Examination of How the Use of Multimedia Characteristics, Political Partisanship and Perceived

Oganizational Reputation Influence Perceived Message Effectiveness and Attitudes Toward the

Message of Health Organizations' COVID-19 Tweets

by

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Social presence theory, computer-mediated communication, partisanship, perceived message
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Abstract

Based on the social presence theory, this study aimed to examine the potential impact of using multimedia characteristics within health communication tweets in terms of perceived message effectiveness and attitudes toward the message. In addition, this study also analyzed how political partisanship and perceived reputation of the Centers for Disease Control and Prevention (CDC) might predict perceived message effectiveness and attitudes toward the message. Data ($N = 167$) was collected from undergraduate students in communication and journalism classes from a large southeastern university via an online experiment (three-group between-subjects design) through Qualtrics. No significant difference was found among the type of tweet (i.e., tweet using emojis, tweet using a GIF file, text-only tweet) in relation to perceived message effectiveness or attitudes toward the message. Political partisanship and perceived reputation of the CDC were significant factors in predicting perceived message effectiveness and attitudes toward the message. Those who identified themselves as a Democrat and those who showed a higher perceived reputation of CDC were more likely to have higher perceived messages effectiveness and attitudes toward the message.

Key Words: social presence theory, computer-mediated communication, partisanship, perceived message effectiveness, attitudes toward the message

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Chapter 1

Introduction

Throughout the COVID-19 pandemic, health organizations such as the Centers for Disease control and Prevention (CDC) have continually disseminated information to their publics primarily through various communication channels. One of the primary mediums many health organizations use to communicate with their publics are their social media channels. Due to the unknown and ever-changing nature of the virus, as well as the necessary instituted health precautions, health organizations have been faced with the challenge of not only disseminating information quickly to their publics, but also in an effective manner. Specifically, the spread of misinformation regarding health concerns related to the pandemic has further increased the necessity of understanding how to most effectively communicate accurate and updated information regarding the pandemic itself. Therefore, it became more important for health organizations to have a greater understanding of how they could effectively deliver information to their target audiences that would lead to positive results.

Due to the heightened need of effectively disseminating health-related information regarding COVID-19, this study's primary goal is to examine how using different multimedia characteristics (i.e., emojis and GIFs) affect perceived message effectiveness and attitudes toward the message. While many studies have been conducted regarding the impact of including emojis in messages on the perceived message effectiveness and attitudes toward the message (Willoughby & Liu, 2018; see also Manganari, 2021; Yakin & Eru, 2017), results have been mixed. Similarly, little research has examined perceived message effectiveness and attitudes toward the message regarding the impact of including GIF files in social media messages.

This study 's secondary goal examines how political partisanship and perceived reputation of the CDC may predict perceived message effectiveness and attitudes toward the message. Existing studies have mentioned the importance of governmental relations and organizational trust based on organizational reputation (Chon & Fondren, 2019; see also Coombs, 2007; Krupenkin, 2021). Furthermore, the amount of trust toward an organization is based on an organization's prior relational reputation, wherein shared political partisanship correlates with shared values and potential enhanced trust toward the organization (Krupenkin, 2021; see also Chon & Fondren, 2019; Coombs, 2007).

Therefore, this study's purpose is to examine how the use of emojis and GIFs affect perceived message effectiveness and attitudes toward the message of a health-related tweet posted by the CDC, and also look into whether political partisanship and perceived reputation of CDC are important predictors of the two variables.

Chapter 2

Literature Review

Organizations' use of Computer-Mediated Communication

Computer-mediated communication refers to the practice of "human interpersonal communication on, through, and about the internet and web" (Thurlow et al., 2004, p. 16). Functioning as both synchronous and asynchronous forms, computer-mediated communication includes mediums such as email, bulletin boards, and social media sites, all of which allow individuals to communicate with one another via technology (Romiszowski & Mason, 2013). Due to its breadth of applicability, as well as the progression of computer-based technology itself, this form of communication harnesses multiple definitions encompassing the various uses and applications found within computer-based technology. According to Thurlow et al. (2004), one definition of computer-mediated communication examines how individuals use specific applications within computer-based technology, such as "statistical analysis programs, remote-sensing systems, and financial modelling programs," for means of personal communication (p. 15). Another definition examines how individuals use computer-based technology to influence and "shape media" when communicating with one another (Thurlow et al., 2004, p. 15). Overall, however, computer-mediated communication addresses how individuals use computer-based technology as an instrument to effectively convey messages among one another (Thurlow et al., 2004).

Due to its multifaceted and multi-applicative nature, computer-mediated communication has significantly grown through organizational usage as a means of efficiently disseminating messages to a large variety of publics (Boyd & Ellison, 2008). As such, social networking sites

have assisted in the increased interaction among those engaging in computer-mediated communication. According to Boyd and Ellison (2008), social networking sites (i.e., social media) are, "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (p. 211; see also Park et al., 2013, p. 411). Based on this interactional nature, ease of functionality, and overall, widely used attributes, organizations use social media platforms to effectively disseminate information to their publics (Romiszowski & Mason, 2013). This is particularly due to the enhanced reliance of the Internet individuals have when attempting to find information (Hong & Li, 2017; see also Lu & Sun, 2021; Pedersen et al., 2020; Zhang & Jung, 2019).

According to Romiszowski and Mason (2013), individuals tend to rely on and prefer platforms in which they are already familiar when in the midst of a crisis. When organizations choose to disseminate information about a crisis through social media platforms as opposed to less familiar platforms, it allows said organizations to "foster[ing] a sense of community and activate[ing] the kind of peer-to-peer interaction that leads to wider circulation of information" (Romiszowski & Mason, 2013, p. 36). Essentially, through enabling computer-mediated communication as a primary medium in which information is shared about a crisis (both at the crisis' origin and throughout), organizations create community with and among their publics; in doing so, the organizations encourage communication among their publics to further spread the current and updated information with others.

Alongside encouraging publics to engage with one another, computer-mediated communication via social media further allows organizations to digitally interface with their

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publics (Romiszowski & Mason, 2013). In doing so, organizations increase the interactivity between themselves and their publics by allowing their publics to provide feedback or ask questions directly to the organization (Romiszowski & Mason, 2013).

For health organizations, this interaction is evident through the spread of medical information, as health campaigns increasingly manifest and spread in online environments (Hong & Li, 2017; see also Lu & Sun, 2021; Pedersen et al., 2020; Zhang & Jung, 2019). Due to the large accumulation of individuals engaging with social media platforms, this mode of computer-mediated communication has grown in prominence regarding the dissemination of health-related messages (Park et al., 2013). For example, according to Park et al. (2013), "government health agencies and local health departments used social media to provide up-to-date information, including flu clinic schedules, availability of vaccines, and mortality reports" in relation to 2009's H1N1 outbreak (p. 410). Similarly, throughout the COVID-19 pandemic, social media platforms have acted as a primary mode of communication in which individuals and organizations have built community with others while in isolation, as well as find and disseminate information regarding the pandemic itself (Lee et al., 2021; see also Yeshua-Katz et al., 2021).

Twitter as an effective organizational communication tool

Among all social media platforms, many health organizations turn to Twitter when disseminating information to their publics. According to Park et al. (2013), "Twitter is a social networking tool that enables users to stay connected to their friends, family members, and people who share the same interests by sending and receiving short messages called 'tweets'" (p. 410). Through a limited character count, these tweets "represent[ing] the full spectrum of communications from personal and private to 'masspersonal' to traditional mass media" in a

variety of contexts (Wu et al., 2011, p. 706). When specifically using Twitter as computer-mediated communication, organizations may increasingly enhance the interactivity between themselves and their publics due to the ease and speed with which information is shared among users (Romiszowski & Mason, 2013; see also Part et al., 2013). For example, according to Park et al. (2013), Twitter allows publics to interact with health organizations by asking questions and leaving comments directed toward the organization. In doing so, the organizations are then able to further interact with their publics through information dissemination.

