#Storytime: An Analysis of Health Crisis Narratives, Conspiracies & New Digital Media

by

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DISSERTATION ABSTRACT

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Title: #Storytime: An Analysis of Health Crisis Narratives, Conspiracies & New Digital Media

The main objective of this dissertation is to examine health crisis narratives and their relationship to message perception and conspiratorial ideations. Through empirical data and observations, this research investigates the complex interplay among crisis narratives, public trust in institutions, credibility, disinformation, and conspiracism within the context of the COVID-19 pandemic, utilizing insights from two distinct yet interconnected studies.

Study 1 delves into the construction, communication, and reception of crisis narratives on TikTok, specifically focusing on videos discussing the purported origins of COVID-19 via the hashtag #covidorigin. Employing a content analysis approach, the study examines patterns in content types and their relationship with public engagement metrics such as views, likes, comments, and shares. Study 1 observed that popular TikTok videos discussing the origin of COVID-19 majorly incorporated at least one of the following: a first-hand narrative (a personal account in which the individual user shares a story in the first-person), a second-hand narrative (an account in which the individual user shares a story they heard from other people rather than from their own experience), and/or an informational report (content such as legislative documents, news reports, and book summaries). Additionally, while U.S. intelligence agencies have yet to reach a consensus on COVID-19's origin, this research detected a surge in #covidorigin videos following a 2023 interview in which FBI Director Wray stated that COVID-19

likely originated from a laboratory incident in China. Overall, this study suggests the influential role public leaders and media sources have in disseminating COVID-19 information and the importance of coherent crisis narratives in shaping public understanding. It also considers the effects of content types and communication formats in terms of how the public engages with speculative claims online.

Informed by the Narrative Paradigm, Study 2 investigates COVID-19 narrative gaps within the Centers for Disease Control and Prevention's (CDC) messages and their impact on public trust and perceptions. Through a four-condition experimental design, this study examined the implications of the CDC's confusing and contradictory messages regarding COVID-19 testing protocols. Among the various types of participant conditions, three separate group sets were randomly assigned to versions of CDC messages about COVID-19 testing protocols. The study revealed significant differences in participants' perceptions of COVID-19 messages across experimental conditions. Overall, those exposed to the verbatim contradictory CDC messages exhibited lower perceptions of message reliability, effectiveness, and credibility compared to those who received updated or modified messages. These findings accentuate the detrimental effects of narrative gaps and confusing statements on trust and credibility in health communication. By examining the effects of narrative gaps on perceptions of reliability, effectiveness, credibility, and trust, this research informs the development of communication recommendations aimed at building trust and mitigating the spread of conspiratorial ideations during health-related crises, thus contributing to more effective crisis communication practices moving forward.

Keywords: communication theory, media studies, communication and public decision-making, conspiracy theories, social media, narratives, COVID-19, CDC, health crisis

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Activist-oriented exploration and prosocial outcomes are the cornerstones of my research interests. Overall, my intent is to provide preventative measures for avoidable socio-psychological issues in efforts to promote a more cohesive global community for generations to come. My area of specialization lies at the intersection of persuasion and media psychology, technology and society, and media and public life. This focus inspires me to investigate crises, social issues, and phenomena surrounding conspiracies, as well as identify factors that contribute to the acceptance/rejection of messages.

Whenever I tell people that I am pursuing a Ph.D. in Communication and Media Studies, the usual response is to ask me about my dissertation topic. Upon learning about my interest in crisis narratives and conspiracies, I am (almost always) immediately met with the following question: *Why conspiracy theories?* My automatic internal answer is that I have spent countless hours watching TikTok videos about various conspiracies and while I do not consider myself a conspiracy theorist per se, I am fascinated to hear about the different narratives that influence the spread of conspiracies and how explanations can be presented so convincingly. Though—while probably not as entertaining—my more curated answer is that conspiratorial thinking is powerful in the sense that it often builds upon elements from pre-existing narratives to shape collective beliefs and actions.

