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RESEARCH ARTICLE

An Examination of Organizational Messages during the COVID-19 Pandemic Using Risk Communication and Social Support Frameworks

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ABSTRACT

Background: The COVID-19 virus continues to plague the world, though not at its alarming rate at the peak of the pandemic in 2020-2021. Throughout that time, a great deal of organizational messages were disseminated to audiences in response to the virus.

Aims: This study examined organizational messages in the United States about COVID-19 between March and September 2020. The purpose of the project was to identify patterns in these organizational messages to identify where messaging can be improved to better support the public when contending with health emergencies.

Method: A total of 106 organizational messages were assessed (N = 106) through risk communication and social support lenses.

Results: It was found that the organizational messages provided informational, instrumental, and emotional support. Organizational messages tended to frame risks as low hazard and low outrage. Strategies involving both rational and emotional appeals were used. The most frequently promoted preventive behavior was social distancing. It was found that different organizations promoted preventive behaviors differently, specifically government using their messages to promote wearing face coverings more than other industries.

Conclusions: Not only does this project fill a research gap, it also serves a practical function, as the findings can be presented to organizations as helpful information for the development of a comprehensive communication strategy during a public health situation.

Introduction

No matter where we go and when we are there, we are bound to encounter organizational messages. These messages come straight from the organization (i.e. a flyer, a brochure, a billboard, etc.) or are disseminated to audiences through the media (i.e. newspapers, magazines, radio, television, online, etc.). They may be considered advertising, which, according to Bovee and Arens, is "…information usually paid for and usually persuasive in nature about products, services or ideas by identified sponsors through the various media" [1] or public relations, which, according to Cutlip et al "…maintains mutually beneficial relationships between an organization and various publics." [2]

In late 2019, the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) began responding to an outbreak of a respiratory disease caused by a novel coronavirus.[3] According to the Johns Hopkins Medicine report, the virus, labeled COVID-19, has killed more than 6.88 million people globally as of June 2023.[4]

This global pandemic induced many thoughts and feelings, creating a need for information and facts coupled with personal comfort and commiseration. As the threat to public health and well-being persists, though not at its alarming rate at the peak of the pandemic in 2020-2021, organizational messages have employed risk communication. According to the United States Environmental Protection Agency, risk communication is the process of informing people about potential hazards to their person, property, or community. [5] Furthermore, organizational messages may be created on the premise of social support. Adelman defined social support as "verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's life experience."[6]

Given research about the COVID-19 outbreak and its impact,[7,8] it is important to examine organizational messages in the U.S. disseminated early on during the pandemic. As people became sick with COVID-19, stress and anxiety were extremely high.[8] People were searching for answers and longing for consolation. Organizational messages could address these needs. Therefore, it is valuable to determine if public necessity was being met. In addition, the information that organizations have been disseminating to the public, for both advertising and public relations purposes, has ultimately contributed to public opinion in the U.S. As such, identifying patterns in these organizational messages will help to identify where messaging can be improved to better support the public against COVID-19 and can aid in the response to future health pandemics. A number of studies have looked at how social media is used for virus information dissemination.[9-14] Additionally, previous research has examined public health crises and how health officials rely on traditional and social media for educational campaigns to deliver information regarding specific risks, such as smoking, environmental, or lifestyle risks.[15-17]. As part of their risk communication efforts, these organizations will often provide the public with information about symptoms, treatments, and ways to avoid exposure to a particular illness.[18]

Furthermore, there is a great deal of evidence documenting social support exchange among individuals during times of need.[19-25] Research also revealed social support on social media can improve understanding of health information and change health behavior.[26]

Given these distinct areas of study, it is clear that information about health and wellbeing can be effectively communicated through channels of social media, mass media, and interpersonal communication. A research gap exists, however, regarding how organizations can activate risk communication, facilitate social support exchange, and ensure virus information dissemination through their communication efforts.

