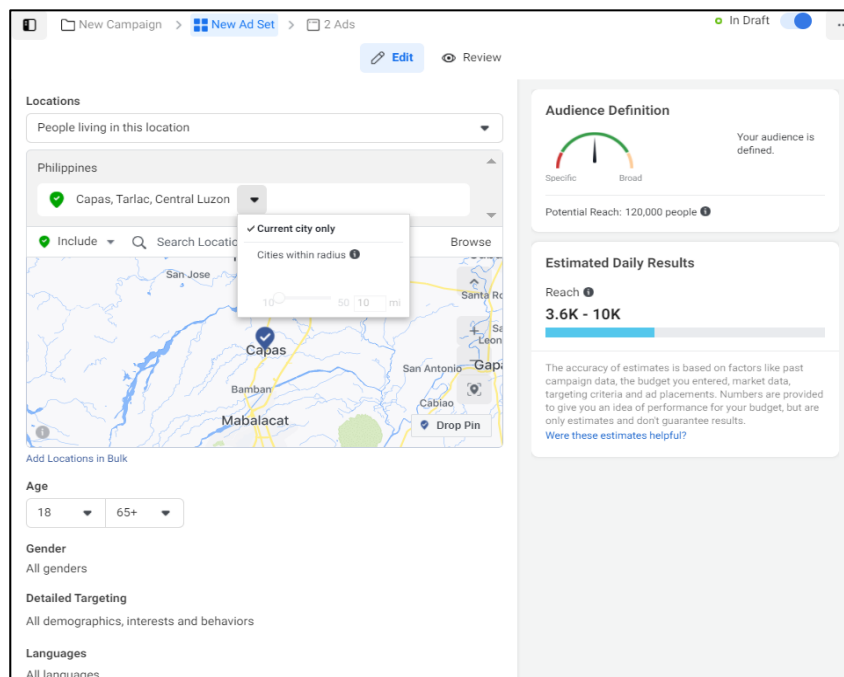
Competitiveness Index 2020 Rankings, it ranks 47th among first and second class municipalities in terms of infrastructure, which includes investments in infrastructure and information technology capacity (Department of Trade and Industry [DTI], 2020).

Respondents and Sampling

The municipality of Capas has a total population of 140,202 (DTI, 2020). Data from Facebook Ads Manager (Facebook, n.d.-a), during the period of study, revealed that the location of the study has an estimated potential Facebook ad audience of 120,000 users ages 18 to 60 and above living in the area, as seen in Figure 3. Therefore, the concentration of Facebook users in the area makes it an ideal place to conduct the study.

Figure 3

Screenshot of Audience Data from Facebook Ads Manager



Note. The figure shows the estimated number of users that can be reached by Facebook ads in Capas, Tarlac. From “Ads Manager,” by Facebook, n.d.-a <https://www.facebook.com/adsmanager>. Copyright by Facebook.

Since gatekeepers were conceptualized as Facebook users with high interaction in the social media platform, the researcher narrowed down the participants to the Top Fans of the Facebook page, Capas Information Office, a page that delivers critical information to the people of Capas, including verified information about the pandemic. Top Fans frequently interact with the contents on the page, and the list of Top Fans is publicly available data on the Facebook page because the users voluntarily accepted the Top Fans badge (Facebook, n.d.-b). As Facebook users, they are not confined to just visiting the page that provides verified information about the pandemic while using the social networking site. They may encounter misinformation from different Posters, but they have the affordances to be equipped with the knowledge they see on the page where they are Top Fans, including COVID-19 updates and cross-postings from relevant national and local agencies.

The criteria for being respondents were the following: a) they must be residents of Capas, Tarlac, b) 18 years old and above, and c) Top Fans of the Capas Information Office Facebook page during October, November, and December 2021.

The researcher used complete enumeration sampling and reached out to the 229 Top Fans of Capas Information Office Facebook page tallied from October 2021 to December 2021. The researcher successfully contacted 225 Top Fans, but four users could not be reached via Facebook Messenger: two Top Fans did not allow message requests to come through, one participant deactivated his/her account before contact, and one participant died before contact.

Out of the 225 contacted Top Fans, 80 agreed to participate, 26 declined to answer the survey, 111 did not respond to the message, 6 blocked the researcher on Facebook, and 2 deactivated their accounts after the initial contact. Three of the 80 who participated in the study did not fit the criteria, and one respondent did not finish the questionnaire. Hence, there were 76 valid responses, or 33.19% of the original 229 sample. While the number may have been reduced, the respondents represent the characteristics of the population.

Research Instrument and Data Gathering

The researcher created a master list of the Top Fans of Capas Information Office Facebook page from October 2021 to December 2021. The Top Fans were contacted through Facebook Messenger. Data were gathered from November 15, 2021 until January 31, 2022.

An informed consent and questionnaire were created online using Qualtrics and distributed through Facebook messenger to the Top Fans of the Capas Information Office Facebook page who agreed to join the study. In addition, the researcher assigned a unique code to each respondent that they inputted at the beginning of the survey for monitoring and anonymity purposes. The text version and preview link of the online questionnaire are available in Appendix A.

The first part of the online questionnaire collected demographic data such as age, sex, and educational attainment from the participants.

The second part gathered data about the respondents' interaction with Facebook: their platform usage (time spent using the social media platform) and how often they received misinformation on Facebook about COVID-19.

The third part asked participants to rank posters of COVID-19 misinformation in the social networking site. They ranked the posters or sources (i.e., politicians, celebrities, other public figures, family members, and friends) in order of how often they encountered COVID-19 misinformation from them. The participants also ranked the features or channels (i.e., Groups, Pages, Newsfeed, Facebook Stories, and Messenger) based on the frequency these Facebook features exposed them to misinformation about the pandemic.

In the fourth part of the questionnaire, the sample identified the COVID-19 misinformation themes they encountered on Facebook and how they identified COVID-19 misinformation narratives. Respondents could select multiple answers in this section.

Lastly, the participants rated different Facebook actions, using Likert Scales, on how likely they would perform the information control action to COVID-19 misinformation when they see one. The participants also identified whom they thought would see their interactions if they performed diffusing gatekeeping activities.

Data Analysis

Answers from respondents that did not fit the criteria (i.e., underage and non-residents of Capas) were rejected by Qualtrics and were not included in the analysis. Likewise, incomplete survey responses were also omitted from the pool of valid responses.

This research used descriptive statistics to capture the frequency distribution and trends that manifested in the data provided by the respondents. Aside from frequency distribution tables, questions with ranking data (i.e., Posters and Facebook features) were analyzed by determining which category leads per rank. In addition, the ranked data were subjected to the ranking average formula as seen in (1), where x is the number of respondents that designated an answer to a particular rank, and w is the weight of the rank.

$$\frac{x_1 w_1 + x_2 w_2 + x_3 w_3 \dots x_n w_n}{total\ response\ count} \quad (1)$$

The weights are in reverse order placing the category with the highest average in rank one and the lowest average in rank five (Almazrou et al., 2019; Australian Government Department of Industry, Science, Energy and Resources, 2014). The weights are designated as follows:

- Rank 1 has the weight of 5
- Rank 2 has the weight of 4
- Rank 3 has the weight of 3
- Rank 4 has the weight of 2
- Rank 5 has the weight of 1

On the other hand, the mode is the measure of central tendency applied to the gatekeeping activities (GA) Likert scales.

Furthermore, measures of correlation were applied to the variables describing the gatekeeper with GAs (i.e., rGAs and dGAs) to understand the association of the characteristics of gatekeepers with each gatekeeping activity.

In correlating sex with the gatekeeping activities, the rank-biserial correlation was used, wherein a positive rank-biserial correlation coefficient (r_{rb}) indicates that being a male respondent is associated with engaging in a particular gatekeeping activity more frequently. In contrast, negative r_{rb} indicates that being a female respondent is associated with doing a GA more frequently.

On the other hand, age, educational attainment, hours spent on Facebook, misinformation encountered, and the number of verification methods used Spearman's rank-order correlation to test the variables' relationship with GA. The study follows these interpretations:

- First, a positive Spearman's rank-order correlation coefficient (r_s) in age means that belonging to a younger age group is associated with engaging with a specific GA more frequently. In contrast, a negative r_s indicates an association with belonging to an older age group and engaging with a specific GA more frequently.
- Second, a positive r_s in educational attainment means that having lesser educational attainment is associated with doing the GA more regularly, while

a negative r_s links higher educational attainment with performing a specific gatekeeping activity more regularly.

- Third, a positive r_s in hours spent on Facebook indicates that spending fewer hours on Facebook is associated with engaging in a gatekeeping activity more frequently. On the other hand, a negative r_s associates spending more hours on Facebook with doing a particular GA more frequently.
- Fourth, a positive r_s in misinformation encountered indicates that encountering less misinformation on Facebook is linked to regularly performing a gatekeeping activity. In contrast, a negative r_s associates encountering more misinformation on Facebook with performing a gatekeeping activity more regularly.
- Finally, a positive r_s in verification methods is an indication that as the ways of verifying COVID-19 decrease, the engagement with a particular gatekeeping activity becomes more frequent. On the other hand, a negative r_s indicates that as the verification methods increase, the engagement with a particular gatekeeping activity becomes more frequent.

Ethical Considerations and Data Management

In compliance with ethics in research, the respondents who agreed to participate were asked to read and sign the online informed consent form (See Appendix B for the informed consent form).

Security measures and questionnaire logic were applied to ensure the integrity of the data. First, respondents who answered that they were not residents of Capas, Tarlac were taken to the end of the questionnaire. Second, the questionnaire

was automatically terminated for participants who were 17 years old and below at the time of answering the form. Lastly, preventing multiple submissions and bot detection were turned on in the questionnaire settings.

On the other hand, safeguards for the anonymity and privacy of the respondents were also put in place. The participants were informed of the scope of the study, their benefits, and their rights in the consent form. The participants were given unique codes to ensure that they would not be identified by their answers. In addition, the 'anonymize responses' option in Qualtrics was also turned on in the questionnaire setting to prevent the recording of the respondents' IP addresses, location data, and contact info. Moreover, only the researcher could access the list of the Top Fans with the corresponding respondents' codes, and it was deleted after the study was finished.

Chapter 4

RESULTS AND DISCUSSION

This chapter details the results of the survey, which ran from November 15, 2021 to January 31, 2022, applying the data analysis expounded from the previous chapter. Furthermore, the discussion is aligned per research objective. First, it describes the Facebook users who participated in the study. Second, it identifies the sources and channels of COVID-19 misinformation of the Facebook users. Third, it enumerates the COVID-19 misinformation narratives encountered by the gatekeepers and how they determine these information disorders. Fourth, it investigates the gatekeeping activities utilized by Facebook users when misinformation about the pandemic tries to enter their network gates, how these activities influence the diffusion of COVID-19 misinformation, and who sees these interactions. Fifth, it explores the relationship of the variables, particularly the characteristics of the gatekeepers and the gatekeeping activities. Lastly, the researcher presents a typology that characterizes the individual level of network gatekeeping.

Demographic Profile of the Gatekeepers

Sex, Age and Educational Attainment

The demographic data of the study's sample ($n = 76$), which included their sex, age, and educational attainment, is summed up in Table 1.

The dominantly female ($f = 60$) sample mostly belonged to age groups 30-39 years old ($f = 26$), 40-49 years old ($f = 21$), and 18-29 years old ($f = 19$), which were

within the range of the largest age groups in the advertising audience profile of Filipino social media users outlined by Kemp (2021b). However, the sample's most prominent groups were more skewed toward older users.

In terms of educational attainment, it is safe to say that the respondents possess basic literacy as almost all of the participants (72/76) have finished high school or higher levels of studies.

Table 1. Socio-demographic Characteristics of the Respondents

CHARACTERISTICS	FREQUENCY <i>f</i> (<i>n</i> = 76)
Sex	
Male	16
Female	60
Age	
18-29 years old	19
30-39 years old	26
40-49 years old	21
50-59 years old	10
60 years old and above	0
Educational Attainment	
No Grade Completed	1
Pre-School	0
Special Education	0
Elementary	0

CHARACTERISTICS	FREQUENCY <i>f</i> (<i>n</i> = 76)
High School	23
Post-Secondary	2
College Undergraduate	18
Baccalaureate/College Graduate	25
Post Baccalaureate Courses	4
Prefer not to say	3

Facebook Usage and the Transmission of Misinformation

Hours spent on Facebook. In examining the role of these respondents as gatekeepers to their Facebook networks, it is also vital to know how much time the Top Fans of Capas Information Office Facebook dedicate to the social media platform. The respondents shared their Facebook usage by revealing the hours they spent per day on the social media platform, as described in Table 2.

Twenty-nine respondents spent three to four hours on Facebook per day, which is close to the national average of social media use at four hours and 15 minutes (Kemp, 2021b). Combining it with the number of respondents who used the platform five hours and above ($f = 16$), more than half of the participants dedicated a significant amount of their social media usage to Facebook. Moreover, their high activity on the page corresponded with Deluiliis' (2015) conceptualization of a network gatekeeper in social media.

Table 2. *Hours Spent Per Day on Facebook*

HOURS	FREQUENCY <i>f</i> (<i>N</i> = 76)
Per day usage	
< 1 hour	7
1-2 hour/s	24
3-4 hours	29
≥ 5 hours	16

Misinformation encountered. After reporting their Facebook usage, the respondents shared how often they have encountered COVID-19 misinformation on the social media platform (Table 3).