This dissertation represents a synthesis of my research interests, aimed at improving communication practices during crisis events and mitigating the spread of conspiratorial ideations. My hope is that it may positively contribute to advancing how we understand and respond to these critical areas. However, it is important for me to state that the completion of this dissertation is not an accomplishment I attained all on my

own. If it were not for the support and encouragement from my husband, family, friends, mentors, cohort members, and colleagues, I would not be at the end of the Ph.D. process. Thank you for your words of affirmation and for constantly reminding me why I am doing this work. I would also like to acknowledge and show my appreciation for the University of Oregon's Center for Science Communication Research (SCR). Through the SCR's small grant program, I was able to conduct the second study of this dissertation.

In terms of writing this dissertation, I would like to express my gratitude to my committee members individually. I have learned so much from each of you—particularly about how to be an effective researcher—and I plan to apply these lessons in the next phase of my career. First, I would like to thank Dr. Rob Chavez for taking the time to meet with me whenever I had questions and for lending his expertise in social psychology and experimental design. Next, I would like to thank Dr. Whitney Phillips, whose own research on digital cultures helped me better conceptualize how to address and organize my work. I would also like to thank Dr. Alex Segrè Cohen, whose advice and guidance shaped how the ideas in this dissertation are discussed and how my research was formulated. Lastly, I would like to thank my academic advisor, Dr. Senyo Ofori-Parku, for being the best and most supportive mentor and friend. I will forever be grateful for the countless hours Senyo has spent drawing out concept maps with me and making sure I thoroughly understand all of the topics that we discussed. I appreciate how much he has pushed me to produce quality work and for always believing in my potential, especially during times when I was unsure of my own abilities. In summary, this dissertation has been made possible because of all the people who have been with me throughout this entire journey.

This dissertation is dedicated to the memory of Augusto Pangan Jr.

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CHAPTER I

INTRODUCTION

> In epidemics, the messenger matters: messengers are what make something spread. But the content of the message matters too.
>
> —Malcolm Gladwell, *The Tipping Point*, 2000.

In navigating the complex interplay between calamity and conjecture, this research explores the interwoven dynamics of crisis narratives, public trust in institutions, credibility, disinformation, and conspiracism, shedding light on the impact narratives have on perception, reality, and our shared response to challenges. Delving deeper into how crises are communicated to the public, this dissertation examines how narratives set the stage for how people perceive and discuss a crisis event. To begin, *disaster* and *crisis* are often used interchangeably to describe an unfortunate situation related to loss or damage that produces immense difficulty and prompts calls for action, such as information-sharing, change initiatives, and recovery efforts. Scholars (e.g., Alexander, 2005; Iyer & Mastorakis, 2006; Jorgustin, 2012; Parker, 1992) have generally defined disasters as "sudden unforeseen events with natural, technological, or social causes that lead to destruction, loss, and damage" (Al-Dahash et al., 2016, p. 1192). Meanwhile others (e.g., Coppola, 2015; Guha-Sapir, et al., 2014; Lighthouse Readiness Group, 2015; Moe et al., 2007) have labeled a disaster as a circumstance that inundates a locality, group, or individual's ability to endure and recover, resulting in a need for support from external parties. On the other hand, a crisis has been referred to as "a disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, [and] its existential core" (Pauchant & Mitroff, 1992, p. 15) and "a situation

faced by an individual, group, or organization which they are unable to cope with by the use of normal routine procedures and in which stress is created by sudden change" (Moe & Pathranarakul, 2006, p. 402). While two separate terms, this dissertation argues that disaster and crisis are symbiotic in the sense that with one must come the other (see Figure 1). To consider each term further, disasters are largely expressed as a harmful occurrence (Perry & Quarantelli, 2005), such as the emergence of a new infectious disease, while crises are often considered in instances when there is an immediate threat to fundamental values or essential functions for a group of people (Boin & Hart, 2007), such as an infectious disease spreading throughout a community. In this context, when a disaster occurs, a crisis is likely to follow. And the ways in which a crisis is mitigated can serve as an indicator or an index of how to maneuver through future crises (Rosenthal et al., 2001)—a main area of focus for this dissertation.