Many health organizations typically turn to Twitter as the preferred social media platform when disseminating information to their publics due to both the speed and breadth of user acquisition (Park et al., 2013). Due to Twitter's functionality of retweeting (i.e., emphasizing a message through third-party repetition), health organizations find this method beneficial as it allows their messages to evolve into trends, thus furthering the spread of their message beyond the reach of their initial publics (Park et al., 2013). Alongside the speed and breadth, health organizations also choose to use Twitter based on the "cost-effectiveness" exhibited by the platform itself based on its free service, as well as the minimal effort required when composing a tweet (Park et al., 2013, p. 410).

This preferred functionality and application of Twitter is particularly applicable in the midst of a health crisis. For example, during the Ebola outbreak of 2014, the Center for Disease Control and Prevention (CDC) used Twitter to create a real-time discussion with its publics to answer questions and address concerns surrounding the virus (Crook et al., 2016). In doing so, the CDC was able to interface with its publics instantaneously, thus quickly and effectively disseminating information regarding the policies and guidelines associated with the outbreak itself. Similarly, throughout the COVID-19 pandemic, the CDC has frequently used Twitter as

means of disseminating information regarding the vaccine, face coverings, social distancing, and various other attributes associated with the virus. Alongside the CDC, the World Health Organization (WHO) has also used Twitter as the preferred social media platform when disseminating health-related information to its publics. For example, the WHO used Twitter when disseminating information internationally surrounding the Zika outbreak in 2015 (Fu et al., 2016). In doing so, the WHO reached its international publics quickly and effectively in a variety of language without any added cost to the organization.

Social Presence Theory

Coined by Short, Williams, and Christie, social presence theory examines the salience between communicators based on their interpersonal relationships (Short et al., 1976). Social presence itself refers to "a quality of the communication medium" (Short et al., 1976, p. 65). This quality determines the levels of immediacy (i.e., psychological closeness or togetherness) between communicators. According to Short et al. (1976), social presence theory "varies between different media, it affects the nature of the interaction, and it interacts with the purpose of the individual who wishes to communicate" (p. 65). In other words, different forms of communications media provide different levels of social presence for communicators to engage with one another (Short et al., 1976). Based on the levels of social presence exhibited by the communications media, communicators decide which form of media proves most effective to accomplish their communicative purpose (Short et al., 1976). For example, when higher levels of social presence are warranted, face-to-face communication is prioritized over writing a letter, email, or making a phone call. As such, "the capacity to transmit information about facial expression, direction of looking, posture, dress, and nonverbal vocal cues, all contribute to the Social Presence of a communications medium" (Short et al., 1976, p. 65).

When further applying social presence theory into computer-mediated communication, interpersonal relationships and the communications medium are considered integral. Essentially, the level of relationships built between communicators are greatly determined by the immediacy created between the senders and receivers of messages, as well as the use of both nonverbal and verbal communication (i.e., multimedia characteristics and written text) used within the messages (Bickle et al., 2019; see also Fester & Cowley, 2018). According to Fester and Cowley (2018), the immediacy experienced by the sender and receiver of a message tends to have greater meaning than the actual content within the messages themselves; therefore, the relationship between the communicators has a greater effect than the message's content. This is based on the notion that while the communicators do not share a physical space while communicating through a computer-mediated setting, the communicators have created a relationship in which communication has the same effect as if a shared physical space existed (Fester & Cowley, 2018).

As computer-mediated communication has increased in prominence both in personal and organizational communication contexts, so has the use of social presence theory. Specifically, organizations use this principle of social presence via social media platforms to enhance their relationships with their publics through building higher levels of immediacy. For example, Johnson and Hong (2020) found that the amount of engagement exhibited by an organization through the number of "likes," "shares," and "comments" found on various social media posts influences its relationship with its publics, particularly with regard to organization credibility. Based on these levels of interactivity displayed by an organization, social presence theory has shown social presence to have influence regarding the overall effectiveness of a message (Johnson & Hong, 2020). According to Johnson and Hong (2020), when analyzing Instagram

posts for the purpose of studying purchase intention, the researchers found that viewing

nonverbal attributes (i.e., photos) increases levels of relatability with the post itself, thus

stimulating further purchase intention regarding the organization's product. Therefore, through

the use of nonverbal attributes (i.e., images and videos) in tandem with verbal aspects (i.e.,

written text), social presence increases among an organization's publics (Johnson & Hong,

2020).

Social Media Message Effectiveness

Due to the influence exhibited by organizations via social presence theory as mentioned

in the previous studies, organizations continually engage in efforts to increase efficiency when

communicating through social media platforms. Specifically, many organizations employ

different strategies to increase the effectiveness of their messages and enhance their audiences'

attitudes toward the message. Perceived message effectiveness is defined as, "an estimate of the

degree to which a persuasive message will be favorably evaluated by recipients of that message"

(Dillard & Ye, 2008, p. 150). According to O'Donnell and Willoughby (2017), "the measure of

perceived message effectiveness has implications for actual effectiveness in achieving a post-

message attitude or behavior" (p.149). Essentially, perceived message effectiveness analyzes

how individuals evaluate the strength of a message based on factors such as credibility,

believability, and relatability (O'Donnell & Willoughby, 2017). In other words, perceived

message effectiveness is the persuasiveness of a message.

Attitudes toward messages refers to the "overall evaluation or liking of a message" (Cho

& Choi, 2010, p.303). In the case of attitudes toward a message, an analysis of how audiences

react to an overall message based on factors such as positive and negative positioning affiliation

occurs (Cho & Choi, 2010). Due to organizations' desires to effectively disseminate messages to

their publics, many have turned to social media (Bhattacharya et al., 2019). Social Media allows organizations to incorporate multimedia characteristics (i.e., audio, video, and images) rather than solely use text when creating and disseminating messages to their publics.

Emojis

One of the ways that organizations attempt to leverage to communicate more effectively is by using emojis. Originating from the emoticon, emojis are a form of textual paralanguage which first developed with the intention of communicating various emotions through a computer-mediated format (Das et al., 2019). Defined by Luangrath et al. (2017) as "written manifestations of nonverbal audible, tactile, and visual elements that supplement or replace written language and that can be expressed through words, symbols, images, punctuation, demarcations, or any combination of these elements," textual paralanguage (i.e., emojis) essentially acts as a form of nonverbal communication which may replace written text or punctuation to enhance a message (p. 1; see also Lo, 2008).

According to Lo (2008), message receivers experience significant shifts in perception when messages add emoticons, as the addition of the nonverbal element heightens understanding of the intended "emotion, attitude, and attitude expression" found within the message itself (p. 597; see also Woodall & Burgoon, 1981). As such, since emojis act as an extension of emoticons based on their enhanced application and functionality among users, software systems constantly include new emojis alongside each system update, thus enhancing emoji specificity in messages (Das et al., 2019; see also Holtgraves & Robinson, 2020; Lo, 2008; Togans et al., 2021).

When crafting messages to disseminate to others through social media platforms, emojis have increasingly grown in prominence throughout the years (Bhattacharya et al., 2019) and have been widely used by many individuals and organizations. Specifically, emojis are used both

in online platforms via social media and text messages, as well as written and digital advertisements (i.e., television commercials and medical pamphlets) (Bhattacharya et al., 2019; see also Das et al., 2019). It was reported that "74% of Americans regularly use emojis to convey feelings and emotions, and they send an average of 96 emojis per day via text message and social media" (Willoughby & Liu, 2018, p. 77). Presently, individuals primarily communicate with one another "using emojis, images, and icons in chats or on social media" as opposed to written text due to the greater visual appeal images create (Bhattacharya et al., 2019, p. 243). Therefore, many organizations have incorporated emojis when creating messages to disseminate to their publics, particularly when employing marketing and advertising tactics.

Emojis also have been widely used by different types of organizations (Bhattacharya et al., 2019; Perrault et al., 2020). Within the health communication context specifically, emojis serve as an effective communication function for various organizations. Governments increasingly rely on mobile technology when disseminating information to their publics, particularly when involving health crises (Bhattacharya et al., 2019). These messages help to both alert and update the governments' publics on the developing health crises. Universities have also used emojis when crafting messages to students regarding health and safety on college campuses (Perrault et al., 2020). By incorporating icons, images, and multi-media characteristics (i.e., emojis), organizations are able to more effectively disseminate information rather than solely using written text when attempting to overcome language barriers (Bhattacharya et al., 2019).