In their day-to-day use of the social networking site, almost all respondents (69/76) reported having encountered varying numbers of COVID-19 misinformation contents. A total of 48/76 respondents stated that they were seeing one to two pieces of misinformation about the pandemic per use while navigating Facebook.

The results confirmed that information disorders regarding COVID-19 are still circulating on social media despite the actions taken by the platforms themselves (Brennen et al., 2020; Singh & Bagchi, 2020). This is of concern because COVID-19 misinformation exposure is being linked with belief, and belief is being associated with insufficient knowledge about the pandemic and low engagement with preventive behaviors (Lee et al., 2020).

Table 3. COVID-19 Misinformation Encountered on Facebook

MISINFORMATION PER USE	FREQUENCY <i>f</i> (<i>n</i> = 76)
None	7
1-2 content/s	48
3-4 contents	16
5-6 contents	5
≥ 7 contents	0

In summary, the respondents were dominantly female ($f = 60$), belonged to dominant age groups of Filipino Facebook users, and have finished high school or are in higher levels of studies. They used Facebook regularly, with more than half dedicating a significant amount of their social media usage to Facebook. However, in their day-to-day use of the social networking platform, almost all respondents have encountered COVID-19 misinformation online, with many facing one to two pieces of misinformation about COVID-19 on Facebook per use. Moreover, the respondents' social media profile and usage indicated that they were active social media users, fitting the description of a gatekeeper by Deluliis (2015). While pandemic misinformation is still circulating on Facebook, misinformation does not exist in a vacuum. In the vast interconnected networks of Facebook, other communication actors influence its transmission towards the gates of Facebook users.

Posters of COVID-19 Misinformation

The poster is the origin of COVID-19 misinformation that tries to enter a network. The respondents ranked from 1 to 5 different communication actors, with 1 as the most frequent source of COVID-19 misinformation and 5 as the least frequent

source of misinformation about the pandemic. Their rankings are summarized in Table 4 and Figure 4.

Other public figures (e.g., social media influencers) ranked 1 among the posters, with 34 respondents saying they were their most frequent source of COVID-19 misinformation on Facebook.

The outcome of the ranking data suggests a top-down flow of false information on Facebook made possible by the far-reaching online presence and high engagement of social media personalities like influencers (Brennen et al., 2020). Moreover, given these other public figures' expansive reach and influence online, one post containing COVID-19 misinformation from this poster can be easily transmitted to a broad audience.

Ranked 2nd are friends, which include close and Facebook friends. The prioritization of their posts by Facebook's algorithm (Mosseri, 2018), the amount of false information they generate (Brennen et al., 2020), and their place as prominent members of the gated (see discussion on the gated network) could have influenced the ranking.

Moreover, the result showcases the bottom-up transmission and spread of COVID-19 misinformation (Brennen et al., 2020) and also the interchangeability of roles in a network where information can also come from members of the gated (Barzilai-Nahon, 2008). Consequently, the high connectedness of a gatekeeper with

this particular poster can potentially increase the chance of misinformation spread, furthering the reach of false information about the pandemic (Törnberg, 2018).

Ranked 3rd are celebrities and politicians. As mentioned earlier, misinformation from prominent figures reaches an audience through their large following and engagement (Brennen et al., 2020). However, other public figures like influencers surpassed celebrities and politicians as COVID-19 misinformation posters, which implies that the former dominates online spaces like social media. Another angle of looking at the results is that the accounts of politicians and celebrities may be handled by their social media managers (Duboff, 2016; Yang & Hetherington, 2019) who curate the content they release to avoid going viral for the wrong reason.

Lastly, ranked 4th are family members. According to the respondents, this poster is their least likely source of COVID-19 misinformation, which could be due to the respondents' trust in this particular poster. However, like friends, family members' high connectedness with the respondents and the trust they place in these posters could still potentially aggravate the diffusion of false information (Buchanan & Benson, 2019; Sterrett et al., 2019; Törnberg, 2018).

Table 4. *Average Rankings of Misinformation Posters*

POSTER	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Average Rank ^a	RANK
	(w ₁ = 5)	(w ₂ = 4)	(w ₃ = 3)	(w ₄ = 2)	(w ₅ = 1)		
	X ₁	X ₂	X ₃	X ₄	X ₅		
Other public figures ^b	34	12	15	8	7	3.76	1

POSTER	Rank 1 (w ₁ = 5)	Rank 2 (w ₂ = 4)	Rank 3 (w ₃ = 3)	Rank 4 (w ₄ = 2)	Rank 5 (w ₅ = 1)	Average Rank ^a	RANK
	X ₁	X ₂	X ₃	X ₄	X ₅		
Friends ^c	19	22	9	16	10	3.32	2
Politicians	11	11	17	21	16	2.74	3
Celebrities	5	19	20	15	17	2.74	3
Family members	7	12	15	16	26	2.45	4

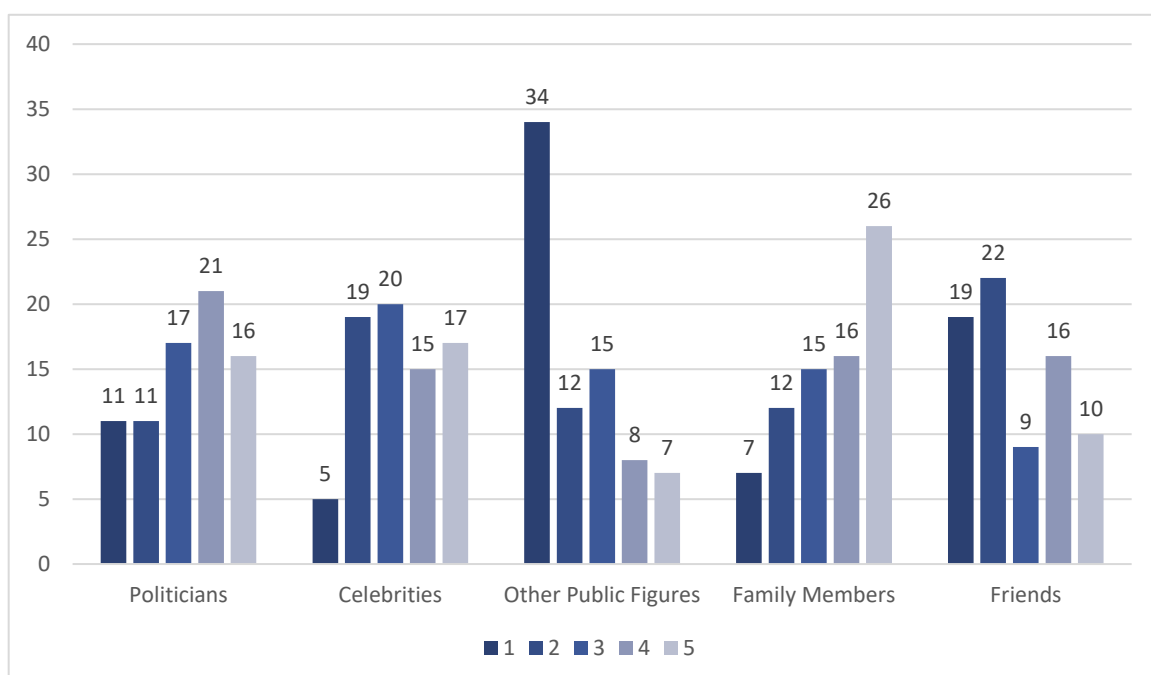
^a Average rank is $(x_1w_1 + x_2w_2 + x_3w_3 + x_4w_4 + x_5w_5) / \text{total responses}$; wherein x = number of responses and w = weight of the rank. The category with the highest average is rank 1, and the lowest average is rank 5.

^b e.g., social media influencers

^c Includes close and Facebook friends

Figure 4

Respondents' Ranking of Misinformation Posters



Note. The lower the number of the rank of a poster, the higher its frequency is to deliver misinformation about the pandemic. (n=76)

In summary, the respondents ranked the posters by the frequency they transmitted COVID-19 misinformation in the following order: other public figures, friends, celebrities and politicians (tied at the third spot), and family members. The top two posters illustrate that misinformation travels top-down and bottom-up (Brennen et al., 2020). Other public figures like influencers expose the respondents to false information about the pandemic through their wide reach and friends transmitting COVID-19 misinformation through the number of information disorders they generate and their prominent place in the network of the respondents. Finally, the diversity of posters is a manifestation of a dynamic network in social media and an indication that multiple posters can send (mis)information to the gatekeepers.

Facebook Features Used to Transmit COVID-19 Misinformation

From the source, COVID-19 misinformation is channeled through the features of Facebook towards the users' gates who partake in information control on the social networking site. The addition of features in the NGT framework reinforces the technological aspect of the theory; the features of social media like Facebook act as pathways that enable the connections in a network and facilitate the flow of information.

The participants identified and ranked the Facebook features where they encountered COVID-19 misinformation in Table 5 and illustrated in Figure 5.

Facebook newsfeed and the Facebook pages tied at the first spot (average rank = 3.49) are the top features that connected users to false information about the

pandemic. As much as the social network is considered a source of information for Filipinos (Basilisco & Cha, 2015; Chua, 2021), the survey strengthens evidence that false information about the pandemic continues to spread on Facebook (Brennen et al., 2020) and confirms the potential of social media to amplify information disorders (Acevedo, 2020; Cinelli et al., 2020; Tandoc et al., 2019; Tuazon et al., 2020; Vosoughi et al., 2018; Zarocostas, 2020).

The result also denotes the vulnerability of the features to be exploited for misinformation spread. For example, fake organization pages can be created and used to amplify false information about the pandemic (Waddell, 2020). On the other hand, it is essential to highlight the newsfeed as a top source of misinformation about the pandemic because it is a feature where all contents on Facebook converge, ranked by an algorithm determining what is relevant to a user using signals such as who posted it, and past interactions (Meta, n.d.). Not discounting the platform’s efforts to curb the infodemic (Singh & Bagchi, 2020), there is a possibility that a user’s newsfeed can be populated by COVID-19 misinformation just by their connection to their network or their past interactions with false information about the pandemic.

Table 5. *Average Rankings of Facebook Features*

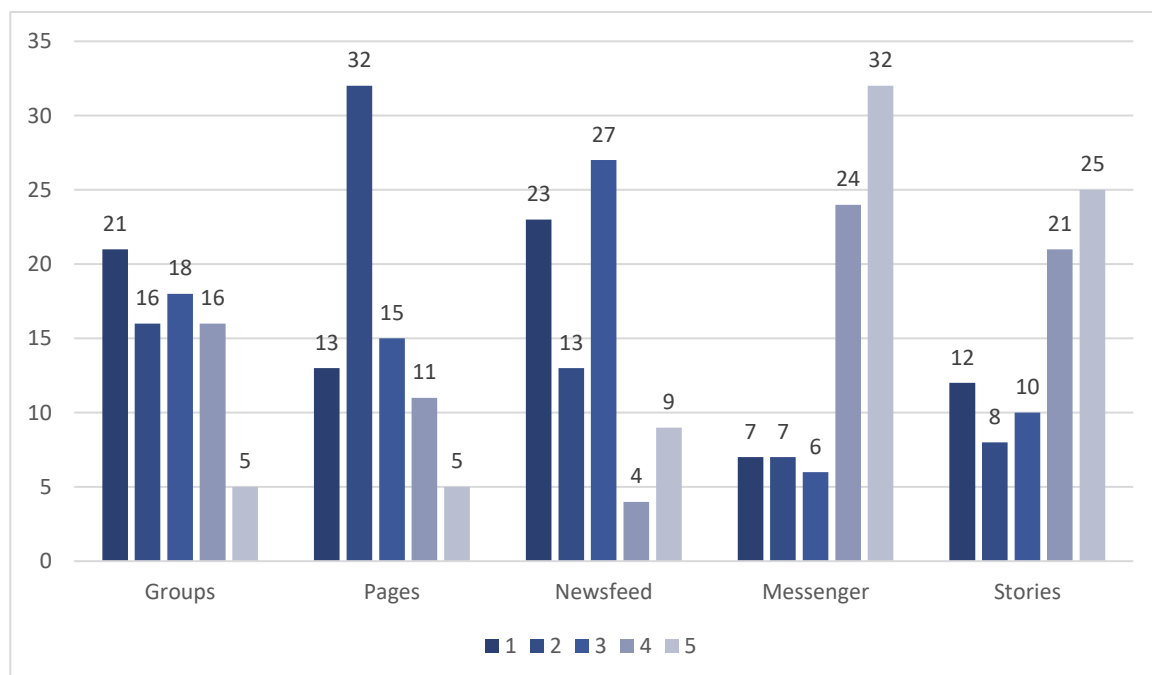
FEATURE	Rank 1 (w ₁ = 5)	Rank 2 (w ₂ = 4)	Rank 3 (w ₃ = 3)	Rank 4 (w ₄ = 2)	Rank 5 (w ₅ = 1)	Average Rank ^a	RANK
	x ₁	x ₂	x ₃	x ₄	x ₅		
Newsfeed	23	13	27	4	9	3.49	1
Pages	13	32	15	11	5	3.49	1

FEATURE	Rank 1 (w ₁ = 5)	Rank 2 (w ₂ = 4)	Rank 3 (w ₃ = 3)	Rank 4 (w ₄ = 2)	Rank 5 (w ₅ = 1)	Average Rank ^a	RANK
	X ₁	X ₂	X ₃	X ₄	X ₅		
Groups	21	16	18	16	5	3.42	2
Stories	12	8	10	21	25	2.49	3
Messenger	7	7	6	24	32	2.12	4

^a Average rank is $(X_1W_1 + X_2W_2 + X_3W_3 + X_4W_4 + X_5W_5) / \text{total responses}$; wherein x = number of responses and w = weight of the rank. The category with the highest average in rank one, and the lowest average in rank five.