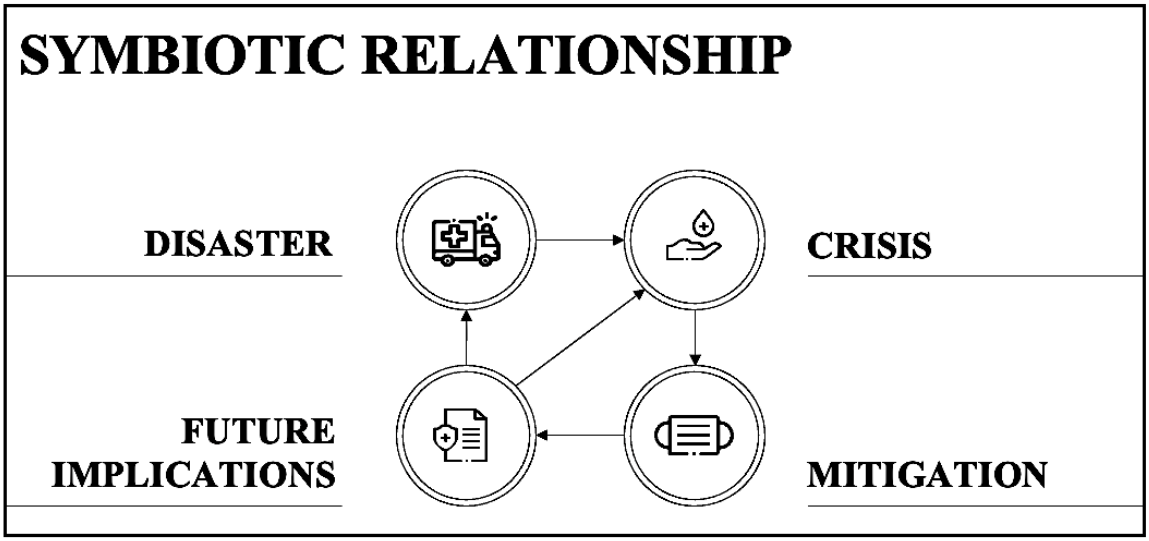


Figure 1. A flow chart that demonstrates the relationship between disaster and crisis. In the context of this research, when a disaster occurs, a crisis is likely to follow. The ways in which a crisis is mitigated can serve as an index for how to respond to future crises.

Disasters and crises are often associated with the spread of conspiracy theories (e.g., Koehler-Derrick et al., 2017; Stempel et al., 2007; van Prooijen & Douglas, 2017). Conspiracy theories are described as simplified ways for official and non-official conspiracy theorists to tell "complex stories" (Olmsted, 2019, p. 6). Olmsted (2019) explains that official theorists convey "one story about an event" while alternative theorists "doubt the stories told by public officials," and then, in an effort to "make sense of the world," they determine a story that they deem is more plausible (p. 6). A conspiracy theory is often defined as a "proposed explanation of some historical event (or events) in terms of the significant causal agency of a relatively small group of persons—the conspirators—acting in secret" (Keeley, 2006, p. 51). However, the concept goes beyond the notion of powerful individuals acting behind the scenes. It includes causal explanations that are (a) speculative (i.e., based on conjecture or errant data rather than reliable data), (b) contrarian and opposed to official or "obvious" accounts and self-sealing, (c) tend to tie unrelated events together, (d) impute nefarious intent to the supposed conspiracy, and (e) assume that the truths that underlie the events they purport to explain are well-guarded secrets (see Cassam, 2023; Keeley, 2006; Lewandowsky & Cook, 2020). Thus, while conspiracy theories may explicitly include the idea of a small group of covert actors operating to influence events, the idea of covert actors may be implied by the presence of other features of conspiracy theories. They may be explicit or implicit. As Cassam (2023) observes as an example, the claim that climate change is a hoax, when taken in isolation, may not satisfy the notion of secret actors conspiring behind the scenes. However, this abbreviated claim, when situated within the social, cultural, and political milieu within which the discourse of "climate change is a hoax"

emanates or is made, may qualify as a conspiracy theory. In this dissertation, the researcher uses "speculative claims" as a broader label that describes conspiracy theories that explicitly or *implicitly* include the notion of covert actors. Speculative claims may satisfy some elements of the conspiracy theory definition, but not all. Thus, the universe of speculative claims, in theory, would be much larger than conspiracy theories, but arguably have the same or similar consequences.