Though emojis have increased in popularity among their overall use, the functionality of this medium remains exceptionally contextual. Various studies have shown how emojis, while ubiquitous, typically incorporate ambiguous meaning, and are used to complete specific tasks based on cultural and rhetorical implications, as well as the knowledge of the receiver's

understanding of said emojis (Gray & Holmes, 2020; Barbieri et al., 2016; Das et al., 2019; Togans et al., 2021; Walwema, 2021; Weissman, 2019; Weissman & Tanner, 2018). For example, Gray and Holmes (2020) explain the use of the "thumbs up" emoji varies based on the cultural relevance, as to some cultures this visual represents a sense of agreement or positivity, while to other cultures it creates offense. Similarly, Weissman and Tanner (2018) explain the use of context when depicting irony among emoji use. Specifically, using the winking emoji as a tool of irony requires context depiction on both the part of the message sender and receiver, as the receiver's brain decodes the ironic emoji-included message as it would when reading literary text (Weissman & Tanner, 2018). In other words, rather than solely depicting emojis as substitutions for nonverbal communication in a computer-mediated context, emojis also enhance emotional valence based on image and textual congruence, as well as assist in deconstructing the sender's meaning, thus ultimately affecting perceived message effectiveness (Togans et al., 2021; see also Holtgraves & Robinson, 2020).

Many studies have been done to examine the effectiveness of emojis and the results have been mixed (Das et al., 2019; Manganari, 2021; Walwema, 2021; Willoughby & Liu, 2018). Das et al. (2019) found messages which include emojis increase consumer purchase intention due to high message effectiveness. Similarly, Walwema (2021) found emojis enhance message recall, relatability of the organization using the emojis in messages, and the overall readability of the message itself. Manganari (2021) found that messages that included emojis had higher levels of perceived message effectiveness than those without emojis. However, Willoughby and Liu (2018) found that individuals who were exposed to health-related messages without emojis experienced higher levels of message effectiveness due to higher levels of perceived credibility.

While perceived message effectiveness regarding emoji use in messages varies among different studies, perceived attitudes toward messages including emojis has higher consistency regarding audience perception. For example, Yakin and Eru (2017) found that individuals expressed positive attitudes toward messages on social media which included emojis due to the perceived creativity associated with emoji use. Similarly, Willoughby and Liu (2018) found that participants exhibited positive attitudes toward messages including emojis based on the way in which emojis acquire the individuals' attention rather than solely through the use of words.

GIFs

Aside from emojis, GIF files also act as multimedia characteristics frequently used when disseminating messages. GIF stands for "Graphics Interchange Format," and is defined as "an image file format that use[s] lossless data compression," thus, "display[ing] frames on repeat within the same image file without being the size (or resolution) of a video" (Miltner & Highfield, 2017, p. 1, p. 3). According to Biggs et al. (2021), though first established in 1987, "GIFs were adopted by net artists as early as the mid-1990s, as a means of expression, merging art and life, playing with identities and roles, creating confusion, and making web-based artworks available to large audiences" (p. 2; see also Paiz-Reyes et al., 2018). Essentially, GIFs can act as shortly looped videos of actions found within movies, television, and other sources to represent the actions and thoughts of the message sender (Tolins & Samermit, 2016).

Similar to emojis, GIFs also exist across a myriad of applications, establishing functionality in different software (i.e., iOS and Android) (Paiz-Reyes, 2018). Though not as frequently studied as emojis, GIF files have grown and expanded in use, developing the most engaging form of multimedia characteristic within computer-mediated communication (Jiang et al., 2017). Rather than act as one image as an emoji does, GIFs provide a multilayered and multi-textual

aspect of functionality, creating a hybridization of language, narrative, and video within each file (Biggs et al., 2021). As such, depicting emotion through GIFs is considered easier than depicting the intended emotion through emojis (Jiang et al., 2017). GIFs also distinguish themselves from emojis in their lack of replacing text (Jiang et al., 2018). Rather than replacing text or punctuation like an emoji, GIFs have multiple functions that include grabbing the receiver's attention, act as an ice breaker, enhance interactivity and overall interactional engagement between the sender and receiver, and provide greater expression when depicting emotions (Jiang et al., 2018).

However, some studies mention that GIFs may potentially mar communication, in that they create more of a distraction than an enhancement when placed inappropriately, thus disrupting the overall flow of communication (Jiang et al., 2018). This distraction occurs primarily when individuals cannot find the desired GIF file which accurately depicts the desired emotion or intention within the message (Jiang et al., 2018). Similar to the use of emojis however, GIF files contain culturally contextualized elements, thus affecting messages based on said context (Biggs et al., 2021; see also Jiang et al., 2018). Therefore, similar to the ambiguity created when using emojis as nonverbal aspects within computer-mediated communication, GIF files require enhanced attention when incorporating them into messages (Jiang et al., 2017; Jiang et al., 2018).

With regard to GIFs specifically, Jiang et al. (2017) found that GIF files have higher levels of ambiguity in their meaning in comparison to emojis, as more interpretations of the aforementioned files were found among the participants of the study. Similarly, Jiang et al. (2018) found the contextualization of GIFs leads to the acceptance of the GIFs themselves. For example, GIFs achieve acceptance when properly used (i.e., when the GIF files enhance the message and have message congruency), while GIFs do not achieve acceptance when improperly

used (i.e., the GIF files do not have congruency with the rest of the message, thus lessening the message's impact). Alongside the congruency of GIFs, the acceptance of GIFs also results from how the receivers perceive the sender of the message, and whether the receiver believes the sender is the appropriate curator through which the GIF is chosen (Jiang et al., 2018). Overall, this level of ambiguity, coupled with the lack of research regarding the effectiveness and functionality of GIFs within computer-mediated messages, encourages further research to take place (Jiang et al., 2018).

As such, emojis and GIFs are widely used by many organizations; however, the results of the studies that have examined their effectiveness have been mixed. Therefore, this study aims to examine whether there exist any differences in using different types of messages (i.e., message using emojis, message using a GIF, text-only message) to deliver health-related information in terms of perceived message effectiveness and attitudes toward the message by comparing CDC's different types of tweets that include information related to COVID-19:

RQ1: Are there any differences among the three groups (i.e., tweet using emojis, tweet using a GIF, text-only tweet) in terms of perceived message effectiveness?

RQ2: Are there any differences among the three groups (i.e., tweet using emojis, tweet using a GIF, text-only tweet) in terms of attitudes toward the message?

Political partisanship and perceived reputation of the CDC

Previous studies have mentioned that one's political ideology and perceived reputation of an organization may play a role in how they feel about the messages that an organization shares. Political partisanship refers to the differentiation of preferred policies held by individuals, as well

as specific constituency held by the parties themselves (Galasso, 2011). In other words, political partisanship establishes one's political beliefs and affiliations based on preferred governmental policies and actions. Perceived reputation refers to the trustworthiness of an organization deemed by the organization's publics (Casalo et al., 2007).

When individuals trust an organization, they are more likely to agree, cooperate, and comply with the organization based on shared values with the organization itself (Chon & Fondren, 2019). One of the ways in which individuals trust an organization is through the establishment of the organization's prior relational reputation. According to Coombs (2007), "prior relational reputation is how well or poorly an organization has or is perceived to have treated stakeholders in other contexts" (p. 167). In other words, an organization receives either positive or negative attribution during a crisis based on how the organization has handled previous crises.

This is also applicable to governmental relations with its publics. According to Chon and Fondren (2019), "public trust in governance authorities is very important because trust is an essential component of effective governance that increases publics' compliance with governance" (p. 3). In other words, the more an individual trusts those in governmental positions of power, the more willing those individuals are in complying with governmental ordinances and mandates.

Krupenkin (2021) further examined the effect political partisanship has regarding governmental trust and compliance. When analyzing notions of vaccines, Krupenkin (2021) found during the Bush administration that those with Republican partisanship exhibited higher levels of compliance than those with Democratic partisanship due to governmental trust. Similarly, Krupenkin (2021) also found those with Democratic partisanship during the Obama

administration exhibited higher levels of compliance when following governmental ordinance than those in the Republican party. In other words, Krupenkin (2021)'s study shows that political partisanship may affect one's perception toward a message based on the stance taken by the political party toward the message's originator.