Figure 5

Respondents' Ranking of Facebook Features



Note. The lower the number of the rank of a feature, the higher its frequency is to deliver misinformation about the pandemic. (n = 76)

In summary, misinformation is channeled through the following features of Facebook towards the users' gates: Newsfeed, Pages, Groups, Stories, and

Messenger. This result reinforces that COVID-19 misinformation is still circulating on Facebook (Brennen et al., 2020). Moreover, the findings strengthen the premise that a platform's features connect different communication actors in a network, enabling the transmission, restriction, and diffusion of information and, by extension, information disorders.

COVID-19 Misinformation Narratives Received

COVID-19 Misinformation Themes

The transmitted COVID-19 misinformation from the posters through Facebook features finally reaches the gates of social media users, acting not only as information consumers but also information controllers. In reception, users encounter different themes of false information about the pandemic. The frequency distribution of misinformation themes is shown in Table 6 and Figure 6.

According to the Top Fans of this study, the top six narratives they have come across on the platform are in order: false and misleading statements, anti-vaccine stories, spread and deaths, false attribution of statements, cures and preventive measures, and exaggeration of the COVID-19 pandemic.

False and misleading statements during the pandemic are a worldwide phenomenon, with authorities also contributing to creating false and misleading claims (Macaraeg, 2020). For example, former Philippine President Rodrigo Duterte claimed gasoline and diesel could be used to disinfect masks (Rappler, 2020).

Anti-vaccine stories ended up as second top theme of COVID-19 misinformation probably due to the government's push for a national vaccination drive (DOH, 2021), which coincided with the study's data collection period.

The spread and deaths narrative came third, which covers false narratives about new infections and mortalities. There were confusions as to how many were really affected or died from the pandemic. It could be due to the reactive response to the infodemic, weak information systems, and the lack of reprimand for the posters of false information (Dela Cruz, 2021).

False attribution of statements is another popular theme of misinformation that the respondents encountered. This theme is prevalent in the Philippines and the falsehoods were mostly delivered via fake quote cards attributed to public figures (Macaraeg, 2020).

The theme 'cures and preventive measures' now placed only sixth place, which diverged from the top global misinformation narratives fact-checked by IFCN (Macaraeg, 2020) that placed this as number one. The decline of a misinformation theme from prominence could indicate shifting conversations about the pandemic. As another example, the study of Lee et al. (2020) conducted within the early months of the pandemic showed misinformation about masks as top misinformation content. However, in this study conducted from November 2021 to January 2022, the anti-mask narrative, which is the included false narrative about masks in the study, drops in the bottom six. At the same time, 'policies,' which placed top three in IFCN, falls to the bottom six COVID-19 misinformation themes.

Finally, tied with cures and preventive measures is exaggeration of the COVID-19 pandemic, both themes were widely circulating in the digital spaces of the respondents. These falsehoods could be rooted in the lack of understanding of the disease due to the weak infrastructure of the country against false information (Dela Cruz, 2021).

However, as mentioned earlier, the top narratives may only hint at the information flow within the respondents' networks. The top COVID-19 misinformation narratives signify the information transmission happening within the respondents' networks, scratching the surface of the narratives amplified in their digital town squares (Johnson, 2018; Mazali, 2011; Rudkowski, 2020).

On the flip side, the divergence of themes from the global ranking may also indicate shifting conversations in social media. As the pandemic progresses and new developments emerge, the themes of misinformation can also change.

Meanwhile, the top six misinformation themes fully capture the effects of the infodemic during the COVID-19 pandemic, where essential information about the pandemic spreads side-by-side with false information (Brennen et al., 2020). The leading COVID-19 misinformation narratives and their diffusion "create fear, confusion, and distrust in authorities" (Macaraeg, 2020, para. 1).

Likewise, the range of the topics also showcases an information overload, another characteristic of the infodemic (WHO, 2020), with different narratives

(including false information) competing for space in the screens of social media users.

Looking back at the shifting themes of misinformation, false information quickly adapts to the trends. Consequently, the infodemic, its adaptations, and its effects present a challenge to the anti-misinformation drives of stakeholders such as authorities, fact-checkers, and development communicators (WHO, 2020).

Therefore, monitoring the leading and shifting themes from local, national, and global perspectives can help stakeholders determine the focal point for combatting misinformation about the pandemic.

Table 6. COVID-19 Misinformation Themes Encountered by the Respondents

MISINFORMATION	FREQUENCY <i>f</i> (<i>n</i> = 76)
False and misleading statements	38
Anti-vaccines	32
Spread and deaths	29
False attribution of statements	28
Cures and preventive measures	27
Exaggeration of the COVID-19 pandemic	27
Conspiracy theories and predictions	26
Statistical report of spread and deaths	24
Spread and deaths among public figures	20
Symptoms	20
Denial or downplaying the pandemic	19

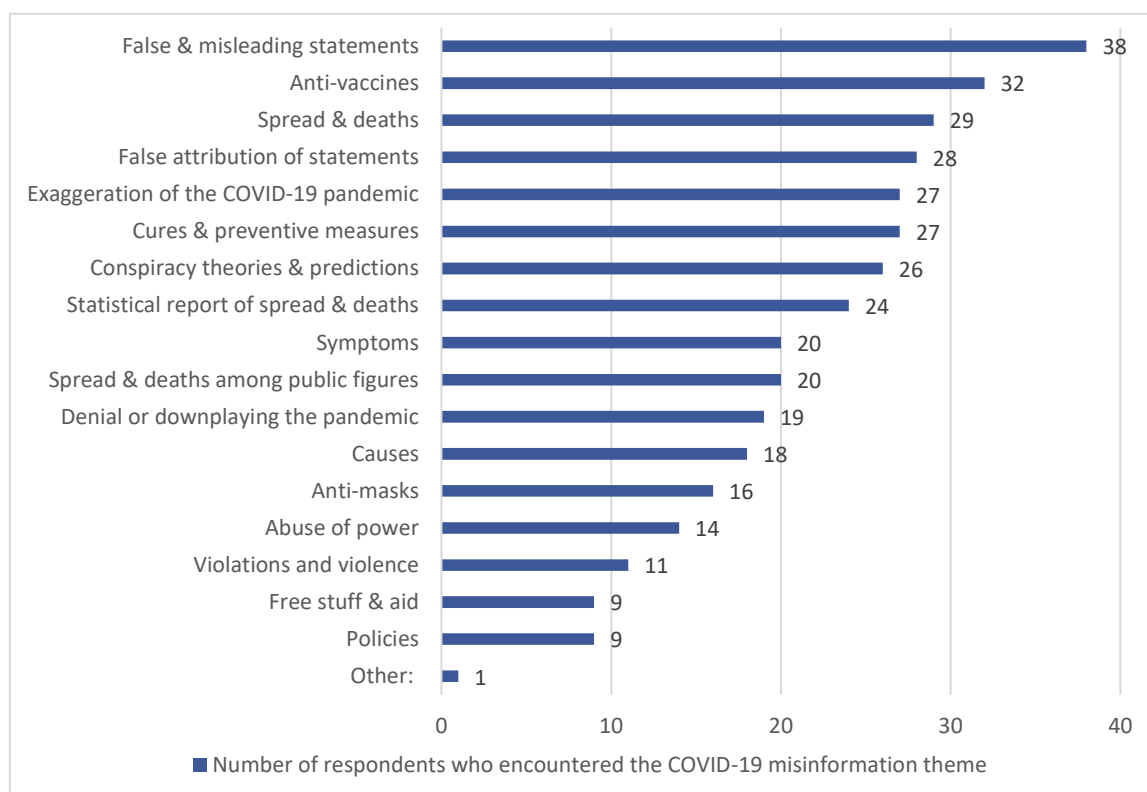
MISINFORMATION	FREQUENCY <i>f</i> (<i>n</i> = 76)
Causes	18
Anti-masks	16
Abuse of power	14
Violations and violence	11
Policies	9
Free stuff and aid	9
Other ^a	1

Note. Multiple answers

^a The respondent selected this option but did not indicate a misinformation theme.

Figure 6

Top COVID-19 Misinformation Themes



Note. Respondents could select multiple themes of COVID-19 misinformation in the questionnaire. (*n*=76)

Verification Methods

As the social media users interact with the different narratives of false information about the pandemic, they, as the gated of the poster, may possess salience attributes. These attributes may include alternatives that allow them access to mechanisms to fact-check if the information received is COVID-19 misinformation. The methods used are summarized in Table 7 and Figure 7.

Some of the Top Fans of the page said that reading the whole story was the best way to detect false information about the pandemic (59/76). Going past the headline allows a user to get more context about the story and evaluate its facticity before interacting with the content on social media.

The method that garnered the second highest votes was 'checking the credibility of the source and author' (56/76). For the respondents, the trustworthiness of the source or publisher is still essential, which contradicts Sterrett et al.'s (2019) findings where the identity of the sharer has more weight than the source or publisher. Moreover, according to Fleming (2020), a suspicious source should raise a red flag on the content.

The third most important method is 'visiting other sources to check if two stories report the same information' (55/76). This validates the value placed by the respondents on the source. In addition, it demonstrates their capability as gated to break away from their network and source other information through alternatives.

Lastly, the fourth crucial verification method for the participants is ‘verifying if the social media account or website is fake’ (46/76), which further strengthens the importance of the source for the respondents. Moreover, it is a valuable technique for validating information because fake accounts and pages can be created to spread false information and target social media users (Sankin, 2020; Waddell, 2020).

The variety of verification methods the participants apply demonstrate that they are not passive consumers of information. Rather, as information controllers, they possess attributes that allow them to authenticate the information they receive. Moreover, the top verification methods uncovered showcase the importance of the source and the full context of the content for the gatekeepers in this study.

Table 7. *Verification Methods Employed by the Respondents*

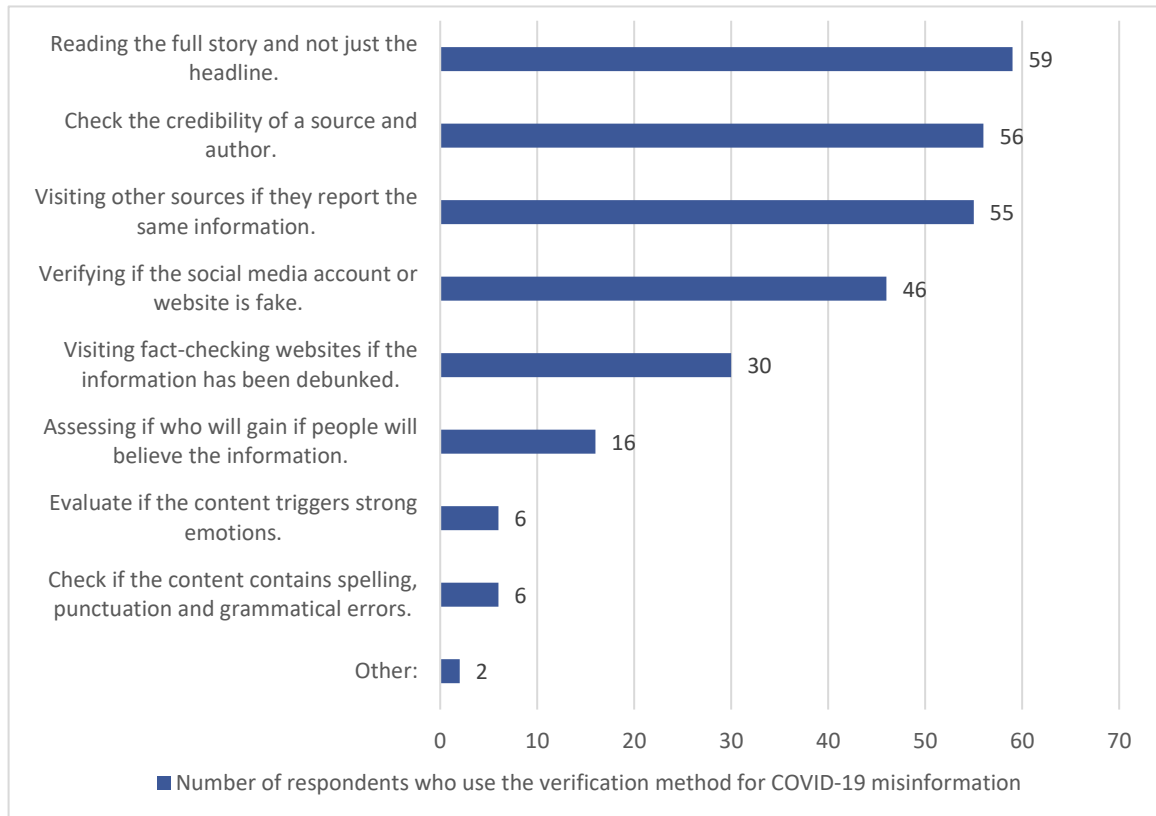
VERIFICATION METHOD	FREQUENCY <i>f</i> (<i>n</i> = 76)
Reading the full story and not just the headline	59
Check the credibility of a source and author	56
Visiting other sources if they report the same information	55
Verifying if the social media account or website is fake	46
Visiting fact-checking websites if the information has been debunked	30
Assessing if who will gain if people will believe the information	16
Check if the content contains spelling, punctuation and grammatical errors	6
Evaluate if the content triggers strong emotions.	6
Other ^a	2

Note. Multiple answers

^a One respondent answered reading more stories while the other left the answer field blank.