As such, the purpose of the proposed research is to examine organizational messages in the U.S. disseminated during the COVID-19 pandemic between March and September 2020. The elements of the organizational message will be examined, as will the aspects of risk communication and social support. Not only does this fill a research gap, it also serves a practical function, as the findings can be presented to organizations as helpful information for the development of a comprehensive communication strategy during a public health emergency.

RISK COMMUNICATION

Given its global impacts, COVID-19 necessitates effective risk communication from all; in particular the government, the mass media, and organizations. Successful communication during a pandemic is essential to keep the public safe. This includes a clear understanding of how to

communicate risks associated with the illness in a way that ensures the public takes appropriate precautions to avoid harm. Covello defines risk communication as "the exchange of information among interested parties about the nature, magnitude, significance, or control of a risk." [27] It is often related to crisis communication[28] and an important aspect of many public health campaigns. These campaigns often use the mainstream media to inform the public and change individuals' behaviors so as to protect and improve the safety and health of the general public.[16] For this reason, it is important to understand the risk communication during a pandemic like COVID-19.

As Sandman[29] explained, one aspect of risk communication looks at how to scare people. An example is how people proceed when a flood is on the horizon and the neighborhood won't evacuate. Risk communication involves persuading people using emotional appeals, such as fear tactics. This approach is critical, particularly in situations where experts indicate that the hazard is serious, but the public is apathetic.[29]

The second component of risk communication is how to calm people down, specifically when the experts think that the hazard is not very serious, but the public is on edge. Risk communication is necessary when anxiety about a perceived risk is more severe to one's health than the risk itself. Risk communication involves reassuring people who are excessively alarmed about a risk.[29] Inherent in risk communication are two additional factors, including hazard and outrage.[29] According to Sandman,[30] audiences interpret risk based on hazard or outrage. Hazard looks at expected negative outcomes, whereas outrage refers to the reaction of the threat. Lachlan and Spence[31]further examined these factors. Their research tested Sandman's[29, 30] theory in a laboratory setting, asking participants to imagine a fictitious environmental risk in their hometowns. Participants then responded to items related to hazard and outrage. The results showed support for measuring hazard and outrage concepts. They also found that messages could be used to manipulate feelings of hazard and outrage in different risk scenarios.[31] Damiano and Catellier[32] examined tweets about COVID-19 from February and March 2020 and found that most tweets expressed low outrage and low risks. However, that study was conducted in the initial stage before the pandemic declaration. As the U.S. experienced a national crisis of COVID-19 after March 2020, it is important to consider how subsequent messages may shape the public conversation about COVID-19 throughout the pandemic.

SOCIAL SUPPORT

In addition to providing the public with information related to COVID-19 and its many risk factors, the idea that humans are social beings must not be overshadowed during the pandemic's time of social isolation. Social support is situated in human relations and exchanged through interpersonal interactions.[33-35] Previous research conceptualizes social support as a strategy to buffer against stress, which refers to any environmental, social, or internal changes.[36] There is no denying the fact that COVID-19 has been a fear and stress-inducing subject.[7,8]

In its simplest form, before considering it in the context of a public health emergency, social support is an indispensable part of daily interaction. Social support does not have to be enacted. Perceptions of availability of social support can also have a positive impact on individuals' well-being because this perception increases individuals' confidence in combating with stress.[37] However, one problem of perceived social support is that there may be a discrepancy from received social support. Therefore, social support does not always lead to positive effects but depends on contextual factors. Kaplan and Hartwell[38] argued that what individuals thought they could access from their social network could be different from actual resources they received. Sometimes the social support individuals receive can have a negative influence on individuals' well-being.[38] This possibly negative impact of social support on well-being that results from the discrepancy between perceived and received social support suggests that it is necessary to examine what types of social support are exchanged.

Three main types of social support are discussed in the literature, including informational, emotional, and instrumental support.[37] According to Helgeson,[37] informational support includes advice, guidance, or information relevant to the situation. Instrumental support includes aid or assistance. Finally, emotional support incorporates love and care. Social support can be provided by a source, or it can be sought from a source. Furthermore, social support can be a reciprocal process, with sources repeatedly providing and seeking support. Adelman defined social support as "verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's life experience." [6] Based on this definition, changes cause a series of negative effects on people's lives, and social support from

someone's network can help reduce these negative impacts.