Scholars (e.g., Abrams, 2020; van Prooijen & Douglas, 2017) have attributed conspiracy beliefs to the human tendency to "perceive patterns and embrace information that meet needs for security and inclusion" (Abrams, 2020, para. 1). People are also drawn to conspiracies for an array of reasons—like to provide an explanation for why events have occurred, to feel exceptional or unique, or to acquire a sense of belonging (Abrams, 2020). Identification also plays a role in the beliefs that individuals possess and may have an effect on how people interpret situations, such as a crisis event (Biddlestone et al., 2021).

There are many factors that shape identity—such as society, family, friends, ethnicity, culture, political affiliation, religion, and so on—and much of a person's beliefs (e.g., conspiracy beliefs) tend to reflect and be predetermined based on their individual, political, or group identities (Biddlestone et al., 2021; Williams, 2022). Studies have also shown that political ideology is linked to public trust in science and conspiratorial ideations (e.g., Ackermann et al., 2004; Hornsey et al., 2020). For example, Hornsey et al. (2020) found that "allegiance to [former President Donald] Trump is associated with the public's perceptions of vaccine safety and efficacy" (p. 2). Thus, Trump supporters were drastically more apprehensive about vaccines than other Americans (Hornsey et al.,

2020). Moreover, once a person believes in an idea—whether it be riddled with misinformation or not—it is challenging to alter such beliefs (Lewandowsky & Cook, 2020; Lewandowsky et al., 2012). Efforts to correct views may even propagate the spread of conspiratorial ideas, especially among ideological groups (Ackland & Gwynn, 2020; Nyhan & Reifler, 2010).

Furthermore, while conspiracy theories are often associated with negative undertones (Aaronovitch, 2010; Byford, 2011; Coady, 2006; Dentith & Orr, 2017; Keeley, 1999; Napolitano & Reuter, 2021), research into the types of narratives that impact ideas about crisis events and the evolving channels in which they are communicated offers an abundant opportunity to learn more about how crisis narratives may affect perceptions and embolden the spread of conspiracy theories or speculative claims more broadly. This discipline can also help identify possible communication patterns that contribute to how people view and discuss speculative claims about a crisis event. In doing so, we may uncover specific features and processes that impact public communication and decision-making so that more effective and informed communication tactics can be applied to promote greater trust, reliability, and credibility of crisis messages and limit the spread of conspiratorial ideologies.

In academic and public discourse, conspiracies have been "linked to misinformation, mistrust in experts and institutions, and political propaganda" (Napolitano & Reuter, 2021, p.1) and defined by scholars (e.g., Aaronovitch, 2010; Byford, 2011; Coady, 2006; Dentith & Orr, 2017; Keeley, 1999) as "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors" (Douglas et al., 2019, p.4). While

certain conspiracies may seem improbable or even ridiculous to some people, the reality is that many people believe in these unverified explanations (Olmsted, 2019). For example, 36% of Americans believe that the Bush administration had some level of knowledge about the 9/11 attacks—meaning there are millions of American citizens who think one of the greatest tragedies to befall the United States was an "inside job" (Olmsted, 2019, p. 1). However, this conviction is not entirely unwarranted. Olmsted (2019) writes:

> In the wake of 9/11, the evidence of real government conspiracies from the past was used to support the conspiracy theories about the government of the present... because for all their seeming outlandishness, the successive generations of antigovernment conspiracy theorists since World War I have at least one thing in common: when they charge that the government has plotted, lied, and covered up, they're often right (p. 3).

A common misconception is that conspiracy theories are completely false and imagined folktales. While some conspiracies may appear bizarre on the surface, others have turned out to be true—e.g., the Watergate scandal (Wright & Arbuthnot, 1974) and the Iran-Contra Scandal (Kornbluh, 1987). Nevertheless, researchers (e.g., van Prooijen & Douglas, 2017) have suggested that social crisis events are pivotal in the creation and dissemination of conspiracy theories. While many studies (e.g., Koehler-Derrick et al., 2017; Stempel et al., 2007; Uscinski & Parent, 2014) have examined connections between popular conspiracies and major tragedies, future crises are inevitable—hence, conspiratorial thinking continues to be a probable outcome of crisis narratives. Therefore, it is crucial that constant research in this area is maintained to be reflective of current

times and the contemporary channels for communicating conspiratorial ideologies. van Prooijen and Douglas (2017) state:

> People of all eras and cultures are likely to believe in conspiracy theories, provided that they are confronted with societal crisis situations. [And] this relationship between societal crisis situations and belief in conspiracy theories is attributable to feelings of fear, uncertainty, and being out of control. These feelings instigate sense-making processes that increase the likelihood that people perceive conspiracies in their social environment... Taken together, these processes might explain why human history is replete with widespread belief in conspiracy theories (p. 330).