Based on the above, this study also aims to examine the following research questions:

RQ3: How does political partisanship (RQ3a) and perceived reputation of the CDC (RQ3b) play a role in predicting perceived message effectiveness?

RQ4: How does political partisanship (RQ4a) and perceived reputation of the CDC (RQ4b) play a role in predicting attitudes toward the message?

Chapter 3

Methodology

Research Design

This study chose to analyze the perceived message effectiveness and attitudes toward messages using of emojis and GIFs within health communication tweets surrounding the COVID-19 pandemic. In addition, this study also examined how political partisanship and perceived reputation of the CDC predicted perceived message effectiveness and attitudes toward the message.

According to Wrench et al. (2016), "an experiment occurs when a researcher purposefully manipulates one or more variables in the hope of seeing how this manipulation affects other variables of interest" (p. 262). Through the aforementioned manipulations, experiments are used to examine "causal relationships" (i.e., what variables influence another) (Wrench et al., 2016, p. 262). The primary goal of this study was to examine the effects of employing multimedia characteristics in CDC's tweets on perceived message effectiveness and attitudes toward a message; therefore, an experiment was chosen as the necessary methodology. The secondary goal of this study was to examine how political partisanship and perceived reputation of the CDC may predict perceived message effectiveness and attitudes toward the message.

To examine the first two research questions, a three-group between-subjects experiment design was used, in which the type of tweet (i.e. (1) tweet using emojis, (2) tweet using a GIF file, and (3) text-only tweet) was the independent variable.

Participants

A total of 176 responses were collected through Qualtrics from undergraduate students at a large southeastern university. After deleting the responses that skipped the majority of the questions ($N = 5$), missed the attention check question ($N = 2$), and incorrectly answered the manipulation check question ($N = 2$), a total of 167 responses ($N = 167$) were included in the analysis. At the end of the experiment, participants were able to sign up to win one of three $20 Amazon gift cards.

Nineteen percent were males, 79% were females, and 2% were nonbinary or third gender. One participant chose to not answer the question (0.6%). Participants ranged from 19 to 38 years of age ($M = 22.01$, $SD = 2.46$). The majority of participants identified themselves as White (89.2%), 0.6% identified themselves as African American, 0.6 identified themselves as American Indian or Alaska Native, 4.8% identified themselves as Asian, 1.2% identified themselves as Native Hawaiian or Pacific Islander, and 3.6% identified themselves as other. When asked about ethnicity, 6.6% identified as Spanish, Hispanic, or Latino, while 93.4% identified as none of these. Regarding education level, the majority of participants have experienced some college (62.9%), while 18% identified as high school graduates, 15% have a college degree, and 3% have a graduate degree. One participant chose to not answer the question (0.6%). The range of income for the participants reveals the following: less than $24,999 (82.6%), $25,000 to $49,999 (6%), $50,000 to $74,999 (5.4%), $80,000 to $99,999 (0.6%), $100,000 to $149,999 (1.2%), $150,000 to $199,999 (2.4%), and $200,000 and above (1.2%). One participant chose not to answer the question (0.6%). When analyzing political identity, 43.7% of participants identified themselves as Republican, 21% as Democrat, 16.8% as Independent, 6% as other, and 12% as no preference. See Table 1.

Table 1

Participant demographics of nominal variables

	N	%
Education		
High school graduate	30	18.0
Some college	105	62.9
College Degree	25	15.0
Graduate degree	5	3.0
Missing	2	1.2
Ethnicity		
Spanish, Hispanic, or Latino	11	6.6
None of these	156	93.4
Race		
White	149	89.2
Black or African American	1	0.6
American Indian or Alaska Native	1	0.6
Asian	8	4.8
Pacific Hawaiian or Pacific Islander	2	1.2
Other	6	3.6
Gender		
Male	31	18.6
Female	132	79.0
Non-Binary/Third Gender	3	1.8
Missing	1	0.6
Political Identity		
Republican	73	43.7
Democrat	35	21.0
Independent	28	16.8
Other	10	6.0
No preference	21	12

Income

Less than $24,999	138	82.6
$25,000 to $49,999	10	6.0
$50,000 to $74,999	9	5.4
$80,000 to $99,999	1	0.6
$100,000 to $149,999	2	1.2
$150,000 to $199,999	4	2.4
$200,000 and above	2	1.2
Missing	1	0.6

Note. N = 167

Experimental Procedure

Following IRB approval, an email was sent to instructors who teach undergraduate courses within the school of communication and journalism (CMJN) at a large southeastern university. The email included information regarding the purpose of the study, as well as a request for the instructors to send a separate email to the students within their undergraduate CMJN courses to partake in the online experiment. The email entailed awareness of consent upon entering the experiment via the provided link.

The experiment, created via Qualtrics, included 34 questions surrounding the presentation of stimuli. Following the initial questions regarding perceptions of the CDC, participants were then randomly assigned to one of the three conditions [tweet using emojis (N = 59), tweet using a GIF file (N = 54), and text-only tweet (N = 54)]. Once the participants were exposed to one of the three stimuli, they were then asked a manipulation check question regarding what multimedia characteristic, if any, was included within the tweet. Following the manipulation check question, participants then filled out a series of questions. These questions included measurements of

perceived reputation of CDC, perceived message effectiveness, attitudes toward the message, and demographic questions including political partisanship.

Stimulus Materials

The experiment's stimuli were fictionalized tweets posted by the CDC in relation to the COVID-19 pandemic (see Figures 1-3). The tweets include information that was retrieved from the CDC website in November of 2021 regarding the use of masks. This information states, "Everyone older than 2 should wear a mask in indoor public places if they are: not fully vaccinated, fully vaccinated and in an area with high transmission, or fully vaccinated and with weakened immune systems" (Centers for Disease Control and Prevention, n.d.). Three tweets were created. One tweet solely included text, one tweet included the two mask emojis in place of the word "mask," and one tweet used a GIF showing the process of a man putting on a mask, followed by affirmation from another individual. Each of these tweets contained the same information regarding the number of retweets and likes provided by the CDC (n.d.) to maintain consistency among the tweets.

CDC ✔ @CDCgov · Jan 20

\#DYK? Everyone older than 2 should wear a mask in indoor public places if they are:
-Not fully vaccinated
-Fully vaccinated and in an area with high transmission
-Fully vaccinated and with weakened immune systems
\#MaskUp

💬   ♻ 2   ♡ 3   ⬆
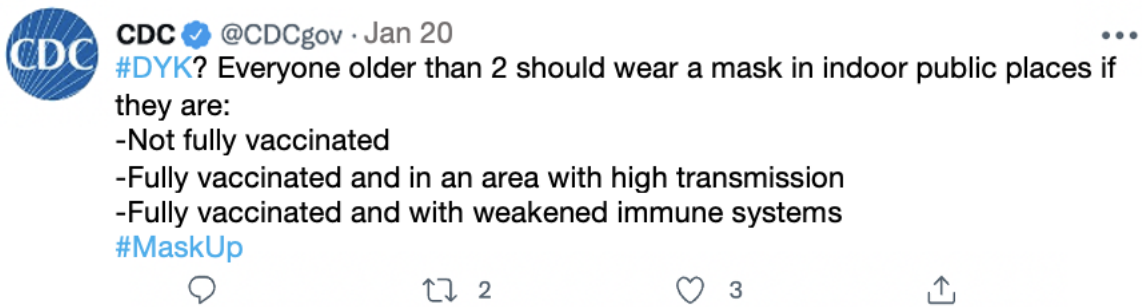
Figure 1. Stimulus for Text-only Condition.