Research suggests that media, particularly computer-mediated communication, is effective for social support exchange.[39, 24, 25] Support mainly includes informational support, such as medical information,[22, 26] sharing personal experiences,[40] and referrals to experts[19]; emotional support, such as encouragement, caring, understanding, empathy, and sympathy[20, 23]; and instrumental support, such as financial support and tasks,[22, 23] esteem support, including compliment and validation,[23] and network support, such as offering other members access to vent.[19] It is valuable to consider how these factors have been utilized during the COVID-19 pandemic to foster social support exchange.

PROPOSED STUDY

As COVID-19 continues to spread across the globe, stress and anxiety remain high. People continue to search for answers and long for consolation. Organizational messages could address these needs. It is imperative to assess whether the public need is being met. Furthermore, the information being disseminated by organizations is undoubtedly contributing to public opinion in the U.S. Upon identifying the patterns in these organizational messages, there is the opportunity to identify where messaging can be improved to further support the public during a health emergency.

The purpose of the proposed study is to review organizational messages in the U.S. disseminated during the COVID-19 pandemic between March and September 2020. The elements of the organizational message will be examined, as will the aspects of risk communication and social support. This study is expected to fill a research gap about how organizations use social media to deliver messages during a health pandemic such as COVID-19, and is expected to serve a practical function, providing findings that can be presented to organizations as helpful information for the development of a comprehensive communication strategy during a public health emergency.

Research Questions

The proposed study will examine organizational messages. Each organizational message will be coded for several factors, including risk communication and social support. The following research questions are proposed:

RQ1: Are advertising/marketing elements included in organizational messages?

RQ2: Are public service announcement (PSA) elements included in organizational messages?

RQ3a: What type of social support is most frequently used in organizational messages?

RQ3b: Is there a difference in social support in the messages produced by different organizations?

RQ4: What risk factors are presented in organizational messages?

RQ5a: What type of appeals are presented in organizational messages?

RQ5b: Is there a difference in appeals used in the messages produced by different organizations?

RQ6a: What preventive behaviors are promoted in organizational messages?

RQ6b: How do different organizations promote preventive behaviors differently in their messages?

Methods

Data for this study were collected from organizational messages in the U.S. disseminated between March and September 2020 during the COVID-19 pandemic. Messages were analyzed from a number of organizations in a variety of industries. Specific organizational messages were selected using simple random sampling by two researchers via a YouTube search with the keywords "COVID-19 organizational messages." The initial search generated more than 500 messages. To avoid selection bias, the researchers used randomization. Additionally, the researchers excluded videos that were duplicated, non-English, non-audio or non-visual, exceeding 10 minutes in duration, or unrelated to COVID-19. The final total of 106 messages served as the sample for this study. This diverse sample was selected so that the researchers could examine a broad range of organizations. The researchers expected to identify patterns among organizational messaging, including risk communication and social support factors.

The researchers chose videos/broadcast messages for several reasons. First, this legacy medium is conducive to the seminal Public Service Announcements (PSAs) launched in the 1970s. In addition, this platform has proven to be successful for organizations using PSAs.[41] Finally, despite the popularity of newer media, there is somewhat of a renaissance occurring in media today, as convergence has enabled traditional broadcast messages to be viewed online and also shared via social media to one's personal and professional networks.[42] This has greatly enhanced message exposure, led to increased engagement, and promoted two-way communication between organizations and audiences; all of which are important outcomes for advertising and public relations strategies. In addition, by using YouTube, the researchers had ideal access to a variety of

organizational messages. Whereas some organizations may only share their messages on certain network or cable broadcast stations or perhaps only online via an organizational website or social media site, given the large number of messages yielded by the researchers when conducting the initial search, it is clear that many organizations from a variety of fields are in fact using YouTube to disseminate their content. Therefore, rather than YouTube presenting a selection bias issue in this study, it in fact provided for a diverse pool of organizational content.