Figure 7

Top Verification Methods



Note. Respondents could select multiple verification methods of COVID-19 misinformation in the questionnaire. ($n=76$)

In summary, the top misinformation themes the respondents encountered were false and misleading statements, anti-vaccine stories, spread and deaths, false attribution of statements, cures and preventive measures, and exaggeration of the COVID-19 pandemic. The leading narratives show that in an infodemic, false information co-exists with verified information, multiple narratives create an information overload (WHO, 2020), and falsehoods adapt to the shifting conversations in online spaces.

On the other hand, the respondents employed verification methods to validate COVID-19 misinformation, such as reading the whole story, checking the credibility of the source and author, visiting other sources, and verifying if the social media account or website was fake. Finally, the top verification methods of the participants show that they valued the source and the full context of the content.

Gatekeeping Activities of the Respondents

The respondents acting as gatekeepers in their network bared their actions when encountering false information about the pandemic. These could be restricting or preventing and diffusing or sharing. Their gatekeeping activities influenced the flow of information in their network.

Using Likert Scales, the Top Fans of Capas Information Office Facebook page who participated in the study identified how frequently they performed an action on COVID-19 misinformation. The mode (Mo) was used to determine the most recurring action.

Restricting Gatekeeping Activities

A Facebook user can limit the movement of COVID-19 misinformation by performing restricting gatekeeping activities. How often the respondents performed these gatekeeping activities is summarized in Table 8 and illustrated in Figure 8.

When limiting the entry of an information disorder into the network, withholding is the popular restricting action, wherein a user cuts off the information

flow from the poster by blocking or unfollowing the poster ($f = 21$, $Mo = \text{always}$). Information is technically withheld because it was not transmitted, and the gatekeeper severed the network connection due to the action, inhibiting further interactions and exposure to COVID-19 misinformation. The result indicates that some of the respondents were choosing a proactive approach toward COVID-19 misinformation, and they preferred to utilize the action provided by the platform (Tandoc et al., 2019). This affirms the goals of network gatekeeping to protect the gated from outside forces (i.e., COVID-19 misinformation from posters) and maintain the information flow (Barzilai-Nahon, 2008).

The second restricting activity is disregarding the misinformation sometimes ($f = 24$) and always ($f = 22$). Ignoring false information removes the factor of interaction that spreads misinformation. While this is a positive action, this is not proactive and may even manifest indifference in acting on information disorders related to the pandemic (Tandoc et al., 2019). Moreover, inaction toward the false information further allows its existence in the platform, and, consequently, its proliferation. Alternatively, Tandoc et al. (2019) suggest that disregarding false information might be rooted in the overwhelming presence of false information and feeling helpless in solving the problem.

On the other hand, deletion is an effective way to eliminate false information in a network. Still, the respondents only performed it sometimes ($f = 31$), meaning they only occasionally reported COVID-19 misinformation to Facebook for removal. Besides, flagging a post for false information involves extra steps on the end of the reporter (i.e., selecting the category of the report, choosing the type of false

information, and requesting another review if it is not taken down), which could be why the respondents chose restricting actions with less effort to perform, such as withholding and disregarding.

Lastly, the respondents claimed that they have never performed channeling ($f = 41$), where they have to divert the false information to a messaging application to send a correction to the source. Although it is a valuable approach to stop the spread the false information (Brode and Vraga, 2018, as cited in Tandoc et al., 2019), according to Tandoc et al. (2019), proactively correcting false information is influenced by the relevance of the information to the receiver, their relationship to the poster, and their perceived ability to correct the content.

Promoting the use of proactive gatekeeping actions could potentially help in the fight against COVID-19 misinformation by limiting its reach and entry into the network (withholding), offering factual information to the poster (channeling), and even eliminating the false information from the network (deletion). The researcher forwards that disregarding posts containing the false information about the pandemic limits interaction and further diffusion, but a gatekeeper still allows its existence in the network, allowing other users to diffuse it.

Table 8. *Respondents' Restricting Gatekeeping Activities*

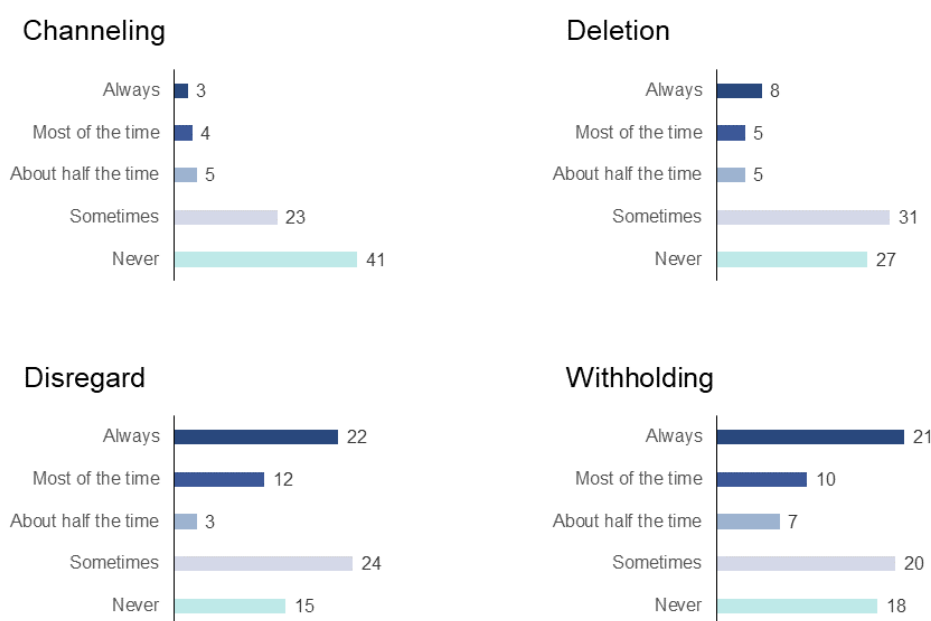
ACTIVITIES	Always	Most of the Time	About Half the Time	Sometimes	Never
Channeling	3	4	5	23	41
Deletion	8	5	5	31	27

ACTIVITIES	Always	Most of the Time	About Half the Time	Sometimes	Never
Disregard	22	12	3	24	15
Withholding	21	10	7	20	18

Note. Restricting gatekeeping activities are as follows: channeling is messaging the source of COVID-19 misinformation for correction; deletion is reporting the post to Facebook; disregard is ignoring the COVID-19 misinformation; withholding is unfollowing or blocking the source of COVID-19 misinformation. Mode of each gatekeeping activity is in bold. ($n = 76$)

Figure 8

Respondents' Restricting Gatekeeping Activities



Note. Restricting gatekeeping activities are as follows: channeling is messaging the source of COVID-19 misinformation; deletion is reporting the post to Facebook; disregard is ignoring the COVID-19 misinformation; withholding is unfollowing or blocking the source of COVID-19 misinformation. ($n = 76$)

In brief, the primary restricting approach of the respondents to COVID-19 misinformation was to cut off the information flow from the poster by blocking or unfollowing. However, other proactive activities were only performed sometimes (deletion) and never (channeling). They mostly disregarded or ignored the misinformation, indicating that the gatekeepers in this study chose or performed

restricting gatekeeping activities that needed less efforts. Encouraging the social media users who act as gatekeepers to use more proactive restricting approaches could further suppress the flow of COVID-19 misinformation.

Diffusing Gatekeeping Activities

Gatekeeping activities can also amplify information disorders about the pandemic within the users' network. How often the respondents performed diffusing activities is summarized in Table 9 and illustrated in Figure 9.

The respondents' answers leaned more towards sometimes and never, meaning they limited actions that could supposedly prevent the spread of misinformation by limiting their interaction with COVID-19 misinformation.

Respondents reported that they never displayed (55/76), localized (45/76), and repeated (52/76) misinformation about the pandemic.

In display, a gatekeeper transforms the information into a media like a meme. On the other hand, localization is sharing the post with a caption in the local language of the gatekeeper. Repetition is just clicking the share button sans a caption.

Chen et al. (2015) warned that respondents might alter their answers in relation to their real-world actions to be more desirable as the act of spreading misinformation can be viewed as socially unacceptable. However, the researcher argues that by choosing not to perform the actions, the respondents prevented

misinformation from entering the network and maintained the information flow within the boundaries of the network (Barzilai-Nahon, 2008). Limiting the reproduction and interaction with false information also reduced its reach and spread in the online space.

Still, misinformation spread because there were still respondents who did integration, manipulation, and addition.

Almost half (31/76) of the respondents claimed that they sometimes reacted to posts containing COVID-19 misinformation (integration). When the gatekeepers integrated their response through Facebook reactions (i.e., like, love, care, haha, wow, sad and angry) to the post, these interaction would be visible to their gated network, therefore, paving the way for the entry of the misinformation into the network.

Engaging with COVID-19 misinformation extends the reach of the information disorder (Buchanan & Benson, 2019). Moreover, buildup of reactions in a post containing false information could potentially increase the chance that it will be distributed to other users. Interactions of social media users with content containing information disorders such as COVID-19 misinformation could be due to the content catching the attention of social media users and finding it interesting and a good conversation topic (Chen et al., 2015).

On the other hand, the respondents seemed to be divided on whether they would add or manipulate the misinformation. Looking closely at these diffusing

activities, adding a comment increases a content’s engagement, hence furthering its diffusion. Meanwhile, manipulating the misinformation to serve the goal of the gatekeeper (i.e., to correct the misinformation) could potentially warn the network about the false information, although it still echoes the content of the misinformation to perform the correction. The divide of the respondents between answering ‘sometimes’ and ‘never’ is probably driven by the effort required to apply the gatekeeping activities. Furthermore, their execution of these actions depends on the topic’s relevance to the gatekeeper, their relationship with the poster, and their perceived capacity to correct misinformation online (Tandoc et al., 2019). Finally, if these diffusing gatekeeping activities are applied to correct a COVID-19 misinformation, the researcher suggests to apply first channeling to avoid adding engagement or echoing the original false information to the network.

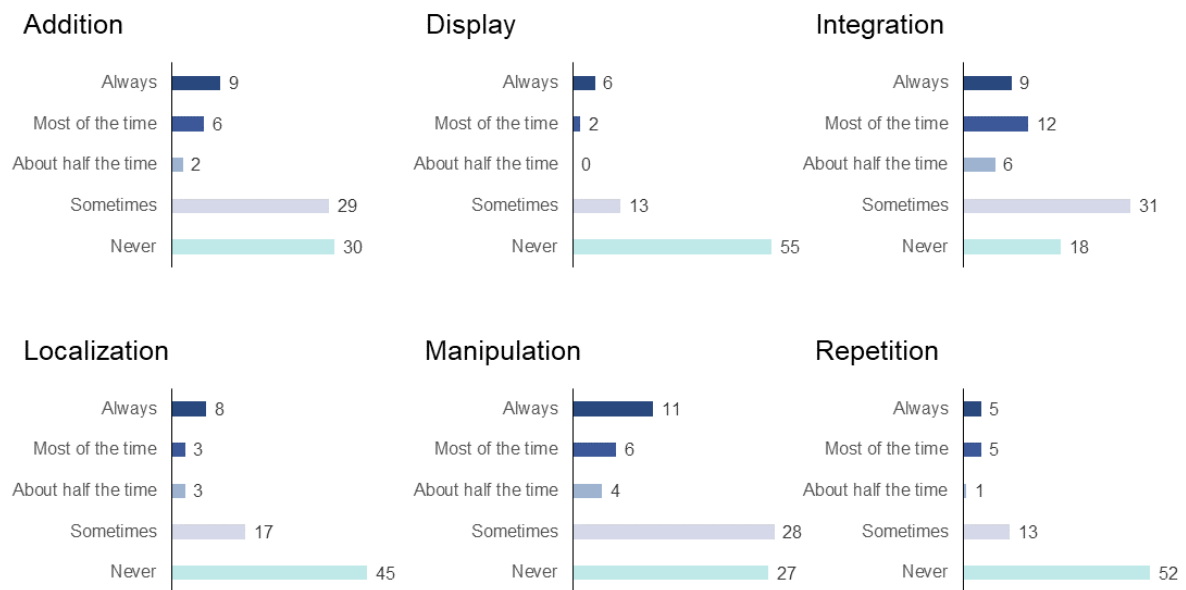
Table 9. *Respondents’ Diffusing Gatekeeping Activities*

ACTIVITIES	Always	Most of the Time	About Half the Time	Sometimes	Never
Addition	9	6	2	29	30
Display	6	2	0	13	55
Integration	9	12	6	31	18
Localization	8	3	3	17	45
Manipulation	11	6	4	28	27
Repetition	5	5	1	13	52

Note. The diffusing gatekeeping activities are as follows: addition is commenting on the post containing the COVID-19 misinformation; display is creating media about COVID-19 misinformation like memes; integration is reacting to the post containing COVID-19 misinformation; localization is sharing a post containing COVID-19 misinformation with caption in local language; manipulation is posting a correction about the COVID-19 misinformation; repetition sharing a post containing COVID-19 misinformation without caption. Mode of each gatekeeping activity is in bold text. (*n* = 76)

Figure 9

Respondents' Diffusing Gatekeeping Activities



Note. The diffusing gatekeeping activities are as follows: addition is commenting on the post containing the COVID-19 misinformation; display is creating media about COVID-19 misinformation like memes; integration is reacting to the post containing COVID-19 misinformation; localization is sharing a post containing COVID-19 misinformation with caption in local language; manipulation is posting a correction about the COVID-19 misinformation; repetition sharing a post containing COVID-19 misinformation without caption. ($n = 76$)

In summary, the diffusing gatekeeping activities allow the spread of COVID-19 misinformation by echoing its content (display, localization, manipulation, and repetition) and increasing its engagement (addition and integration). More than half of the gatekeepers never displayed, localized, and repeated COVID-19 misinformation. Moreover, the respondents were divided on whether to perform the actions addition and manipulation. However, the gatekeepers in this study diffused COVID-19 misinformation by integrating Facebook reactions to the post containing the false information; the response extends the reach of the content (Buchanan & Benson, 2019).