CDC ✔ @CDCgov · Jan 20

#DYK? Everyone older than 2 should wear a 😷 in indoor public places if they are:
-Not fully vaccinated
-Fully vaccinated and in an area with high transmission
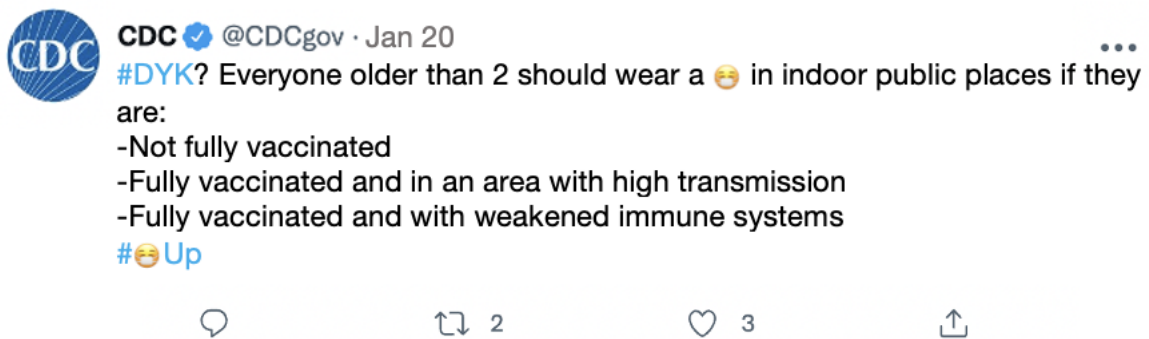-Fully vaccinated and with weakened immune systems
#😷Up

Figure 2. Stimulus for Tweet with Emoji Condition.

Figure 3. Stimulus for Tweet with GIF Condition.

Measures

  Perceived Reputation of CDC. Within Huang and DiStaso's (2020) study, **"**perceived reputation of CDC was measured using four items adapted from Ponzi, Fombrun, and Gardberg, (2011)" (p. 5). To further adapt the four items into the present study, participants were asked from 1 (strongly disagree) to 7 (strongly agree) how much they disagree or agree that: "I have a good feeling about the CDC," "I trust the CDC," "I admire the CDC," and "The CDC has a good overall reputation." These items were averaged to create an index (Cronbach's α = .93, M = 4.21, SD = 1.60).

  Realisticness. The realisticness of the tweet was measured with the following item on a 7-point scale ranging from 1 = strongly disagree to 7= strongly agree based on Chung's (2015) study: (1) The tweet seems realistic (M = 3.7, SD = 2.155).

  Perceived message effectiveness. To measure perceived message effectiveness, this study used a modified version of Dillard et al.'s (2007) 10-item measure as used by O'Donnell and Willoughby (2017). This modification originated from Noar et al.'s (2010) suggestion to "create a more robust measure for perceived message effectiveness" (O'Donnell & Willoughby, 2017, p. 154). Each item consists of a bipolar pair of words using a five-point semantic differential scale to measure the various aspects regarding perceived message effectiveness (O'Donnell & Willoughby, 2017). The participants were asked to rank the fictionalized CDC tweets as: (1) not convincing…convincing, (2) not believable…believable, (3) bad…good, (4) unfavourable…favourable, (5) undesirable…desirable, (6) unnecessary…necessary, (7) unlikeable…likeable, (8) un-relatable…relatable, (9) not informative…informative, and (10) detrimental…beneficial (Cronbach's α = .95, M = 2.96, SD = 1.11). Certain items within the 10-

item scale were recoded following the experiment to act as attention checkers while participants completed the experiment.

Attitudes toward the message. To measure receiver attitudes toward the message, this study used the two-item measure from Cho and Choi (2010). Each item consists of a bipolar pair of words using a five-point semantic differential scale (Cho & Choi, 2010). The participants were asked to rank their attitudes toward the fictionalized CDC tweets as: (1) good…bad and (2) positive…negative ($M = 2.90$, $SD = 1.38$, $r = .95$, $p < .001$).

Chapter 4

Results

Data Analysis

The purpose of this study was to examine whether there are any differences among the three groups (i.e., tweet using emojis, tweet using a GIF, text-only tweet) in terms of perceived message effectiveness (RQ1) and attitudes toward the message (RQ2). To test research questions 1 and 2, a one-way ANOVA was conducted.

This study also examined how political partisanship and perceived reputation of the CDC play a role in predicting perceived message effectiveness (RQ3a) and attitudes toward the message (RQ3b). To test RQ3 and RQ4, two separate hierarchical multiple regression analyses were conducted. Table 2 shows the correlations among variables of interest, along with their means and standard deviations. Tables 3 and 4 shows the regression results for predicting perceived message effectiveness and attitudes toward the message, respectively. All analyses in this study were run with SPSS Statistics software, version 28.

Table 2

Means, standard deviations, and correlations of the variables

	M	*SD*	1	2	3	4
1. Age	22.01	2.46	-			
2. Perceived Reputation of CDC	4.21	1.60	.04	-		
3. Perceived Message Effectiveness	2.96	1.11	.11	.63**	-	
4. Attitudes Toward the Message	2.90	1.38	.11	.60**	.86**	-

**p <.01, N=167*

Research Questions 1 and 2

According to Morgan et al. (2012), one-way ANOVAs "compare[s] the *means* of the samples or groups in order to make inferences about the population means" (p. 186). To run an ANOVA, there are multiple assumptions to take into account. Firstly, "observations are independent. The value of one observation is not related to any other observation" (Morgan et al., 2012, p. 186). In other words, the characteristics of one observation is unique to that observation and should not give any indication to a separate observation within the same group. Secondly, "variances on the dependent variable are equal across groups" (Morgan et al., 2012, p. 186). In other words, the dependent variable should be equally represented among all groups. Thirdly, "the dependent variable is normally distributed for each group" (Morgan et al., 2012, p. 186). In other words, each group should have an equal number of the dependent variable to run an ANOVA.

For this study, the first assumption (i.e., independent observations) and the third assumption (dependent variables are normally distributed for each group) were met. To check the assumption of homogeneity of variances, Levene's test was conducted. For perceived message effectiveness, the Levene's test was not significant and thus, the assumption was not violated. For attitudes toward the message, Leven's test was significant ($p < .05$) and thus, the assumption of equal variances was violated. However, according to Morgan et al. (2012), "because ANOVA is robust, it can be used when variances are only approximately equal if the number of subjects in each group is approximately equal" (p. 186) and therefore, one may still be able to use ANOVA if the assumption of homogeneity of variances is not fully met. Therefore, a one-way ANOVA was conducted to examine RQ1 and RQ2.

To examine whether there are any differences among the three groups in terms of perceived message effectiveness (RQ1) and attitudes toward the message (RQ2), separate one-way ANOVA tests were conducted. No significant difference was found among the three groups in terms of perceived message effectiveness ($F (2, 164) = 1.50$, $p = .23$) (see Table 3) and attitudes toward the message ($F (2, 164) = .72$, $p = .49$) (see Table 4).

Table 3. *One-way ANOVA test for perceived message effectiveness of the three groups*

	SS	df	MS	F	p
Between Groups	3.65	2	1.182	1.50	.23
Within Groups	199.08	164	1.121		
Total	202.72	166			

Table 4. *One-way ANOVA test for attitudes toward the message of the three groups*

	SS	*df*	*MS*	*F*	*p*
Between Groups	2.75	2	1.38	.72	.49
Within Groups	312.37	164	1.91		
Total	315.12	166			

Research Questions 3 and 4

To examine RQ3 and RQ4, a hierarchical multiple regression was conducted. Multiple regressions allow statistical analyses to examine the potential relationship multiple independent variables have with one dependent variable (Son, 2020). Multiple regressions include multiple conditions, including the need for normal distribution among the dependent variable due to their scalar nature (Leech et al., 2011). While the dependent variable must be scalar or interval, the independent variable must also have a numeric value (Leech et al., 2011). However, while the dependent variable must be at least interval level, the numeric value coinciding with the independent variable may be representative of nominal data in the form of "dummy variables" (Leech et al., 2011, p. 106).

One method by which multiple regressions are conducted is through hierarchical analysis. In using the hierarchical method, independent variables act as "predictors" which may be ordered sequentially by means of further leading toward and emphasizing potential predictions in relation to the dependent variable (Leech et al., 2011, p. 106). This study specifically chose to sequence the demographic independent variables prior to ending with perceived reputation of the CDC, to

see whether "certain variables *improve*[s] *on* [emphasis not added] prediction by others" (Leech et al., 2011, p. 106).

First, the demographic variables (i.e., gender, age, income, education, race, political partisanship) were entered in Block 1. Perceived reputation of CDC was entered in Block 2. Table 5 shows how the demographic variables and the perceived reputation of CDC predict perceived message effectiveness. Table 6 shows the results of a hierarchical regression analysis of using the demographic variables and the perceived reputation of CDC to predict attitudes toward the message.