The purpose of the study was to examine organizational messages in the U.S. in the weeks following news stories across the globe of the COVID-19 pandemic, and to assess risk communication and social support factors. Risk communication and social support were presented as independent variables found within these organizational messages, and were measured using a content analysis. Using the organizational messages as the units of analysis, the researchers created a codebook with categories and dimensions as the recording unit. A combination of both manifest and latent content was examined, particularly items that could actually be identified and quantified (manifest) as well as underlying, deeper meanings/themes inherent in the organizational messages (latent). The categories and dimensions were created after a pre-test examining dominant patterns appearing in the data. A number of factors were considered when creating the codebook. In particular, the researchers examined several existing scales that looked at risk communication and social support. However, since the area of risk communication and social support in organizational messages during a public health emergency is a burgeoning field yet to be examined by many, the study took on an exploratory function by utilizing a broad scale to first contribute general literature to the field before further scrutinizing and breaking down the scale items.

The first category of the codebook was "Message/Brand," specifically the organization that created the message. This was a fill-in category without any dimensions.

Next, the "Advertising/Marketing Element" was coded, examining whether the message featured/provided an update on a product, service, or the organization. The coding scheme was as follows: (0) No and (1) Yes.

Next, each message was coded for whether it focused on health and personal well-being, therefore demonstrating a "Public Service Announcement." The coding scheme was as follows: (0) No and (1) Yes.

"Social Support" was then reviewed, which is based on previous work by Helgeson.[37] A total of six items were included in this section, specifically: 1. Providing Informational Support (give advice/guidance/information about the situation), 2. Providing Instrumental Support (give aid or assistance), 3. Providing Emotional Support (give love and care), 4. Seeking Informational Support (ask for advice/guidance/information about the situation), 5. Seeking Instrumental Support (ask for aid or assistance), and 6. Seeking Emotional Support (ask for love and care). The coding scheme was as follows: (0) No and (1) Yes.

"Risk and Outrage" was then measured, which follows research by Sandman[29, 30] and Lachlan and Spence.[31] How the message framed risk was assessed with the following dimensions: (0) Low Hazard/Low Outrage, (1) Low Hazard/High Outrage, (2) High Hazard/Low Outrage, and (3) High Hazard/High Outrage.

The four dimensions are defined as follows:
-Low Hazard/Low Outrage: Risks that pose little threat and fail to upset many
-Low Hazard/High Outrage: Risks that upset but pose no real harm
-High Hazard/Low Outrage: Presents potential for harm but fails to upset
-High Hazard/High Outrage: Risks are serious and concern is high

Next, "Type of Appeal" was reviewed, which is based on Aristotle's[43] work. The first item asked whether the message incorporated a rational appeal. The second item asked whether the message incorporated an emotional appeal. The coding scheme was as follows: (0) No and (1) Yes.

The following category was "Industry Featured," which looked at the type of industry the organization represents. After examining previous scales measuring similar items, the following dimensions were established for this study: (1) Clothing, (2) Grocery, (3) Restaurant, (4) Automobile, (5) Banking and Insurance, (6) Jewelry, (7) Health and Beauty, (8) Recreation/ Sports/Entertainment, (9) Retailer/ Department Store—Not Clothing Specific, Not Grocery Specific,

(10) Technology (i.e., computers, social media, etc.)., (11) Utility (electricity, telecommunication, heating, etc.), (12) Government, (13) Non-Governmental Organization (NGO)/Non-Profit Organization (NPO) (i.e., Ad Council), and (14) Others.

The next category was "Promotion of Preventive Behavior," which included the following dimensions: (1) No Preventive Behavior Promoted, (2) Wearing a Mask or other Face Coverings, (3) Washing Hands, (4) Deep Cleaning, (5) Social Distancing, (6) Wearing Gloves, and (7) Others.