In summary, the narratives used to communicate crises and the manners in which they inspire conspiratorial thinking are key variables for conspiracy research.

Since the beginning of humankind, civilizations across the globe have accumulated a perpetual rolodex of crisis events—from conflicts to environmental disasters to virus outbreaks (Roos, 2022). For instance, in 2022, the *History Channel* released an online article that outlined some of the most monumental crises from over the past century, titled "The Deadliest Events in U.S. History" (Roos). The list includes warfare (i.e., the U.S. Civil War, World War I, World War II, the Vietnam War, and the Korean War), acts of terrorism (i.e., 9/11), natural disasters (i.e., the 1900 Galveston hurricane and the 1906 San Francisco earthquake and fire), and health crises (i.e., the 1918 flu pandemic, the HIV/AIDS epidemic, and the COVID-19 pandemic). Given the broad spectrum of categories, this dissertation focuses on health-related crises as a sample crisis event type. More specifically, the research is centered around the COVID-

19 pandemic. While previous studies have considered the spread of conspiracy theories during a health crisis (e.g., Allington et al. 2021; Heller, 2015), there is little empirical work that specifically and simultaneously examines how narrative gaps and inconsistencies impact public trust and the perceived effectiveness and reliability of crisis messages within the context of conspiratorial ideologies.

According to Lynas (2020), a major conspiracy topic that developed during the height of the COVID-19 pandemic entailed the virus' supposed origins—i.e., the narrative of interest for Study 1 of this dissertation. As recently as 2023, debates regarding the source of COVID-19 began to surge across news outlets (e.g., *NPR, The Washington Post,* and *Associated Press*) following FBI Director Christopher Wray's comments that COVID-19 likely originated from a lab in Wuhan, China (Baier, 2023). However, the U.S. Department of Energy (DOE) released a report days earlier, which determined with "low confidence" that a lab leak was the cause of the pandemic (Gans, 2023). Furthermore, other major U.S. intelligence agencies have yet to publicly reach a consensus on the origin of COVID-19 (Gans, 2023)—making the narrative a timely and relevant area to examine how such inconsistencies affect public perceptions and the spread of conspiratorial ideations.

To consider the pandemic further, Study 2 analyzes COVID-19 messages from the Centers for Disease Control and Prevention (CDC), a U.S. government-appointed, official source for COVID-19 communication ("Our Story," n.d.). The CDC was selected for this research primarily because:

1. The organization has been a leader in U.S. COVID-19 communication efforts;
2. The organization already has a history of provoking public mistrust; and

3. CDC Director Dr. Rochelle Walensky publicly addressed the organization's flaws in communicating COVID-19 information (Stobbe, 2022).

In terms of COVID-19, the main critiques against the CDC were the organization's lack of urgency when it came to sharing information with the public and their dissemination of confusing and contradictory messages (Stobbe, 2022). Since this dissertation is concerned with the effects of crisis narratives, Study 2 is centered around the confusing and contradictory messages from the CDC. According to numerous reports (e.g., Edwards, 2020; Mandavilli, 2020; Miller & Foody, 2021; Stobbe, 2020; Walker, 2021), the most confusing messages from the CDC entailed testing protocols, quarantine protocols, and travel protocols. Therefore, messages about testing protocols were chosen as a sample CDC message type. Through this focus, Study 2 investigates how the CDC's testing protocol messages impact public perceptions of reliability, effectiveness, narrative fidelity, and credibility. In addition, this research examines how perceived reliability/effectiveness and narrative gaps affect public trust in the government and scientists and how people rate conspiracy beliefs.