The third research question asked how political partisanship (RQ3a) and perceived reputation of CDC (RQ3b) play a role in predicting perceived message effectiveness. When the demographic variables including political partisanship were entered in Model 1, it significantly predicted perceived message effectiveness, $F (6, 157) = 8.73$, $p < .001$, $R^2 = .25$. As indicated by the R^2, 25% of the variance in perceived message effectiveness could be predicted by the demographic variables entered. The beta weights and significance values, presented in Table 5, indicate that political partisanship is the only variable that contributes significantly to predict perceived message effectiveness ($\beta = .45$, $p < .001$).

When perceived reputation of CDC was added in Model 2, it significantly improved the prediction, R^2 change $= .22$, $F (1, 156) = 20.14$, $p < .001$. As indicated by the R^2 change, additional 22% of variation in perceived message effectiveness could be explained by adding perceived reputation of CDC to the regression model. The beta weights and significance values, presented in Table 5, indicate that perceived reputation of CDC ($\beta = .53$, $p < .001$) and political partisanship ($\beta = .22$, $p < .01$) contribute significantly to predicting perceived message effectiveness.

Table 5

Hierarchical regression predicting perceived message effectiveness (N = 167)

		Perceived message effectiveness
Predictor variables	Block 1	Block 2
Demographics		
Gender[a]	-.02	-.07
Age	.12	.08
Income	.13	.14*
Education	-.17	-.11
Race[b]	-.13	-.13*
Political partisanship[c]	.45***	.22*
Perceived reputation of CDC		.53***
R^2	.25	.48
ΔR^2		.22
F	8.73	20.14

Notes: Beta weights are from final regression equation with all blocks of variables in the model. Variables recoded as follows: a, Gender (female = 1, others = 0); b, Race (white = 1, others = 0); c, Political partisanship (Democrat = 1, others = 0).
*$p < .05$.
** $p < .01$.
***$p < .001$.

The fourth research question asked how political partisanship (RQ4a) and perceived reputation of CDC (RQ4b) play a role in predicting attitudes toward the message. When the demographic variables including political partisanship were entered in Model 1, it significantly predicted attitudes toward the message, $F (6, 157) = 10.93$, $p < .001$, $R^2 = .30$. As indicated by the R^2, 30% of the variance in attitudes toward the message could be predicted by the demographic variables entered. The beta weights and significance values, presented in Table 6, indicate that political partisanship is the only variable that contributes significantly to predict attitudes toward the message ($\beta = .48$, $p < .001$).

When perceived reputation of CDC was added in Model 2, it significantly improved the prediction, R^2 change $= .15$, $F (1, 156) = 18.08$, $p < .001$. As indicated by the R^2 change, additional 15% of variation in attitudes toward the message could be explained by adding perceived reputation of CDC to the regression model. The beta weights and significance values, presented in Table 6, indicate that perceived reputation of CDC ($\beta = .44$, $p < .001$) and political partisanship ($\beta = .30$, $p < .001$) contribute significantly to attitudes toward the message.

Table 6

Hierarchical regression predicting attitudes toward the message (N = 167)

	Attitudes toward the message	
Predictor variables	Block 1	Block 2
Demographics		
Gender[a]	.12	.07
Age	.14	.11
Income	.11	.12
Education	-.18*	-.13
Race[b]	-.11	-1.01
Political partisanship[c]	.48***	.30***
Perceived reputation of CDC		.44***
R^2	.30	.45
ΔR^2		.15
F	10.93	18.08

Notes: Beta weights are from final regression equation with all blocks of variables in the model. Variables recoded as follows: a, Gender (female = 1, others = 0); b, Race (white = 1, others = 0); c, Political partisanship (Democrat = 1, others = 0).
*$p < .05$.
** $p < .01$.
***$p < .001$.

Chapter 5

Discussion

This chapter discusses the findings of this study and their implications. It also discusses the limitations of this study and provides suggestions for future research.

Findings and Implications

The primary goal of this study was to see whether different types of tweets of a health organization would lead to different results in terms of perceived message effectiveness and attitudes toward the message. Specifically, the goal was to examine whether using different multimedia characteristics (i.e. emojis, GIF) in a CDC's tweet delivering information about COVID-19 would have any influence on perceived message effectiveness and attitudes toward the message. To examine the above research questions, an experiment was conducted.

Further, the secondary goal of this study was to examine whether political partisanship and perceived reputation of the CDC would play a role in predicting perceived message effectiveness and attitudes toward the message.

The results of the experiment showed that there are no significant differences among the three groups (i.e., (1) tweet using emojis, (2) tweet using a GIF file, and (3) text-only tweet) in terms of perceived message effectiveness or attitudes toward the message. In other words, respondents in the three different groups did not have significantly different levels of perceived message effectiveness or attitudes toward the CDC's tweet.

Social presence theory states that the level of relationships built through computer-mediated communication rely on the psychological closeness experienced between the senders and receivers of messages, as well as the verbal and nonverbal communication used (Bickle et

al., 2019; see also Fester & Cowley, 2018). As such, the use of nonverbal communicators through multimedia characteristics plays a part when communicating through a computer-mediated format (Das et al., 2019; see also Johnson & Hong, 2020).

The psychological closeness associated with and attributed to social presence also correlates with facial expressions themselves. As mentioned by Short et al. (1976), "the capacity to transmit information about facial expression, direction of looking, posture, dress, and nonverbal vocal cues, all contribute to Social Presence of a communication medium" (p. 65). Emojis and GIFs display digital versions of the aforementioned contributions toward social presence (i.e., facial expressions, dress, direction of looking, etc.) through computer-mediated communication. As such, the multimedia characteristics used within computer-mediated messages act as an extension of in-person communication, thus enhancing the social presence and immediacy found between communicators.

When examining the perceived message effectiveness and attitudes toward the message through the inclusion of GIFs, very few studies have been conducted. This lack of research is in part due to the high levels of ambiguity associated with the multimedia characteristics themselves, and should therefore undergo further analysis (Jiang et al., 2018). However, several existing studies of emojis have indicated various results surrounding the use of emojis within messages regarding perceived message effectiveness and attitudes toward the message.

As mentioned previously, some studies have found that the incorporation of emojis within messages have positively influenced perceived message effectiveness (Das et al., 2019; see also Manganari, 2021) and attitudes toward the message (Willoughby & Liu, 2018; see also Yakin & Eru, 2017), while other studies have found that the incorporation of emojis within

messages negatively influenced perceived message effectiveness (Willoughby & Liu, 2018).

This discrepancy may be attributed to overall content and context of the messages themselves.

When examining perceived message effectiveness specifically, Das et al. (2019) found that using emojis within marketing messages increased perceived message effectiveness, thus leading to increased consumer purchase intention as well. Similarly, Manganari (2021) found that emojis used within messages in the business context had higher levels of perceived message effectiveness than messages without emojis. However, when placed in the context of health communication, Willoughby and Liu (2018) found that messages which did not include emojis experienced higher levels of perceived message effectiveness based on higher levels of credibility exhibited by the message itself.

When solely examining attitudes toward the message the results have appeared more consistent than those of perceived message effectiveness. For example, though Willoughby and Liu (2018) found emojis to lessen perceived message effectiveness, they also found that emojis enhance attitudes toward a message based on relatability within the health communication context. Similarly, Yakin and Eru (2017) found that emojis positively impacted attitudes toward the message when examining messages on social media platforms due to perceived creativity and relatability.

In other words, using emojis within health-related contexts has received mixed results when examining perceived message effectiveness and attitudes toward the message, while non-health related messages on social media that include emojis have experienced positive perceived message effectiveness and attitudes toward the message (Willoughby & Liu, 2018; see also Manganari, 2021; Yakin & Eru, 2017). As such, the content within the message, as well as the message's context may play a role when crafting messages using multimedia characteristics .