After completing the coding process, data were imported to SPSS for analysis.

DATA ANALYSIS STRATEGIES

To answer RQ1, RQ2, RQ3a, RQ4, RQ5a, and RQ6a descriptive analyses were run to examine whether advertising/marketing elements and PSA elements were included in organizational messages or not, what type of social support was most frequently used in organizational messages, what risk factors were presented in organizational messages, what type of appeals were presented in organizational messages, and what preventive behaviors were promoted in organizational messages.

To answer RQ3b, RQ5b and RQ6b, chi-square tests were run to examine if there were differences in social support, appeals, and preventive behaviors in organizational messages produced by different organizations.

Results

RQ1: Are advertising/marketing elements included in organizational messages?

RQ2: Are public service announcement (PSA) elements included in organizational messages?

From a sample size of 106 (N = 106), descriptive analysis shows that 85.8% of the messages (N = 91) have an advertising or marketing element. Moreover, 91.5% of the organizational messages (N = 97) have a PSA element.

RQ3a: What type of social support is most frequently used in organizational messages?

RQ3b: Is there a difference in social support in the messages produced by different organizations?

A total of 92.5% of the messages (N = 98) provided informational support, 86.8% (N = 92) of the messages provided instrumental support, and 83% of the messages (N = 88) provided emotional support. Chi-square tests showed that informational support was more frequently provided than emotional support in organizational messages (χ^2 (1) = 4.429, $p < .05$), but no difference was detected between informational support and instrumental support (p = .174), or between instrumental support and emotional support (p = .441).

Among the 106 messages, none of them seek informational support. Only 5.7% of the messages (N = 6) seek emotional support, and 50% of the messages (N = 53) seek instrumental support.

Chi-square tests also showed that messages produced by different organizations provided different levels of emotional support (χ^2 (10) = 22.471, $p < .05$), with messages produced by the government providing the most emotional support, and messages produced by the banking and insurance industry providing the least emotional support.

RQ4: What risk factors are presented in organizational messages?

For risk factors, there were significantly more messages framing the risks as low hazard and low outrage (73.6%; N = 78) than messages framing the risks as high hazard and low outrage (14.2%; N = 15) (χ^2 (1) = 75.573, $p < .001$), messages framing the risks as high hazard and high outrage (7.5%; N = 8) (χ^2 (1) = 95.605, $p < .001$), and messages framing the risks as low hazard and high outrage (4.7%; N = 5) (χ^2 (1) = 105.116, $p < .001$).

RQ5a: What type of appeals are presented in organizational messages?

RQ5b: Is there a difference in appeals used in messages produced by different organizations?

For different types of appeals, 85.8% of the messages (N = 91) contained a rational appeal, and 98.1% of the messages (N = 104) contained an emotional appeal. Chi-square tests showed that messages produced by different organizations contained different levels of rational appeal (χ^2 (10) = 20.208, $p < .05$). Messages produced by the government contained more rational appeal than messages produced by other organizations, while messages produced by the banking and insurance industry contained the fewest rational appeals. No difference was detected for emotional appeal.

RQ6a: What preventive behaviors are promoted in organizational messages?

RQ6b: How do different organizations promote preventive behaviors differently in their messages?

Social distancing was the most frequently promoted preventive behavior in organizational messages (73.6%, N = 78), followed by wearing face

coverings (46.2%, $N = 49$), wearing gloves (20.8%, $N = 22$), deep cleaning (13.2%, $N = 14$), and washing hands (11.3%, $N = 12$).

Chi square tests showed that different organizations promoted wearing face coverings differently (χ^2 (10) = 25.149, $p < .01$). Government messages promoted wearing face coverings more frequently than messages produced by other organizations, but messages produced by restaurants had the fewest number of face covering elements. Messages produced by different organizations also promoted washing hands (χ^2 (10) = 18.428, $p < .05$) and deep cleaning (χ^2 (10) = 18.610, $p < .05$) differently. Health and beauty industries produced the highest number of messages promoting washing hands and deep cleaning, but the government produced the fewest messages promoting washing hands and deep cleaning.