Generally, the results point to respondents choosing social media actions with less effort to perform. Whether to restrict the entry of COVID-19 misinformation through withholding and disregard or interacting with the content allowing its passage through the gates using integration, the respondents are more likely to perform gatekeeping activities that require less action.

Moreover, the Top Fans who participated in the study were more restrictive when it comes to false information about the pandemic, favoring restricting gatekeeping activities and limiting the application of diffusing actions. Finally, the gatekeeping behavior of the gatekeepers in this study on COVID-19 misinformation fulfills two of the three goals of the Network Gatekeeping Theory: to protect the gated from outside forces and maintain the information flow in the network.

The Gated Network of the Respondents

Through the various social media actions they apply, the respondents are participating in the gatekeeping process (Deluiliis, 2015), and through these actions, they maintain and influence the information flow in their network (Barzilai-Nahon, 2008). Part of the gatekeeping process is letting the information into the network, and the receivers of the diffused information are the members of the gated network. Furthermore, the diffusing gatekeeping actions do not just open the gate for COVID-19 misinformation, but these actions extend the reach of false information about the pandemic (Buchanan & Benson, 2019).

According to the respondents, those who were likely to see their interactions with COVID-19 misinformation are their friends (54/76), their family (47/76), and their

followers (42/76) (Table 10). Consequently, the results hint at the composition of the gated network of the participants, dominated by their friends and followed by their family members. These gated members will likely see the respondents' interactions with COVID-19 misinformation because Facebook also prioritizes the distribution of the participants' social media activities to these particular contacts (Mosseri, 2018). Lastly, as a social networking site, Facebook allows the expansion of connections of its users (Kaplan & Haenlein, 2010), and the network of the participants extends beyond their friends and family. Majority of the respondents stated that they have other followers, which denotes that their interaction with COVID-19 misinformation will diffuse to a broader audience.

Aside from showing that the respondents were secondary gatekeepers (i.e., they have applied information control to the content from posters who also applied gatekeeping actions), the results likewise point to the interchangeability of roles in a network like social media as established in the theoretical and conceptual frameworks. For example, their friends serve as both top sources and receivers of COVID-19 misinformation. Thus, the respondents' network can receive information as gated, but they can also transmit information as posters.

Networks in social media like Facebook are complex, and the gatekeeping process can happen in different dimensions and levels (Barzilai-Nahon, 2008). A gatekeeper can be a gated and vice-versa. Future studies can investigate the salience of the gated network of secondary gatekeepers to explore this interchangeability of roles.

Table 10. *Gated Network of the Respondents*

GATED NETWORK	FREQUENCY <i>f</i> (<i>n</i> = 76)
Friends	54
Family	47
Other Followers	42

Note. Multiple answers

In summary, the gated networks of the respondents consisted of the following in order: friends, their family, and their followers. The results imply that roles can interchange within a network, where a social media user can be a poster and a member of the gated. Moreover, the reach of the respondents' interaction with COVID-19 misinformation extends beyond their friends and family members.

Relationship of Independent and Dependent Variables

The association between the characteristics of the respondents and the gatekeeping activities was examined using nonparametric tests. In the case of sex and the gatekeeping activities, the rank-biserial correlation was applied. Meanwhile, Spearman's rank-order correlation tested the associations between the information control activities and the ordinal variables such as age, education, hours spent on Facebook, and misinformation encountered. Spearman was also applied to measure the association between verification methods and the gatekeeping actions. The results are summed up in Table 11.

In general, the nonparametric measures reveal very weak to weak associations between the characteristics of gatekeepers (i.e., sex, age, educational

attainment, hours spent on Facebook, misinformation encountered, and the number of verification methods) and the gatekeeping activities they apply.

In terms of sex, being a male respondent was associated with being more restrictive on the movement of COVID-19 misinformation. However, this group was also associated with performing the diffusing activities such as integration, localization, and manipulation. Meanwhile, being a female respondent was associated with the diffusing gatekeeping activities such as addition, display, and repetition, while no restricting activities were associated with this group, supporting Chen et al.'s (2015) findings that women share more misinformation on social media.

On the other hand, despite being more exposed to the infodemic (Allington et al., 2020; Lee et al., 2020), the sample's younger members were associated with performing all social media actions that restricted COVID-19 misinformation.

In addition, the respondents with lower educational attainment were linked to performing all diffusing social media actions except addition. In contrast, the participants with higher educational attainment were more restrictive when encountering COVID-19 misinformation.

A peculiar pattern emerged in the relationship between hours spent on Facebook and the gatekeeping activities. The measure shows that a respondent spending less time on the platform was both linked to restricting COVID-19 misinformation (three out of four rGAs) and diffusing it into the network (five out of six

dGAs). In contrast, respondents who spent more time on Facebook were more likely to report the post (deletion) or attach a caption in a local language (localization).

When it comes to the amount of COVID-19 misinformation they encountered on Facebook, the respondents exposed to more misinformation were more likely to perform addition, display, localization, and manipulation. Thus, as the Top Fans who participated in the study encountered more COVID-19 misinformation, they were more likely to diffuse the false information about the pandemic. Likewise, the respondents who employed fewer verification methods were more likely to apply the diffusing activities such as addition, display, localization, and manipulation. Therefore, it is safe to say that the respondents who performed fewer verification methods were more likely to diffuse the COVID-19 misinformation.

Table 11. *Correlation Between Gatekeepers' Characteristics and Gatekeeping Activities*

VARIABLES	GATEKEEPING ACTIVITIES ^a									
	R1	R2	R3	R4	D1	D2	D3	D4	D5	D6
Sex										
Male	.18	.20	.04	.16			.12	.25	.15	
Female					-.01	-.02				-.01
Age										
Younger	.06	.02	.10	.004			.01	.16		.02
Older					-.10	-.16			-.03	
Education										

VARIABLES	GATEKEEPING ACTIVITIES ^a									
	R1	R2	R3	R4	D1	D2	D3	D4	D5	D6
Higher		-.13	-.11	-.24	-.01					
Lower	.001					.14	.07	.04	.15	.09
Hours^b										
More		-.20						-.02		
Less	.06		.20	.08	.08	.15	.15		.17	.20
ME^c										
More	-.14	-.04			-.05	-.04		-.02	-.01	
Less			.21	.12			.09			.02
VM^d										
More			-.12	-.14			-.02			-.01
Less	.18	.01			.18	.28		.001	.06	

Note. The alignment of the coefficients indicates the association with the particular category ($r_{rb} = .00-.19$, very weak; $r_{rb} = .20-.39$, weak; $r_s = .00-.19$, very weak; $r_s = .20-.39$, weak).

^a The gatekeeping activities are coded as follows: R1 is channeling; R2 is deletion; R3 is disregard; R4 is withholding; D1 is addition; D2 is display; D3 is integration; D4 is localization; D5 is manipulation; D6 is repetition.

^b Hours spent on Facebook per day

^c Misinformation encountered on Facebook per use

^d Verification methods used by the respondents to identify COVID-19 misinformation

In summary, results show very weak to weak associations between the characteristics of gatekeepers (i.e., sex, age, educational attainment, hours spent on Facebook, misinformation encountered, and the number of verification methods) and

the gatekeeping activities they apply. Further ramifications of the methodology (e.g., larger random samples) can be done.

Typology of Gatekeeping Activities in Legacy and Social Media

The study affirmed the participation of social media users in the gatekeeping process within the digital environments provided by the Internet and social networking sites like Facebook.

In the past, the position of gatekeeper was monopolized by communication workers in legacy media (i.e., print, radio, and television), with the audience traditionally sourcing information that shapes their reality from these channels (Shoemaker & Vos, 2009). The Internet and social media brought changes to the information environment of the audience. While Rusdi & Rusdi (2020) and Welbers & Opgenhaffen (2018) still see journalists, editors, and publishers, who shifted their reportage online, as the holders of the gatekeeper position in the new digital spaces, Mehrotra (2017) contends that the social media platforms themselves dominate the process of information control by the way they structure their content algorithms and platform dynamics.

However, emphasis should also be given to social media users, who are at the core of these platforms, and their participation in the information control process, wherein their actions influence the diffusion, restriction, and visibility of content (Shoemaker & Vos, 2009; Singer, 2013) and by extension, information disorders like COVID-19 misinformation.

This research provides a framework and preliminary observations to examine how social media users affect information flow and assume the role of gatekeepers on platforms like Facebook. It explores the individual level of network gatekeeping of Barzilai-Nahon (2008) and expands the conceptualization of social media network gatekeeping by Deluliis (2015) as applied in the context of restricting and diffusing COVID-19 misinformation.

The literature and findings show how gatekeeping by social media users in social networking platforms differ from gatekeeping or information control in legacy media. In Table 12, the researcher proposes the characteristics of gatekeeping in social media (platform and individual level) versus gatekeeping in legacy media and how these information controllers act on information disorders.

Table 12. *Typology of the Characteristics of Gatekeeping in Social Media versus Legacy Media (Siron, 2022)*

	Legacy Media^a	New Media	
		Social Media Platform	Social Media User
Authority	Internal authority	Internal authority	Individual
Gatekeeper	Communication workers (e.g., journalists, editors, and broadcasters)	Platform owners and administrators	Users
Poster (Source)	Mediated by the channel	Users	Multiple, could be another gatekeeper, gated, or an external force

	Legacy Media ^a	New Media	
		Social Media Platform	Social Media User
Information control	Editorial	Algorithm and platform dynamics	Relies on social media actions provided by the network
Information flow	Mono-directional, top-down	Relies on the activities of users	Multidirectional, Top-down and bottom-up
Gated (Receivers)	Audience	Users	Members of user's network
			Possess alternatives that allow them to gather information from other sources.
Actions towards information disorders	Fact-check	Restrictive, uses content policies and relies on fact-checkers	Restrictive, uses social media actions: however, interactions with information disorders also aid diffusion
			Will likely choose actions requiring less effort to perform

^a Print, radio, and television

Legacy and social media platforms impose their information control function as internal authorities, having their particular information regulations as institutions

and social networks, respectively (Barzilai-Nahon, 2008). For legacy media such as print radio and television, communication workers like journalists, editors, and broadcasters are the central gatekeepers (Shoemaker & Vos, 2009), using editorial mechanisms to perform gatekeeping (Barzilai-Nahon, 2008).

However, the direction of information in legacy media is only mono-directional, travelling from the top (i.e., communication workers) to the bottom (i.e., the audience who are the gated) since they mediate between the source and the audience (Shoemaker & Vos, 2009). On the other hand, the owners and administrators of social networking sites utilize their algorithms and platform dynamics to control the movement of information to their users (Mehrotra, 2017).

However, worth noting is the reliance of social media platforms on users to enact their gatekeeping function and facilitate information creation and flow due to their Web 2.0 and UGC foundations (Kaplan & Haenlein, 2010). Nevertheless, the users are still the gated of social networking sites because the dynamics and algorithms embedded on the platform affect the information users receive (Mehrotra, 2017).

Meanwhile, social media users exercise their network gatekeeping authority at the individual level. This study shows that their personal actions determine if the contents from diverse sources will enter their network, but their collective gatekeeping applications influence the movement of contents in the digital space (Törnberg, 2018; Vosoughi et al., 2018).

However, their application of gatekeeping depends on what actions are allowed by the platform, and it differs in every social networking site. Social media actions are users' means of applying gatekeeping, and they can be divided into restricting and diffusing gatekeeping activities. Furthermore, due to the interchangeability of roles in social media, multiple sources can exist, and the gated network can also act as a poster and transmit information to the users who act as gatekeepers (Barzilai-Nahon, 2008); hence, information flows top-down and bottom-up, as seen in the results of the study.