Overall, this dissertation considers how crisis narratives affect perceived reliability, credibility, and public trust in institutions, above and beyond the effect of individuals' political identities and pre-existing conspiratorial beliefs. It also examines what ways the technological affordances of modern digital communication channels and messages about crises encourage the spread of speculative claims. First, contextual examples of crisis narratives and conspiratorial thinking are provided. Next, several conceptual frameworks that demonstrate the relationship between crisis events, conspiracy theories, and the media are addressed. Then, specific research questions are

posed along with a detailed outline of the two studies conducted to answer them. Based on the findings, a series of recommendations are offered to enhance communication efforts during health crisis events. Lastly, this dissertation concludes with an explanation of the significance and broader impacts of this research.

CHAPTER II

CONTEXT OF THE RESEARCH

Although there are many moments in history that can be assessed for conspiratorial thinking, for the purposes of providing further context to support this research, two categories of crises are provided below. The first example considers two separate events that are connected to one specific crisis and how narratives were used to catalyze such events. The second example examines the ways in which communication about major health crises contributed to the spread of conspiratorial ideations. These cases demonstrate the significance of crises for conspiracy scholarship and why further understanding of crisis narratives and conspiratorial thinking are crucial for effective communication efforts.

Category 1: Terrorism

On March 19, 2003, American and British armed forces invaded Iraq, which led to an onset of tension between nations and public scrutiny (History.com Editors, 2022). Despite the U.S. declaring an end to the war on December 15, 2011, after almost a decade of combat, vivid perceptions about the war continue to be prominent topics of interest in recent years. In 2019, researchers conducted a study to garner perceptions from American veterans about the invasion of Iraq (Igielnik & Parker). The data collected indicate that about two-thirds of veterans believe that the war was *not worth fighting*, with the majority agreeing that the costs of the war outweighed the benefits. In addition, polling records revealed that public opinion of then-President George W. Bush had declined nearly 50 points between 2003 and 2008 (active war years; “Bush and Public Opinion,”

2018). Given the negative public perception and hindsight disapproval, what influenced the decision to go to war? The short answer: *a national crisis*.

9/11 Terrorist Attacks

September 11, 2001 (known as 9/11) stands as one of the most impactful tragedies in living memory among Americans. On that day, 19 militants associated with al Qaeda, an Islamic extremist group, carried out a series of suicide attacks against the United States (History.com Editors, 2010). The radicals hijacked four airplanes: one hitting the Pentagon in Arlington, Virginia; another colliding into a field in Shanksville, Pennsylvania; and the remaining two plummeting into the Twin Towers of the World Trade Center in New York City, killing close to 3,000 people (History.com Editors, 2010). Citizens across the nation and people all over the world were exposed to the attack's aftermath through the media, causing mass hysteria and devastation (Walker, 2013). It was also during this time when public approval for President Bush began to skyrocket ("Bush and Public Opinion," 2018). An immense tragedy had just occurred, creating an ideal opportunity for leaders to capture the *"hearts and minds*" of the nation (Lewis & DeFaria, 2021, p. 82). People were paranoid and afraid, and in efforts to make sense of what happened, a narrative was adopted: America had been wronged (*a crisis*), the government will protect us (*the protagonist),* and terrorists were the culprits (*the accused*), therefore, they must be reprimanded (*redemption*). This narrative essentially communicated a strong *patriotic* theme that enticed citizens to support the current administration and initial war efforts in Iraq.

President Biden's Counterterrorism Operation

On the evening of August 1, 2022, almost 21 years after the 9/11 terrorist attacks, the White House released a statement by President Joe Biden as he announced the assassination of al Qaeda leader Ayman al-Zawahiri. In his speech, the president stated that "[al-Zawahiri] was deeply involved in the planning of 9/11, one of the most responsible for the attacks that murdered 2,977 people on American soil" and that al-Zawahiri participated in a number of global attacks, including "the bombing of U.S. embassies in Kenya and Tanzania" (Biden, 2022). Similar to 9/11 and the war in Iraq, a narrative was implanted to prime the government as the protector, and the leader of a terrorist group as the punishable villain. The results of this rhetoric and plan of action, however, had a significantly different level of impact than the Bush administration. According to polling data provided by Reuters (Lang, 2022), the Biden administration began with a 55% approval rating, but in the week following the counterterrorism operation, they were at a 40% approval rating. Since taking office, public perceptions of the president began to fluctuate slightly for different reasons, but why did the assassination of al-Zawahiri not cause a dramatic, *patriotic* effect? There may be several factors here, but perhaps a key element was the absence of a mass trauma-inducing, public-facing spectacle that immediately preceded the narrative about the killing of al-Zawahiri. For some Americans who were hearing about the news for the first time, feelings of relief and pride in the U.S. may have occurred. However, it is also plausible that the narrative did not yield the desired public response because some perceived the action as totally random, considering that the assassination of the al Qaeda leader is 21 years removed from the 9/11 terrorist attacks. Moreover, it is possible that the lack of