Discussion

The results of this analysis provide some interesting insight into organizational messages during a global public health emergency. The purpose of this study was to examine organizational messages in the U.S. disseminated between March and September 2020 during the COVID-19 pandemic. The elements of the organizational message were examined, as were the aspects of risk communication and social support. While it was expected that there would be different kinds of social support provided/sought by various types of organizations, it was interesting to see how the COVID-19 pandemic was discussed in tandem with risk communication and social support behaviors.

ADVERTISING/MARKETING

The fact that so many messages in this study's sample contained an advertising/marketing element is not surprising. Given that advertising continues to be an increasingly expensive industry, organizations must get the biggest bang for their buck when they buy advertising time in not only reflecting on the pandemic and building relationships with audiences, but also using the opportunity to promote their brand.

In Olive Garden's "OGTOGO.COM" message from July 2020, the focus was on encouraging audiences to purchase meals from the chain restaurant, albeit while taking advantage of online ordering and curbside pickup to cut down on the spread of the virus. Similarly, Walmart in its "Back to School" message from August 2020, encouraged parents to buy all the back-to-school gear their children need (regardless of whether their kids attend classes in person or from home) at the large retailer.

Interestingly, some organizational messages did not emphasize the advertising/marketing element. Coca-Cola's "To the Human Race" message from May 2020 was a thank you to essential workers and included a feel-good message about everyone 'in the human race' working together to get through the tough times. The message was uniquely Coke with its iconic red color and a reference to 'filling your cup,' though the message did not explicitly ask audiences to buy Coke. This message aired early on in the pandemic, therefore perhaps some organizations like Coke thought better of producing messages with advertising/marketing elements, which might have made them look out of touch from the public health crisis occurring.

INCLUSION OF PUBLIC SERVICE ANNOUNCEMENTS

Several of the messages in this sample contained an advertising/marketing element and even more contained a public service announcement (PSA). PSAs have a long history of success in the U.S., specifically for discouraging unhealthy, risky behaviors such as smoking tobacco, drinking alcohol, and using drugs.[41] If there was ever a time to incorporate messages of PSAs into an organization's communication strategy to promote health, safety, and well-being, it is during this period.

The New York State Governor's Office produced many messages that promoted public health initiatives, specifically mask wearing behaviors. The "Mask Up, America" campaign, which began in July 2020, featured nearly a dozen messages with appearances from celebrities including Morgan Freeman, Billy Crystal, and Robert DeNiro and stressed the importance of wearing a face covering to cut down on the spread of the virus. Similarly, the Ad Council produced a number of messages as part of its "Alone Together" campaign, launched in March 2020, once again illustrating the elements of a PSA by encouraging the public to unite while being physically apart.

SOCIAL SUPPORT

The finding that several of the sampled messages provided social support makes sense. After all, this pandemic is the most significant public health emergency in our lifetime. People have been contending with negative emotions and longing for comfort, which unfortunately could not be provided in typical interpersonal forms, such as physical contact (i.e. hugging), due to social distancing guidelines. As a result, organizations used messages to embody social support, which, after all, is built on the premise of reducing uncertainty and enhancing

perceptions of personal control in one's life experience.[6]

Many of the messages in the sample provided informational support, provided instrumental support, and provided emotional support. In a message from McDonald's released in March 2020, information was provided, specifically stating that "the safety of our communities and people is our top priority." Instrumental support was provided, in particular, pointing out that the drive-in window at franchise locations would continue to be open to the public. Finally, emotional support was provided when the text on the screen indicated "just like we have for the last 65 years, we can still be here to take your order," which reinforced that with so much changing, consumers still had McDonald's as a constant.