Lastly, this study places gatekeeping in the context of the movement of information disorders like misinformation. While legacy media utilize fact-checking and social media platforms employ content policies to act on false information (Singh & Bagchi, 2020), data from this study show that users possess methods to verify false information and can even break away from their network in this verification process. Moreover, users are restrictive when it comes to information disorders but choose gatekeeping activities with less effort to perform.

In line with the initial observations, the research proposes the following hypotheses:

1. When social media users encounter information disorders, they are more likely to choose to apply restricting gatekeeping activities;
2. When interacting with information disorders on social media, users are more likely to choose actions with less effort to perform.

Therefore, social media users assume the role of gatekeepers in social networks like Facebook, and through different activities, they influence the movement of information, even information disorders like misinformation.

To complement the typology, the researcher also provides a synopsis of the gatekeeping activities and their equivalent social media actions that the gatekeepers can perform. Remarks from the researcher elaborating on the equivalence of the activities with the actions from past studies are also included (Table 13).

Table 13. *Network Gatekeeping Activities vis-à-vis Social Media Actions*

GATEKEEPING ACTIVITY	DEFINITION (BARZILAI-NAHON, 2008)	SOCIAL MEDIA ACTION	GATEKEEPING FUNCTIONALITY OF SOCIAL MEDIA ACTIONS (SIRON, 2022)
Restricting			
Channeling	Leading information through a channel	Messaging the source for correction (Tandoc et al., 2019)	The information is diverted within the boundaries of a messaging application, confining the interaction between the poster and the gatekeeper.
Deletion	Eliminating information	Reporting the post (Tandoc et al., 2019)	Flagging the content to Facebook can potentially reduce the content's visibility or eliminate it from the platform.

GATEKEEPING ACTIVITY	DEFINITION (BARZILAI-NAHON, 2008)	SOCIAL MEDIA ACTION	GATEKEEPING FUNCTIONALITY OF SOCIAL MEDIA ACTIONS (SIRON, 2022)
Disregarding	Ignoring the information	Ignoring the post (Tandoc et al., 2019)	Inaction towards the information disorder does not allow entry into the network, and it removes the factors of interaction and diffusion. However, it still allows existence in the platform.
Withholding	Keeping information from the gated network	Blocking or unfollowing the source (Tandoc et al., 2019)	The gatekeeper cuts off their connection with the poster, which also denies entry of information from the source and reduces further exposure from the poster.
Diffusing			
Addition	Joining of information	Commenting on the post (Tandoc et al., 2019)	The comment section complements the content as a separate section, but it is not entirely integrated like reactions. Commenting adds engagement and reach to the post.

GATEKEEPING ACTIVITY	DEFINITION (BARZILAI-NAHON, 2008)	SOCIAL MEDIA ACTION	GATEKEEPING FUNCTIONALITY OF SOCIAL MEDIA ACTIONS (SIRON, 2022)
Display	Visualizing information	Creating a media out of the information received like memes	User-generated content is an essential component of social media (Kaplan & Haenlein, 2010). The resulting media echoes the narrative of the information trying to enter the gate.
Integration	Mixing of information to form a new piece of information	Reacting to the social media post	Reactions (i.e., like, love, care, haha, wow, sad and angry) become part of the post but still visible to other users. Reacting adds engagement and reach to the post.
Localization	Adapting the information to a target audience	Adding a caption on the user's and their network's native language	Localizing information for the gated network of the gatekeeper might generate more interactions.
Manipulation	Changing information to serve the gatekeeper's goals	Posting a correction (Tandoc et al., 2019)	Amending the information is the ultimate goal of the gatekeeper; however, the action still exposes other users to the narrative of

GATEKEEPING ACTIVITY	DEFINITION (BARZILAI-NAHON, 2008)	SOCIAL MEDIA ACTION	GATEKEEPING FUNCTIONALITY OF SOCIAL MEDIA ACTIONS (SIRON, 2022)
Repetition	Restating the information	Just sharing the misinformation on one's Facebook timeline	information disorder. Sharing the post without a caption does not provide context to the intent of the gatekeeper; hence the action just echoes the original information.

Chapter 5

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

Summary

This research explored the emerging gatekeeping roles of social media users, particularly on Facebook, and their influence on the information flow and spread of COVID-19 misinformation on the platform. Underpinned by the Network Gatekeeping Theory, data were gathered through an online survey from November 15, 2021 to January 31, 2022 of 76 Facebook users who are Top Fans of Capas Information office Facebook page.

Data were analyzed using descriptive statistics and nonparametric measures such as rank-biserial and Spearman's rank-order correlations to test the association between the gatekeepers' characteristics and the gatekeeping activities.

Highlights of the findings are the following:

Profile of the Respondents

The respondents were dominantly female ($f = 60$). Moreover, in terms of age, most participants (66/76) belonged to the Philippines' largest age groups of social media users, ranging from 18-44 years old (Kemp, 2021b). When it comes to their educational attainment, almost all (72/76) finished high school or were in higher levels of studies. In addition, they were regular Facebook users, with more than half of the respondents (45/76) dedicating a significant amount of their social media usage to Facebook. However, in their day-to-day use of the social networking

platform, almost all respondents (69/76) encountered COVID-19 misinformation online, with 48 respondents facing one to two pieces of misinformation about COVID-19 on Facebook per use, which is worth highlighting due to the link between COVID-19 misinformation exposure and belief (Lee et al., 2020). Moreover, the respondents' social media profile and usage indicated that they were active social media users, fitting the description of a gatekeeper by Deluiliis (2015), and that pandemic misinformation was still circulating on Facebook (Brennen et al., 2020).

Posters of COVID-19 Misinformation on Facebook

Misinformation about the COVID-19 pandemic in a network like social media originates from a source, and the respondents ranked the posters by the frequency they transmitted COVID-19 misinformation in the following order: other public figures, friends, celebrities and politicians (tied at the third spot), and family members. The top two posters illustrate that COVID-19 misinformation travels top-down and bottom-up (Brennen et al., 2020), with other public figures like influencers exposing the respondents to false information about the pandemic through their wide reach and friends through the number of information disorders they generate and their prominent place in the gated network of the respondents. Finally, the diversity of posters displays a dynamic network in social media platforms like Facebook and an indication that multiple posters can send information and information disorders to the gatekeepers.

Facebook Features Transmitting COVID-19 Misinformation

Regarding the frequency of distributing COVID-19 misinformation, the respondents ranked the Facebook features as follows: Newsfeed and Pages (tied at

the first spot), Groups, Stories, and Messenger. The results highlight that COVID-19 misinformation is still spreading on Facebook (Brennen et al., 2020). It supports evidence that social networking sites play a role in the diffusion of false information (Acevedo, 2020; Cinelli et al., 2020; Tandoc et al., 2019; Tuazon et al., 2020; Vosoughi et al., 2018; Zarocostas, 2020) and that posters can utilize the features to spread information disorders about the pandemic (Sankin, 2020; Waddell, 2020). Moreover, the findings strengthen the premise that a platform's features connect different communication actors in a network, enabling the transmission, restriction, and diffusion of information and, by extension, information disorders.

COVID-19 Misinformation Themes and Verification Methods

The top misinformation themes on COVID-19 that the respondents saw on Facebook included: false and misleading statements, anti-vaccine stories, spread and deaths, false attribution of statements, cures and preventive measures, and exaggeration of the COVID-19 pandemic. The leading narratives show that in an infodemic, false information co-exists with verified information, multiple narratives create an information overload (WHO, 2020), and falsehoods adapt to the shifting conversations in online spaces. On the other hand, the respondents employed verification methods to validate COVID-19 misinformation, and their top four approaches were reading the whole story, checking the credibility of the source and author, visiting other sources, and verifying if the social media account or website is fake. Finally, the top verification methods of the participants show that they valued the source and the full context of the content.

Gatekeepers' Influence on COVID-19 Misinformation Flow

As gatekeepers to their respective networks, the Top Fans in this study took part in the gatekeeping process by deciding what to do with the information they received from the sources (Deluiliis, 2015; Shoemaker & Vos, 2009). They applied information control activities that can either restrict or diffuse the information (Barzilai-Nahon, 2008; Barzilai-Nahon, 2009).

The primary restricting approach of the respondents to COVID-19 misinformation was to cut off the information flow from the poster by blocking or unfollowing. However, other proactive activities were only performed sometimes (deletion) and never (channeling). Besides, reporting a post involved additional steps to fulfill, while proactively correcting false information was influenced by factors such as its relevance to the receiver, their relationship with the poster, and how they perceived their capability to correct the false information (Tandoc et al., 2019). Hence, the gatekeepers in this study chose restricting gatekeeping activities that required less effort to perform. This was supported by their occasional application of disregarding or ignoring the misinformation. Increasing the usage of proactive restricting approaches by social media users who act as gatekeepers could further suppress the flow of COVID-19 misinformation.

On the other hand, the gatekeepers in this study sometimes diffused COVID-19 misinformation by integrating Facebook reactions to the post containing the false information; this response extends the reach of the content (Buchanan & Benson, 2019). Chen et al. (2015) expounded that users possibly interact with false information because it catches their attention, and they view the content as interesting and a good conversation topic.

While some respondents sometimes extended the reach of COVID-19 misinformation by commenting (addition, $f = 29$) or echoing the false information by correcting (manipulation, $f = 28$), their numbers were followed closely by participants who never applied any of the aforementioned diffusing gatekeeping activities. The hesitance and divide could be explained by the amount of effort to perform the actions and factors such as the relevance of the misinformation to the gatekeeper, their relationship with the poster, and the gatekeeper's perceived capacity to correct the false information (Tandoc et al., 2019).

In addition, the gatekeepers in this study never displayed, localized, and repeated COVID-19 misinformation, with frequencies reaching more than half of the sample. It must be noted that diffusing gatekeeping activities can be used for proactive correction, but they can also give COVID-19 misinformation additional reach by echoing its narrative and increasing its engagement. Hence, it is recommended to apply restricting gatekeeping activities first or combine corrective diffusing activities with restricting gatekeeping activities to control the spread of false information.

The results point to respondents choosing social media actions with less effort to perform. Moreover, the Top Fans who participated in the study were more restrictive when it came to false information about the pandemic, favoring restricting gatekeeping activities and limiting the application of diffusing actions. The researcher calls for encouraging social media users to increase their usage of proactive restricting activities to suppress the infodemic and limit the reach of COVID-19 misinformation. Finally, gatekeeping behavior of the gatekeepers in this study on

COVID-19 misinformation accomplished two of the three goals of NGT: to protect the gated from outside forces and maintain the information flow in the network.

The Gated Network of the Respondents

The respondents' gated network consisted of the following in order: friends, their family, and their followers. Consequently, their gated network was exposed to COVID-19 misinformation through the diffusing actions made by the gatekeepers. However, the gated can also transmit misinformation back to the gatekeeper, as indicated by the inclusion of friends, a prominent member of the participants' gated network, as top posters, which affirms the interchangeability of roles in a social network (Barzilai-Nahon, 2008). Moreover, the reach of the respondents' interaction with COVID-19 misinformation extended beyond their friends and family members.

Association Between Gatekeepers' Characteristics and Gatekeeping Activities

The nonparametric measures applied showed the direction of association between the characteristic of the gatekeepers in this study and the gatekeeping activities they applied.

Although the strength of associations only ranged from very weak to weak, there were some trends observed.

The female respondents were more likely to utilize diffusing gatekeeping activities such as addition, display, and repetition with no restricting actions, indicating that this group may spread more misinformation than their male counterparts (Chen et al., 2015). On the other hand, the younger members of the

sample were more restrictive when they encountered COVID-19 misinformation on Facebook despite being more exposed to the infodemic (Allington et al., 2020; Lee et al., 2020). Furthermore, the higher the respondent's educational attainment, the more restrictive they were with false information about the pandemic.

As the amount of COVID-19 misinformation they encountered increased, the respondents were more likely to diffuse the information disorder by addition, display, localization, and manipulation. In addition, if the respondents applied fewer verification methods, they were more likely to spread it to their network by addition, display, localization, and manipulation. However, as stated before, these associations were not statistically significant.

Typology of Gatekeeping Activities in Legacy and Social Media

The author proposes a typology that differentiates the individual level of network gatekeeping in social media versus the information control happening at the platform level and in legacy media (e.g., print radio and television).

While legacy media and social media platforms operate their information control as internal authorities, social media users apply gatekeeping as individuals. Moreover, the study establishes the democratization of the role of gatekeepers in society, especially in social media. Control of information does not exclusively belong to communication workers (e.g., journalists, editors, and broadcasters) and platform owners and administrators anymore because social media users partake in the gatekeeping process by acting on (i.e., restrict or diffuse) the information they receive (Deluliis, 2015; Shoemaker & Vos, 2009).

However, this study also demonstrated that users rely on the social media actions provided by the platform to execute gatekeeping. Legacy media sticks to editorial information control mechanisms, while social media platforms regulate information using algorithms and platform dynamics (Mehrotra, 2017).

At the level of individual gatekeeping on social media, multiple sources of information can exist in a network; these posters could be another gatekeeper, gated, or an external force (Barzilai-Nahon, 2008), which showcase a multidirectional flow of information in social networking sites. If the individual gatekeepers choose to diffuse the information, it will reach the members of their network. Compared to legacy media, the source is mediated, which creates a top-down movement of information to the audience. In social media platforms, the sources are the users themselves who facilitate the information flow. However, it is worth noting that the users are still gated to the platforms, subject to the information delivered by the dynamics and algorithm of the social network.