Furthermore, the findings of this study suggest that while multiple studies exhibit the positive impact of using emojis to communicate a message to target audiences (Das et al., 2019; see also Manganari, 2021; Willoughby & Liu, 2018; Yakin & Eru, 2017), it might not lead to any positive results in terms of perceived message effectiveness or attitudes toward the message due to the overall mixed results based on the ambiguity associated with multimedia characteristics as a whole (Jiang et al., 2018). Therefore, organizations should note that while some studies have found that using emojis lead to positive results in enhancing perceived message effectiveness and attitudes toward the message, mixed results have occurred. As such, organizations should carefully consider the different factors that may affect the effectiveness of using multimedia characteristics such as the communicative context (e.g., social media dissemination, health communication, marketing, etc.), the type of the message they are delivering, and their target, and strategically use them to expect positive outcomes.

While the content of the message acts as a factor which affects perceived message effectiveness and attitudes toward the message, another potential factor that has not received much study involves the number of emojis used within messages. Therefore, as the number of emojis may act as an important factor surrounding the overall perceived effectiveness of a message, future research regarding the subject is necessary. Similarly, the type of emoji(s) selected for messages may also play a role in perceived message effectiveness and attitudes toward the message, particularly as it relates to the overall congruency of the message and acceptance of the emoji itself (as seen similarly in the case of GIF use) (Jiang et al., 2017). Therefore, the type of emoji used within messages also warrants further research.

The results of RQ3 and RQ4 show significant results surrounding the role of political partisanship and perceived reputation of the CDC in predicting perceived message effectiveness

and attitudes toward the message. The findings show that political partisanship (RQ3a) and perceived reputation of the CDC (RQ3b) were significant factors in predicting perceived message effectiveness. Specifically, those who identified themselves as Democrats tend to display a more positive sense of perceived message effectiveness than the other political partisanships (i.e., Republicans, Independents, no preference, and other) and those who had a more positive perceived reputation of the CDC tended to have a more enhanced sense of perceived message effectiveness.

Similar to RQ3, political partisanship (RQ4a) and perceived reputation of the CDC (RQ4b) were also significant factors when predicting attitudes toward the message. Those who identified themselves as Democrats tend to display a more positive attitudes toward the message than the other political partisanships (i.e., Republicans, Independents, no preference, and other) and those who had a more positive perceived reputation of the CDC also tended to have more positive attitudes toward the message as well.

The above findings are in line with Chon and Fondren's (2019) and Krupenkin's (2021) studies regarding trust in organizations based on shared idealistic values and partisanship. Based on the results found within this study regarding higher positive perception of message effectiveness and attitudes toward the message originating from those identifying with the Democratic political party, it is further assumed that due to the current political party in power through the Biden administration, those who identify with the Democratic party have higher levels of trust based on shared political affiliation as opposed to other political partisanships (i.e., Republicans, Independents, no preference, and other). Therefore, shared political partisanship with the current political party in power results in higher perceived message effectiveness and attitudes toward the message based on trust and shared values.

Organizations should understand that the same disseminated message might be received differently by different types of audiences through the concept of public segmentation. According to Grunig and Repper (1992), segmentation is the "divide [of] a population, market, or audience into groups whose members are more like each other than members of other segments" (p. 129). In the case of this study, segmentation primarily refers to the various political partisanships represented among participants. Based on the findings within this study, political partisanship influences the prediction of perceived message effectiveness and attitudes toward a message. Specifically, those who share political partisanship with the ruling governmental party experience higher perceptions of message effectiveness and attitudes toward the message. This finding is further explained by Krupenkin (2021) and Chon and Fondren (2019), as those who share political partisanship with the ruling party are more likely to exhibit governmental cooperation and positive attitudes based on shared values and trust.

Furthermore, perceptions toward organizations, perceived message effectiveness, and attitudes toward messages which reflect partisanship also relate to overall levels of trust in governmental leadership, policies, mandates, and doctrines (Krupenkin, 2021). In response to RQ3 and RQ4, this study found that political partisanship significantly predicted perceived message effectiveness. Specifically, those who identified as Democrats were predicted to have higher perceived message effectiveness and attitudes toward the message than other parties. This corresponds to Krupenkin's (2021) findings in that those who belong to the party in office (i.e., the current Democratic party) have more trust in the government, while those who belong to other parties (i.e., Republicans, Independents, and others) have less trust in the government. As such, political partisanship affects trust in the government, as trust toward government officials leads toward governmental compliance (Chon & Fondren, 2019).

Alongside political partisanship, organizations must maintain a good reputation with its publics to effectively disseminate information to its publics regardless of political affiliation. As such, in response to RQ3 and RQ4, it is important to note perceived reputation of the CDC appeared the most significant factor when predicting perceived message effectiveness and attitudes toward the message. As mentioned by Coombs (2007), the way an organization's publics perceive an organization's reputation greatly relies on how the organization has handled past crises. In other words, if the organization has effectively handled crises in the past, while simultaneously maintaining positive relations with its stakeholders, the organization is more likely to have a positive perceived reputation on behalf of its publics. On the contrary, if the organization has ineffectively handled past crises and has created negative relations with its stakeholders, it is more likely to have a negative perceived reputation on behalf of its publics. As such, organizations should understand the characteristics of their target publics and develop messages which effectively target different segments (i.e., those who belong to different political partisanships), in tandem with maintaining a positive reputation in the eyes of their publics.

Conclusion

It is imperative to effectively deliver health-related information, particularly during times such as the COVID-19 pandemic. To do that, organizations need to learn how to effectively employ different multimedia characteristics in their messages and also understand what factors may play a role in people's perceptions and attitudes toward the message. The findings of this study suggest that the same message could be received differently by different public segments (i.e., political partisanship). Therefore, organizations should think about how to make their messages more effective in targeting different public segments to lead to better results. In addition, as the results showing that the participants' perceived reputation of the CDC being the

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strongest predictor of perceived message effectiveness and attitudes toward the message suggest, organizations should understand the importance of maintaining a good reputation in the eyes of its publics.

Limitations and Suggestions for Future Research

Though the findings of this study provided meaningful insight regarding political partisanship and perceived reputation of the CDC with regard to perceived message effectiveness and attitudes toward the message, there exist multiple limitations as well. Firstly, due to time constraints surrounding the study, no pretest was conducted prior to the main experiment. According to Rashotte (2007), conducting a pretest in an experiment allows the researcher to gain insight into potential issues within the research design which otherwise would not have been accounted for nor expected prior to research conduction. As such, once aware of the potential problems or issues which arise during the pretest, the researcher may then fix the overall research design prior to conducting the actual experiment (Rashotte, 2007). Therefore, for future studies, it would be necessary to conduct a pretest prior to conducting the main experiment.

It would be worthwhile to conduct the experiment using different demographics. The sample taken from the population of participants within this study was solely limited to undergraduates taking a class from the communication and journalism program at one specific large southeastern university. Alongside the specificity of the population, the overwhelming majority of participants were white females, thus potentially limiting the overall generalizability of the study's findings. As such, it is suggested that future research be conducted on a different sample population consisting of a wider demographic variety.

The reported realisticness of the stimuli used for this study was not high ($M = 3.7$, $SD =$ 2.155). One potential reason for this limitation involves the differences in timing between the stimuli construction and stimuli dissemination. The information for the stimuli used originated from the CDC's website regarding mask recommendations (i.e., when it is most appropriate to wear masks). However, the information used when creating the tweet had a publication date from November of 2021, while the experiment itself experienced dissemination in February of 2022. During the time between stimuli construction and experimental dissemination, multiple COVID-19 restrictions were lifted, including multiple mask mandates. As such, the CDC adjusted the information on its website to reflect the updated COVID-19 procedures, including updates regarding mask wearing. Due to the lifted mask mandates and changes in mask-wearing policies, the CDC no longer deemed consistent mask wearing necessary by the time of this experiment. Therefore, when participants were exposed to the tweet in the experiment, they may have thought that the content of the tweet was outdated, which could have influenced their perception of the realisticness of the stimuli.

In addition, future studies should more carefully consider the different factors that may affect the effectiveness of using multimedia characteristics. One such factor may be the context of the message itself. When including emojis within marketing, social media, and general business messages, studies found the addition of the multimedia characteristic positively influenced perceived message effectiveness and attitudes toward the message (Das et al., 2019; see also Manganari, 2021; Willoughby & Liu, 2018). However, emojis used in messages within the health communication context lessened perceived message effectiveness due to lowered perception of credibility (Willoughby & Liu, 2018). As such, the context of the message (i.e., health, business, etc.) may influence the overall effectiveness when using a multimedia

characteristic. Therefore, it is suggested that future studies analyze how multimedia

characteristics affect the effectiveness of messages from different communication contexts.