The findings regarding seeking social support were quite different from providing social support. From the sample, very few messages sought social support. In particular, none sought informational support, very few sought emotional support, and just under six percent sought instrumental support. As much as social support is grounded in human relations and based on an exchange process,[33-35] it is undoubtedly difficult to ask something of someone when their most basic human needs, including health and well-being, are at risk. In late April 2020, CVS Pharmacy released its "Heart at Work" campaign thanking the essential workers who were "hard at work" and "full of heart." The message also thanked those staying at home and doing their part to stop the spread of the virus. The message ended with the CVS logo and a web site to learn more about the "Heart at Work" initiative. From the sampled messages, the ones that sought instrumental support encouraged audiences to visit an organizational website.

Another interesting finding from this study was that messages produced by the government provided the most emotional support, and messages produced by the banking and insurance industry provided the least emotional support. In late May 2020, then-New York State Governor Andrew Cuomo launched a contest for New Yorkers to submit a 30-second PSA as part of its "Wear a Mask" campaign. The five selected finalist messages each provided emotional support, specifically reinforcing the theme of unity through mask wearing and the societal obligation to wear a mask to protect the people around you. Governor Cuomo's office also created the hashtag #NYTough, which had been used on all New York State government communication since March 2020.

Governments throughout the nation and across the globe have continued to face resistance. Lerman[44] (2019) believed that government was facing a reputation crisis. Similarly, Mettler[45] found that although many Americans are dependent on the government for their income, since programs may not be readily identified, Americans hold a negative view of government despite sometimes direct benefits. Given all of this opposition, it appears that government communication was taking strides to be kinder and gentler.

On the contrary, of the sampled messages, 30-second spots from State Farm Insurance (in May 2020) and American Family Insurance (in June 2020) did not provide emotional support. Both messages referenced the COVID-19 pandemic and the importance of insurance and possible give-back/return compensation, but they stopped short of providing the emotional support evident in so many of the messages in this sample, especially the ones from government. Informational support was evident, though it remains to be seen if audiences also sought emotional support.

RISK

From the sampled messages, there were significantly more framing the risks as low hazard and low outrage. This is as opposed to framing the risks as high hazard and low outrage, messages framing the risks as high hazard and high outrage, and messages framing the risks as low hazard and high outrage. As Sandman[29] explained, there are two aspects of risk communication: 1) how to scare people and 2) how to calm people down. While the pandemic continues, audiences remain nervous, and, although these organizational messages have an opportunity to use their platform to promote public health and safety, there is also the possibility of creating panic, which could be devastating for individuals, and also destructive for organizations if anxiety is induced.

The toilet paper industry is one area that has manifested public fear, panic buying, and hoarding of supplies. Interestingly, organizations from these industries have used messages to allay audience fears by illustrating that the supply chain is hard at work. In April 2020, Angel Soft released a message stating that "the world has slowed down, but we haven't." Similarly, Quilted Northern, in its March 2020 message, stated, "We've been making toilet paper since 1901. And we won't stop now." Additionally, in March 2020, Cottonelle said in its message, "...we assure you there will be enough to go around." All of these messages demonstrated risk as low hazard and low outrage.

TYPES OF APPEALS

We identified that most of the messages adopted rational appeal (85.8%) and emotional appeal (98.1%), indicating the popularity of these two types of appeals in COVID-19 messages. Moreover, we also found that the adoption of rational appeals depended on the organizations that produced COVID-19 messages. A total of 84.2% of the messages produced by government included rational appeal, while only 42.9% of the messages produced by bank and insurance companies adopted rational appeal. For instance, New York City Department of Health produced a PSA as early as March 2020, when COVID-19 started its breakout in the U.S. In this PSA, they invited the NYC Health Commissioner, who is also a medical expert, to discuss the threats and the rapid infection of the virus. "Mask Up, America 1918," one of the PSAs in the series of "Mask Up, America" produced by New York State Government, cited the number of infected people in the 1918-1920 Spanish Flu to demonstrate how masks could prevent the disease spread during the pandemic. Previous research showed that the application of rational appeal in PSAs could shape positive emotional attitude and increase the likelihood to adopt healthy behavior in the areas of AIDS, smoking, drinking, and driving,[46-48] as rational appeal can provide numbers, statistics, and factual evidence in persuasion. As far as we know, this study is among the earliest ones to examine the rational appeal in COVID-19 PSAs. Thus, this study also provides practical and policy implications, specifically that other industries may follow government to produce more COVID-19 PSAs using rational appeal in the future to increase the persuasion effects.