In terms of actions towards information disorders, legacy media and social media platforms utilize fact-checking, while individual gatekeepers possess alternatives to verify information. This study shows that social media users were restrictive to information disorders, choosing actions that required less effort to perform, but they aided the diffusion of misinformation by interacting with the content.

In line with the findings, the author also proposes the following hypotheses:

1. When social media users encounter information disorders, they are more likely to choose to apply restricting gatekeeping activities;
2. When interacting with information disorders on social media, users are more likely to choose actions with less effort to perform.

Summing up, the research demonstrates the information control capability of social media users bombarded by numerous narratives of misinformation from multiple posters during the infodemic caused by the COVID-19 pandemic. Moreover, the study attests to the role of social networking sites like Facebook in connecting the posters, the gatekeepers, and the gated, enabling the flow of information disorders. Social media users who act as gatekeepers in their networks utilize verification methods on information disorders and decide the action they will apply to the content. Generally, the gatekeepers in this study were restrictive on COVID-19 misinformation, choosing gatekeeping activities that required minimal effort to execute. However, their interactions with misinformation would spark its diffusion within the social media users' network. On the other hand, the research saw only very weak to weak associations between the characteristics of the gatekeepers in this study and the information control activities they applied. Finally, through the literature and findings, the researcher presents a typology and hypotheses that describe the individual level of gatekeeping, which can be tested in future studies.

Conclusion

Different studies have affirmed the role of users as influencers in misinformation flow and social media platforms as amplifiers of these information disorders about the pandemic (Buchanan & Benson, 2019; Chen et al., 2015;

Sterrett et al., 2019; Tandoc et al., 2019; Törnberg, 2018; Vosoughi et al., 2018).

This study adds to the body of literature and further establishes the impact of Facebook users and the social networking platform on the infodemic using the lens of Network Gatekeeping Theory (Barzilai-Nahon, 2008; Barzilai-Nahon, 2009).

The Web 2.0 and UGC foundations of social media (Kaplan & Haenlein, 2010) enable the interchangeability of roles in the information control process (Barzilai-Nahon, 2008), where the receivers of information can also create and influence the content (i.e., the gated can be a poster and a gatekeeper). Furthermore, the different dimensions and levels of gatekeeping (Barzilai-Nahon, 2008) present in networks like social media support the existence of multiple posters connected to users through the features of a platform. In this regard, multiple posters and the interchangeability of roles in social media enable the proliferation of diverse narratives; however, information disorders are also augmented in these digital spaces (Törnberg, 2018; Vosoughi et al., 2018). As seen in this study, the infodemic created by the COVID-19 pandemic presented social media users with diverse falsehoods.

As a whole, the results reinforce that at the individual level, social media users are not just information consumers but also information controllers, partaking in the gatekeeping process by influencing the movement of social media content through different information control activities, which are afforded by the social media platforms (Barzilai-Nahon, 2008; Deluiliis, 2015). Furthermore, the performance of restricting and diffusing gatekeeping activities indicates that social media users affect a content's visibility in their networks and beyond (Singer, 2013), which shows the

shift away from the traditional gatekeeping influence and dominance of communication workers in media (Shoemaker & Vos, 2009).

Specifically, the users participating in the gatekeeping process in social media also affect the movement of information disorders (e.g., COVID-19 misinformation), and they play a part in diffusing and restricting its flow online (Buchanan & Benson, 2019; Chen et al., 2015; Sterrett et al., 2019; Tandoc et al., 2019). As seen in this study, users are employing gatekeeping activities to suppress the spread of misinformation. However, the other side of the coin reveals the participation of users in the diffusion of false information by interacting with the content containing the information disorder, probably driven by the content catching the attention of these users and finding it interesting and a good conversation topic (Chen et al., 2015). Consequently, the gatekeeping action that social media users will apply will determine if the information will be rejected or be admitted into their network. In line with this, the researcher encourages users to increase their usage of restricting gatekeeping activities.

Therefore, in exploring the concepts of information control in social media, the research was able to paint a picture of the individual level of network gatekeeping in social media platforms. This level of information control is performed by social media users who process social media content from the multidirectional flow of information from multiple posters. Then, the users act on the information they have received using gatekeeping actions afforded by the platform, which could either restrict or diffuse the content into their network. In dealing with information disorders, these individual gatekeepers were restrictive; however, some of their interactions

contributed to the diffusion of misinformation. Overall, these information controllers chose gatekeeping activities with minimal effort to execute.

Implications and Recommendations

The Top Fans of Capas Information Office Facebook page, who participated in this study, substantiate the presence of false information about the pandemic on the social media platform. Moreover, the study establishes that information disorders do not exist in a vacuum, and they originate from posters through the features of Facebook. Furthermore, this research demonstrates the information control capabilities of social media users as secondary gatekeepers in their networks, which can be beneficial or detrimental to the movement of COVID-19 misinformation within platforms like Facebook. In line with this, this section outlines suggestions for stakeholders and future studies.

Improving the Methodology

The findings are primarily limited by the research's sampling method and sample size. Future studies can be built upon the methodology of this research but gathering a larger random sample to either affirm or refute the results of this study, strengthen the associations between variables, and discover other factors influencing the information control applied by the gatekeepers.

The research can also be expanded by studying the Top Fans of larger Facebook pages that publish verified information about the pandemic, such as the World Health Organization Philippines page, or by studying the gatekeeping activities of Filipino Facebook users in general.

Moreover, future research can also examine the gatekeeping functions of users on rising platforms such as TikTok.

Regarding conducting a social media survey via Facebook Messenger, the researcher encountered problems such as messages not being seen by the respondents or the researcher being blocked on Facebook, therefore losing the connection with the respondents. Hence, partnership with the page being studied should be considered for future studies.

Enriching the Information Environment of Capas, Tarlac

The study showed that the respondents in this study were restrictive to COVID-19 misinformation that they encountered but with less focus on proactive approaches that could suppress the information disorder. Through this insight, the Capas Information Office Facebook page can launch a campaign encouraging their followers to perform more restricting gatekeeping activities such as deletion or reporting the post to Facebook and lessen interactions with posts containing false information about the pandemic.

On the other hand, the identification of misinformation themes encountered by the respondents and the verification methods they used can aid the office in choosing the focus of their anti-pandemic misinformation campaigns.

Reflecting on the Information Flow on Social Media Platforms

The research supports the findings of other studies that social media platforms can serve as vehicles for false information (Acevedo, 2020; Cinelli et al.,

2020; Tandoc et al., 2019; Tuazon et al., 2020; Vosoughi et al., 2018; Zarocostas, 2020). Consequently, information disorders continue to spread on social networking sites like Facebook (Brennen et al., 2020) despite the platforms' actions (Singh & Bagchi, 2020). As the gatekeepers of their platforms (Mehrotra, 2017), owners and administrators of social networking sites like Facebook should recognize their role in augmenting information disorders.

Moreover, they should also acknowledge the influence of their users in amplifying and constraining false information. Scrutinizing the content's flow could help in rethinking how information and, by extension, information disorders should move on social media, especially that actions that drive engagement and reach (i.e., diffusing gatekeeping activities) allow the spread of COVID-19 misinformation by echoing its content (display, localization, manipulation, and repetition) and increasing its engagement (addition and integration). For example, since users are reported to spread COVID-19 misinformation by sharing (Chen et al., 2015), social networking sites can prompt users to read the full story before doing a diffusing gatekeeping activity, a platform dynamic started by Twitter to combat false information (Porterfield, 2020), which other social media can apply.

Including Features on the Network Gatekeeping Theory

NGT establishes information control in new media technologies like social media (Barzilai-Nahon, 2008; Deluliis, 2015). In applying the theory, the study proved that a platform's features ensure the movement of information in a network and link the communication actors from the posters to the gatekeepers and, eventually, the gated. Hence, the researcher proposes the inclusion of the variable

Features in NGT (see Figure 2) as it puts context to the information environment the gatekeeper is situated in and concretizes the theory's technological aspect.

However, the presence of multiple channels could refute NGT's first assumption that a gatekeeper's goal is to contain the gated (Barzilai-Nahon, 2008), which can be further explored in future studies.

Development Communication Versus COVID-19 Misinformation

Flor (2009) emphasized the centrality of information during this technological age, and the arrival of social media opened a pathway for the fast transmission of information. However, the pandemic puts into the spotlight the vulnerability of the platforms—that they are not safe from misinformation, as indicated by the results of this study.

The researcher forwards that the reception and diffusion of information disorders like misinformation degrade the quality of information an individual or a community holds, making them more disadvantaged. Furthermore, the disruption in the information flow has the potential to hinder progress. For example, in the fight against the pandemic, exposure to false information is linked to belief, which could lead to insufficient knowledge about the pandemic and low engagement with preventive behaviors (Lee et al., 2020).

This study affirms that false information about the pandemic continues to circulate on Facebook. For this reason, the researcher calls for further research on misinformation in the context of development communication as we progress towards becoming an information society to improve the quality of information that

we receive and transmit in our digital spaces. Moreover, the framework and findings can be used to examine other pandemics or controversial health issues (e.g., Dengvaxia vaccine controversy).

This research contributes to this call by outlining the flow of COVID-19 misinformation on Facebook as experienced by the respondents. Mapping the transmission, reception, and diffusion of false information about the pandemic using NGT can assist development communicators in formulating comprehensive media and information literacy programs for every level of the gatekeeping process. For example:

- The results on posters, members of the gated network, and the characteristics of the gatekeepers can potentially help in choosing and narrowing the target audience for projects like social marketing or mobilization against COVID-19 misinformation, shifting away from the mass media approach (Tuazon et al., 2020), and looking at the capacity of the social media users to influence the flow of COVID-19 misinformation (Buchanan & Benson, 2019; Chen et al., 2015; Sterrett et al., 2019; Tandoc et al., 2019).
- The local trends of COVID-19 misinformation themes can narrow the message of awareness campaigns.
- The verification methods applied by the respondents can benefit development communicators in identifying the skills still needed by social media users to use and share high-quality information (Vraga et al., 2020) and develop fact-checking habits online (Dela Cruz, 2021).
- The gatekeeping activities can be further studied to mitigate the movement of false information in networks like social media, developing a strategy that

empower social media users to influence the flow of information in a 'critical, ethical and effective way' (UNESCO, 2013, p.29).

Looking at the bigger picture of the presence and spread of COVID-19 misinformation on social media, this research only scratches the surface of the stream of false information but contributes to the body of literature by attempting to expand the investigation on Facebook and looking at this societal problem through the network gatekeeping theory.

The study, via the perspectives of the Top Fans of Capas Information Office Facebook page who participated, exemplifies the presence of gatekeeping in different levels and dimensions of a network (Barzilai-Nahon, 2008); a process COVID-19 misinformation is also subjected to when it enters social media networks (e.g., when an individual gatekeeper applies social media actions, as seen in this study). With further research, understanding the information control process and the shift of gatekeeping role towards social media users can benefit the fight against misinformation.

Finally, with digital media as the next frontier of development communication (Quebral, 2012), the field of study is a stakeholder in ensuring and maintaining the quality of information existing in digital spaces.

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Appendix A

QUESTIONNAIRE

The succeeding pages in this section contain the text version of the online survey questionnaire from Qualtrics. The logic and survey flow are also depicted in this text version. For a preview of the survey, log on to:

https://upsystemdiliman.qualtrics.com/jfe/preview/SV_5dTjUXoExzHkEiq?Q_CHL=preview&Q_SurveyVersionID=current

The survey link was distributed to the participants via Facebook messenger after they had signed the consent form.

The Reception and Diffusion of COVID-19 Misinformation of Facebook Users in Capas, Tarlac

Introduction

Thank you for being part of this study. Click next to proceed to the questionnaire.

1. Enter your unique code: _____

Demographic Data

This section will gather demographic data such as age, sex, and educational attainment that will be used to examine the information provided in the proceeding sections.

2. Are you a resident of Capas, Tarlac?

Yes No

Skip To: End of Survey If Are you a resident of Capas, Tarlac? = No

3. Age

17 years old and below

18-29 years old

30-39 years old

40-49 years old

50-59 years old

60 years old and above

Drop down question. Skip To: End of Survey If Age: = 17 years old and below

4. Sex

- Male Female

5. What is the highest level of education that you attained?

- No Grade Completed
- Pre-School
- Special Education
- Elementary
- High School
- Post-Secondary
- College Undergraduate
- Baccalaureate/College Graduate
- Post Baccalaureate Courses
- Prefer not to say

Facebook Usage and the Transmission of Misinformation

This section will gather data about your interaction within the social media platform. In this section, you will also identify sources of COVID-19 misinformation and the Facebook feature where you received this misinformation.

6. On a typical day, about how much time do you spend using Facebook?

- Less than 1 hour a day
- 1-2 hour/s a day
- 3-4 hours a day
- 5 hours a day and above

7. How often do you encounter COVID-19 misinformation on Facebook?

- None
- 1-2 content/s per use
- 3-4 contents per use
- 5-6 contents per use
- Other: (Please enter a number above 6)

8. When using Facebook, which source delivers most misinformation about COVID-19? Drag and rank the sources from 1-5, with 1 as the source that is most frequent to share COVID-19 misinformation and 5 as the source that is least frequent to share misinformation about the pandemic.