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Appendix A: Questionnaire

I.   Perceived CDC Reputation

Please indicate what you think about the following statements about the Centers for Disease Control and Prevention (CDC).

Strongly disagree (1)   Disagree (2)   Somewhat disagree (3)   Neutral (4)
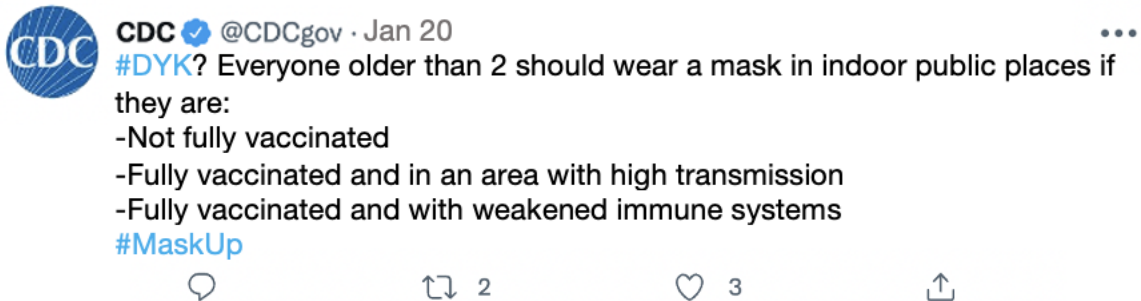Somewhat agree (5)   Agree (6)   Strongly agree (7)

1. I have a good feeling about the CDC
2. I trust the CDC
3. I admire the CDC
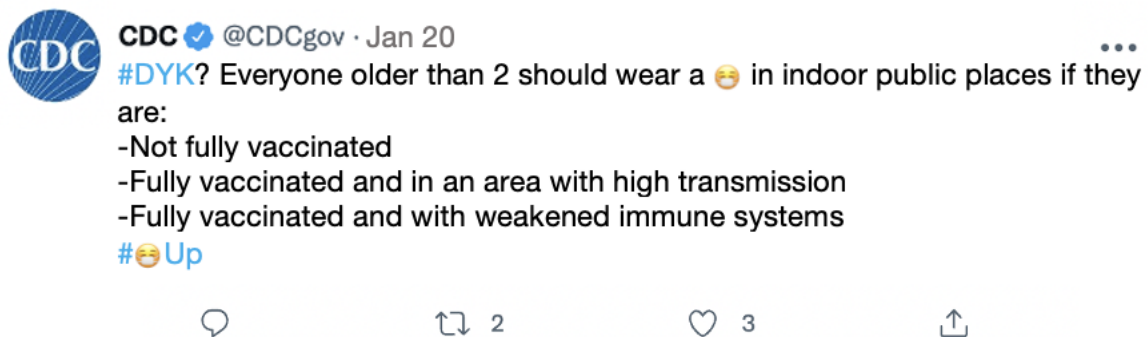4. The CDC has a good overall reputation

II.   Instruction

Please read the CDC's tweet on the following page. After you have read the tweet, click the "Next" button, and continue with the survey.

III.   Stimuli

Text-only Condition

CDC ✔ @CDCgov · Jan 20   •••
#DYK? Everyone older than 2 should wear a mask in indoor public places if they are:
-Not fully vaccinated
-Fully vaccinated and in an area with high transmission
-Fully vaccinated and with weakened immune systems
#MaskUp
         ⤬   ↻ 2   ♡ 3   ↥

Emoji Condition

CDC ✔ @CDCgov · Jan 20   •••
#DYK? Everyone older than 2 should wear a 😷 in indoor public places if they are:
-Not fully vaccinated
-Fully vaccinated and in an area with high transmission
-Fully vaccinated and with weakened immune systems
#😷Up
         ⤬   ↻ 2   ♡ 3   ↥

GIF Condition

CDC ✓ @CDCgov · Jan 20   •••
#DYK? Everyone older than 2 should wear a mask in indoor public places if
they are:
-Not fully vaccinated
-Fully vaccinated and in an area with high transmission
-Fully vaccinated and with weakened immune systems
#MaskUp

IV.   Realisticness

Please indicate what you think about the following statement:

Strongly disagree (1)   Disagree (2)   Somewhat disagree (3)   Neutral (4)
Somewhat agree (5)   Agree (6)   Strongly agree (7)

1. This tweet seems realistic

V.   Manipulation Check

Did the tweet include any multimedia characteristics (i.e., emoji or GIF)?
    (1) Yes, emojis were used
    (2) Yes, a GIF was used
    (3) No, the tweet did not include emojis or a GIF

VI. Perceived Message Effectiveness

Please indicate your impressions or feelings about the tweet on each of the scales below. Choose the one that best indicates your agreement with each item.

1. Not convincing 1 2 3 4 5 Convincing
2. Believable 1 2 3 4 5 Not Believable
3. Bad 1 2 3 4 5 Good
4. Unfavourable 1 2 3 4 5 Favourable
5. Desirable 1 2 3 4 5 Undesirable
6. Necessary 1 2 3 4 5 Unnecessary
7. Unlikeable 1 2 3 4 5 Likeable
8. Un-relatable 1 2 3 4 5 Relatable
9. Not Informative 1 2 3 4 5 Informative
10. Detrimental 1 2 3 4 5 Beneficial

VII. Attitudes Toward the Message

Please indicate your feelings toward the tweet on each of the scales below. Please choose the one that best indicates your agreement with each item.

1. Bad 1 2 3 4 5 Good
2. Negative 1 2 3 4 5 Positive

VIII. Message Quality

Please indicate your feelings toward the tweet on each of the scales below. Please choose the one that best indicated your agreement with each item.

1. Unconvincing 1 2 3 4 5 Convincing
2. Valid 1 2 3 4 5 Invalid
3. Strong 1 2 3 4 5 Weak
4. Unbelievable 1 2 3 4 5 Believable

IX. Message Credibility

Please indicate your feelings toward the tweet on each of the scales below. Please choose the one that best indicates your agreement with each item.

1. Inaccurate 1 2 3 4 5 Accurate
2. Unbelievable 1 2 3 4 5 Believable
3. Unconvincing 1 2 3 4 5 Convincing

X. Demographics

1. What is your gender?
    (1) Male
    (2) Female
    (3) Non-binary/third gender
    (4) Prefer to self-identify as _____
    (5) Prefer not to answer
2. What is your year of birth?
3. What is your annual income?
    (1) Less than $24,999
    (2) $25,000 to $49,999
    (3) $50,000 to $74,999
    (4) $75,000 to $99,999
    (5) $100,000 to $149,999
    (6) $150,000 to $199,999
    (7) $200,000 and above
4. What is the highest level of school you have completed or the highest degree you have received?
    (1) Elementary school education
    (2) High school graduate
    (3) Some college
    (4) College graduate
    (5) Graduate degree
5. Are you Spanish, Hispanic, Latino, or none of these?
    (1) Yes
    (2) None of these

XI.   Attention Checker

The color test you are about to take part in is very simple. When asked for your favorite color you must select 'Green.' This is an attention check question.

1. Based on the text you read above, what color have you been asked to enter?
    (1) Red
    (2) Blue
    (3) Green
    (4) Orange
    (5) Brown

XII.   Demographics Continued

6. Please mark which race you identify as:
    (1) White
    (2) Black or African American
    (3) American Indian or Alaska Native
    (4) Asian

(5) Native Hawaiian or Pacific Islander
(6) Other
7. Generally Speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?
(1) Republican
(2) Democrat
(3) Independent
(4) Other
(5) No preference

XIII. Incentive

Thank you for participating in this study. To further thank you for your time, would you like to be entered into a drawing to win one of three $20 Amazon gift cards? This will include inputting your email address.

(1) Yes, I would like to enter
(2) No, I would not like to enter

Thank you again for participating in this study! Please enter your email address to be entered to win one of three $20 Amazon gift cards.