We found that more than 98% of COVID-19 PSAs used emotional appeal, a strategy that has been proven to be effective in PSAs.[49, 50] However, this study didn't distinguish positive emotions from negative emotions, which has shown different effectiveness in PSAs of other areas such as drinking, smoking, and preventative behavior.[49, 51] Future research could examine discrete emotions such as fear, anxiety, hope, and humor in COVID-19 messages on YouTube. Another direction for future research is that it might be interesting to examine how rational appeals and emotional appeals changed over time during the crisis of COVID-19. For instance, it may be possible that more fear or anxiety appeals were used in messages during the early stage of the crisis, while more positive emotions were used during a later time as people got to know more about the symptoms and the treatment of COVID-19.

PREVENTIVE BEHAVIOR

Though the health experts suggested multiple behaviors to prevent COVID-19, these preventative behaviors did not receive equal amount of attention in COVID-19 PSAs. Over 70% of the PSAs promoted social distancing, and almost half of the PSAs included wearing a mask or other face coverings. However, only 20% of the messages encouraged washing hands, and even less promoted deep cleaning. Further analysis revealed that different organizations promoted different preventive behavior. Government's PSAs mainly focused on social distance and wearing face coverings. For example, New York State Government heavily promoted wearing masks and keeping social distancing in their "Mask Up, America" series of PSAs. The data also showed that PSAs produced by restaurants had the least amount of information about face coverings and social distancing, while PSAs produced by beauty and health industries had the highest recommendation for washing hands. Such results may be explained by the special characteristics and different perspectives of different stakeholders.[52] For instance, it is natural for a beauty or health company to promote washing hands or deep cleaning.

Future research could examine if the promotion of different preventive behavior has changed over time. For example, the New York Governor made wearing face masks a mandatory order on April 15, 2020. It would be interesting to investigate whether there was a difference in COVID-19 PSAs in promoting wearing face masks before and after April 15.

CONTRIBUTIONS

Exchanging social support is an indispensable part of daily interaction. More research was needed to examine this evolving phenomenon. Not only did this research fill a research gap, it also serves a practical function here, as the findings can be presented to organizations as helpful information for the development of a crisis communication strategy during a public health emergency.

LIMITATIONS

This study also has some limitations. First, the sample size was small ($N = 106$) considering the thousands of organizational messages that continue to be produced and distributed to audiences on a daily basis. With additional coders, more organizational messages could have been coded. As this is a story that has continued, the data are limited, and it may change as more information is found and the virus spread slows. The types of social support, along

with the level of hazard and outrage in risk communication, although all pre-existing items, were applied to organizational messages during a pandemic for the first time. As such, these items can be refined to further categorize organizational response.

The presented study is an exploratory review of organizational messages during the COVID-19 pandemic using the framework of social support and risk communication. Future studies require looking at how audiences respond to this organizational communication. Does this lead to stronger goodwill toward the organizations? Does this lead to increased sales/business for the organizations? By discovering this, there is the opportunity to make additional inferences about how organizations can strengthen their relationships with audiences. Furthermore, it would be interesting to review organizational messages sent during other crises and determine whether social support and risk communication was also presented. Finally, there are many additional channels used by organizations, therefore future studies could look at social media, web sites, and print messages. Surely there are many areas for future study.

Conclusions

Overall, this study provides some important insight into the organizational communication during a crisis using a social support and risk communication framework. While there is always more work to be done with how organizations can better communicate, we also know that the more we understand about crisis response, the better we can tailor messages. Organizations can use this information to better inform the public and help shape perceptions of organizations, crises, and society as a whole.

Conflicts of Interest Statement

The authors have no conflicts of interest to declare

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