- _____ Politicians
- _____ Celebrities
- _____ Other Public Figures (e.g., Social Media Influencers)
- _____ Family Members
- _____ Friends (Close friends and Facebook Friends)

Display answers in a random order.

9. When using Facebook, which feature delivers most misinformation about COVID-19? Drag and rank the sources from 1-5, with 1 as the channel that is most frequent to show COVID-19 misinformation and 5 as the channel that is least frequent to show misinformation about the pandemic.

- _____ Facebook Groups
- _____ Facebook Pages
- _____ News feed

_____ Facebook Messenger

_____ Facebook Stories

Display answers in a random order.

Reception of COVID-19 Misinformation

This section will gather data about the themes of COVID-19 misinformation you encounter on Facebook and how you identify these misinformation contents.

10. What themes of COVID-19 misinformation do you encounter on Facebook?

You can select multiple answers.

Display answers in a random order.

- | | |
|--|---|
| <input type="checkbox"/> Cures & preventive measures | <input type="checkbox"/> False & misleading statements |
| <input type="checkbox"/> Conspiracy theories & predictions | <input type="checkbox"/> Anti-masks |
| <input type="checkbox"/> Policies | <input type="checkbox"/> Anti-vaccines |
| <input type="checkbox"/> Spread & deaths | <input type="checkbox"/> Violations and violence |
| <input type="checkbox"/> Spread & deaths among public figures | <input type="checkbox"/> Abuse of power |
| <input type="checkbox"/> Statistical report of spread & deaths | <input type="checkbox"/> Free stuff & aid |
| <input type="checkbox"/> Causes | <input type="checkbox"/> Other (Give other themes of COVID-19 misinformation that you encounter): _____ |
| <input type="checkbox"/> Symptoms | |
| <input type="checkbox"/> Exaggeration of the COVID-19 pandemic | |
| <input type="checkbox"/> Denial or downplaying the pandemic | |
| <input type="checkbox"/> False attribution of statements | |

10. What are the methods you use to verify if the COVID-19 information you received is misinformation? You can select multiple answers.

Display answers in a random order.

- Check the credibility of a source and author.
- Check if the content contains spelling, punctuation and grammatical errors.
- Evaluate if the content triggers strong emotions.
- Visiting other sources if they report the same information.
- Verifying if the social media account or website is fake.
- Assessing if who will gain if people will believe the information.
- Reading the full story and not just the headline.
- Visiting fact-checking websites if the information has been debunked.
- Other (Give other verification method that you use):

Diffusion of COVID-19 misinformation

In this section, you will be presented with different Facebook actions that you can apply to COVID-19 misinformation posts. Choose the likelihood that you will apply the action.

11. Diffusion. Choose the likelihood that you will apply the following Facebook action to COVID-19 misinformation.

	Always	Most of the time	About half the time	Sometimes	Never
Commenting on the post containing the COVID-19 misinformation					

Creating memes about the COVID-19 misinformation.					
Reacting to the post containing COVID-19 misinformation.					
Sharing a post containing COVID-19 misinformation WITH caption in local language.					
Posting a correction about the COVID-19 misinformation					
Sharing a post containing COVID-19 misinformation WITHOUT caption.					

12. Restriction. Choose the likelihood that you will apply the following Facebook action to COVID-19 misinformation.

	Always	Most of the time	About half the time	Sometimes	Never
Messaging the source of COVID-19 misinformation for correction.					
Reporting the post to Facebook.					
Ignoring the COVID-19 misinformation.					
Unfollowing or blocking the source of					

	Always	Most of the time	About half the time	Sometimes	Never
COVID-19 misinformation.					

13. If you have commented, shared, reacted created a meme or posted a correction about a COVID-19 misinformation, who do you think among your Facebook network have seen these interactions? You can choose multiple answers.

Family

Friends

Other Followers (Facebook friends and other followers)

Appendix B
INFORMED CONSENT FORM

This section contains the English and Filipino versions of the consent form signed by the respondents of the study.

English Version

Informed Consent Form
For the Top Fans of Capas Information Office Facebook Page

Researcher: Erwin T. Siron

Organization: UP Open University

Introduction

You are invited to participate in this online census for the Top Fans of Capas Information Office Facebook page. Please read and sign this form to signify your consent to be included in the study. In case there are concepts or words that you do not understand, feel free to ask the researcher at any time.

Purpose of the Research

This study aims to understand how Facebook users who are Top Fans of a Page influence the movement of COVID-19 misinformation in the social media platform.

Type of Research Intervention

This research will use an online questionnaire to gather your responses.

Participant Selection

You were selected to be part of this study because you are a Top Fan of the Capas Information Office Facebook page.

Voluntary Participation

Your participation in this study is voluntary. You may refuse to take part in this research or withdraw your data at any time.

Procedures

The online questionnaire will be sent to you through Facebook messenger. You can answer the questionnaire personally or the researcher can assist you in answering the questions. If there are questions that you don't want to answer, you may proceed to other parts of the form.

If you agree to participate, questions will include but are not limited to your demographic information, Facebook usage, COVID-19 misinformation you encounter on Facebook, social media actions you apply to these misinformation contents, and who from your network sees these interactions.

The information recorded is confidential and you will not be identified by your answers. The information can only be accessed by the researcher, Erwin Siron, and the statistician of the study. The results will be reported to the technical panel of the study.

Duration

Answering the questionnaire will only take 5-6 minutes of your time. Data collection of the survey will run for 2 months from the date the link was sent to you. During that time, please be informed that the researcher may follow up for the completion of the form or to clarify some answers.

Risks

There are no foreseeable risks involved in participating in this study.

Benefits

You will receive no direct benefits from participating in this research study aside from the fifty-peso (₱50) compensation. However, your responses may help us learn more about how Facebook users as new gatekeepers influence the movement of COVID-19 misinformation in the platform.

Reimbursements

Participation is free. You will receive fifty pesos (₱50) as compensation for your participation and to cover data or Internet charges that may incur in accessing the questionnaire link.

Confidentiality

Your survey answers will be sent and stored in Qualtrics. Rest assured that identifying information such as your name, email address, or IP address will not be stored and your answers will remain anonymous. The researcher applied measures to the questionnaire to ensure the protection of your privacy and your anonymity.

Sharing the Results

The results will be shared with the statistician and the technical panel of the study. Please be informed that the results can be shared broadly through conferences or publications. Your name or other facts that might point to you will not appear when we talk about the data or publish its results.

Right to Refuse or Withdraw

As a participant, you have the right to refuse to participate in this study or withdraw your participation at any time. You also have the right to review the information you provide.

Data Management

The data will be stored and extracted using Qualtrics. The data will be provided to the statistician of the study for analysis, and the results will be presented to the technical panel of the study. After the research, the list of Top Fans will be deleted by the researcher.

Contact

If you have questions at any time about the study or the procedures, you may contact the researcher Erwin Siron via phone at 09062060473 or via email at etsiron@up.edu.ph.

Certificate of Consent

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I understand that:

1. The purpose of the study is to do a census of the Top Fans of Capas Information Office Facebook page; and
2. My participation is voluntary.

I consent voluntarily to be a participant in this study.

Name: _____

Signature: _____

Date: _____

Filipino Version

Kasulatan ng Pahintulot

Para sa mga 'Top Fans' ng 'Capas Information Office Facebook Page'

Tagapagsiyasat: Erwin T. Siron

Organisasyon: UP Open University

Pambungad

Kayo po ay binigyan ng kasulatan ng pahintulot na ito dahil kayo ay iniimbitahan na sumali sa pagsusuri na ito na isang 'census' ng mga 'Top Fans' ng 'Capas Information Office Facebook page.' Kayo po ay hinihiling na basahin at pirmahan ang kasulatan na ito na nagpapahiwatig ng pagpayag ninyo na sumali sa

aking pag-aaral. Kung mayroong mga konsepto o salita na hindi ninyo maintindihan, maari kayong magtanong sa tagapagsiyasat anumang oras.

Layunin ng Pag-aaral

Ang pag-aaral na ito ay naglalayon na maintindihan kung paano naaapektuhan ng mga 'Facebook users' na 'Top Fans' ng isang 'Page' ang daloy ng maling impormasyon tungkol sa COVID-19 sa social media platform.

Uri ng Pananaliksik

Ang pag-aaral na ito ay gagamit ng isang 'online questionnaire' para makuha ang inyong mga sagot.

Pagpili sa mga Kalahok

Ikaw ay napili sa pag-aaral na ito dahil bahagi ka ng 'Top Fans' ng 'Capas Information Office Facebook page.'

Kusang-loob na Pakikilahok

Ang iyong pag-sali sa pag-aaral na ito ay boluntaryo. Maaari kang tumanggi na sumali o maaari mong bawiin ang iyong kasagutan o datos anumang oras.

Paraan ng Pagsusuri

Ang 'online questionnaire' ay ipapadala sa inyo gamit ang Facebook Messenger. Maaari mong sagutan ang mga tanong ng personal o maaari kang tulungan ng tagapagsiyasat. Kung may mga katanungang hindi mo nais sagutan, maaari kang magpatuloy sa ibang bahagi ng questionnaire.

Kung pumapapayag ka na lumahok, ilan sa mga katanungan ay tungkol sa demograpikong impormasyon, paggamit ng Facebook, mga maling impormasyon na nakikita mo tungkol sa COVID-19, mga aksyon sa 'social media' na ginagawa mo sa mga maling impormasyon na ito at kung sino sa iyong Facebook network ang nakakakita ng mga interaksyon na ito.

Ang impormasyon na iyong ibibigay ay pananatilihin na kompidensyal at hindi ka matutukoy ng iyong mga kasagutan. Ang impormasyon ay makikita lamang ng tagapagsaliksik at ng statistician ng pag-aaral. Ang resulta ay ibabahagi sa panel ng pag-aaral.

Tagal ng Pag-aaral

Ang pagsagot sa questionnaire ay tatagal lamang ng 5-6 na minuto. Ang pagkalap ng datos ay tatagal ng 2 buwan mula nang maibahagi ang link ng questionnaire sa iyo. Sa panahon na ito, maaring magtanong ang tagapagsaliksik sa iyong pagsagot ng form o para mabigyang-linaw ang ilang kasagutan.

Panganib

Walang nakikitang panganib sa pag-aaral na ito.

Benepisyo

Walang direktang benepisyo ang pakikilahok sa pag-aaral na ito maliban sa limampung piso (₱50) na kompensasyon. Pero ang iyong mga kasagutan ay makakatulong para mas maintindihan ang impluwensiya ng Facebook users bilang 'gatekeepers' sa paggalaw ng maling impormasyon sa COVID-19 sa social media.

Mga Gastos O Bayad

Wala kang gagastusin o babayaran sa pakikilahok sa pag-aaral na ito. Ikaw ay makakatanggap ng limampung piso (₱50) na kompensasyon para sa iyong pagsali sa pag-aaral at sa maaaring 'data charge' sa pag-access sa questionnaire link.

Pagiging Kompidensyal

Ang iyong mga sagot ay mapapaloob sa Qualtrics at ang mga impormasyon tulad ng pangalan, email address o IP address ay hindi kukunin sa questionnaire at hindi ka matutukoy ang iyong pagkakakilanlan sa iyong mga kasagutan. Naglagay ang tagapagsaliksik ng mga paraan para maprotektahan ang iyong pagkapribado at pagkakakilanlan.

Pagbabahagi ng Resulta

Ang impormasyon ay ibabahagi sa statistician at technical panel ng pag-aaral. Ang resulta ay maaaring maibahagi din sa mga conferences at publikasyon. Ang inyong pangalan at iba pang detalye na makapagtuturo sa inyo ay hindi ihahayag kapag napag-usapan ang datos o mailathala ang mga resulta nito.

Karapatang Tumanggi

Bilang napiling kalahok ng pag-aaral, mayroon kang karapatang tumanggi sa pagsali sa pag-aaral o bawiin ang pakikilahok ano mang oras. Mayroon ka ring karapatan na suriin ang impormasyon na ibinigay.

Pag-manage ng Datos

Ang iyong datos ay itatago at kukunin sa Qualtrics at ito ay ibabahagi sa statistician ng pag-aaral para sa pagsusuri. Ang resulta ay ibabahagi sa panel ng pag-aaral. Kapag natapos na ang pag-aaral, ide-delete na ang listahan ng Top Fans.

Contact

Kung mayroon kang katanungan tungkol sa pag-aaral na ito, maaaring ipahatid ang iyong mensahe sa tagapagsaliksik sa pamamagitan ng text o email (etsiron@up.edu.ph).

Sertipiko Ng Pagsang-Ayon

Nabasa ko ang kasulatan na ito o binasa at ipinaliwanag ang kasulatan na ito tungkol sa mga layunin ng pag-aaral na ito. Nagkaroon ako ng pagkakataon na magtanong tungkol sa pag-aaral at nasagot ang aking mga katanungan.

Naiintindihan ko na:

1. Ang layunin ng pag-aaral ay magsagawa ng census sa mga Top Fans ng Capas Information Office Facebook page
2. Ang aking pagsali ay kusang-loob.

Ako ay kusang-loob na maging bahagi ng pag-aaral na ito.

Pangalan: _____

Lagda: _____

Petsa: _____