soundness and fidelity in the narrative sparked conspiratorial ideas about the assassination, such as the operation being a mere ploy to secure support for President Biden's administration and the Democratic party amid the upcoming midterm elections. For instance, just hours after the killing of al-Zawahiri was announced, *The New York Times* posted an article with the following statement:

> The strike was an important achievement for Mr. Biden, whose unpopularity in polls has jeopardized his party's chances in the midterm elections this fall and prompted fellow Democrats to urge him to let someone else run in 2024 (Barker et al., 2022, para. 27).

While the idea that the assassination was a tactic to generate voter support is unconfirmed speculation, it does allude to the broader issue of effective strategic communication—particularly, how a firm grasp on current perceptions of crisis narratives can be used to promote mutual understanding and trust with the public and limit the spread of conspiratorial ideologies. Firstly, it appears that without a recent preceding crisis event, a narrative about the assassination of a terrorist group member may not be effective in spawning political support. Barker et al. (2022) report:

> Such successes on the battlefield have had little lasting political benefit for [Biden's] predecessors. Successful raids killing the head of the Islamic State and a top Iranian commander made no meaningful difference for Mr. Trump, and even the raid that killed Bin Laden resulted in only a temporary bump in the polls for President Barack Obama (para. 26).

Secondly, even if the conspiracy was to be proven true and the goal of the Biden administration was to garner overwhelming public support by eliminating a known

terrorist, the communication plan failed to produce significant desired effects. In essence, Biden's public approval rating had decreased significantly after the assassination (Lang, 2022), and counterterrorism experts say that al-Zawahiri's death will not greatly impact al Qaeda operations nor the threat of terrorism against the U.S. (Barker et al., 2022).

Category 2: Major Health Crises

As previously mentioned, whether it is warfare, terrorist attacks, natural disasters, or health-related quandaries, history is riddled with examples of major social crises (Roos, 2022). For this dissertation, the researcher assesses the connection between health crisis events, narratives, and conspiratorial beliefs, as well as identifies trends based on empirical data and observations. Reconsidering the *History Channel*'s list of the most impactful tragedies in the United States (Roos, 2022), the health crisis events of utmost significance are the 1918 flu pandemic, the HIV/AIDS epidemic, and the COVID-19 pandemic. This section entails a discussion of how each health crisis was communicated to the public, as well as some of the conspiratorial ideas that emerged.

The 1918 Flu Pandemic

Flu (or influenza) is "a contagious viral infection that can cause mild to severe symptoms and life-threatening complications, including death, even in healthy children and adults" ("Flu," n.d.). Flu indicators include fever, aches (muscle, body, and headaches), body chills, fatigue, and sudden onset. The influenza pandemic of 1918 is projected to have killed 50 million people worldwide, with 675,000 of those deaths occurring in the U.S. alone (Sharp, 2005). In response, major cities across the country implemented non-pharmaceutical interventions to reduce the spread of the virus (Correia et al., 2022). These non-pharmaceutical interventions generally involved social distancing

measures, such as “school, theater, and church closures, public gathering bans, quarantine of suspected cases, and restricted business hours” (Correia et al., 2022, p. 918), and were publicized through news outlets like *The Philadelphia Inquirer* and *The New York Times*. Given the timeframe of the health crisis, as well as the lack of technology and knowledge on etiology and virus transmissibility, it is reasonable that initial ideas about the pandemic were erroneous—such as the 1918 flu being a byproduct of *Haemophilus influenzae* (Belser & Tumpey, 2018). It was not until the 1930s, over a decade later, that scientists were able to identify an H1 subtype as the “causative strain” (Belser & Tumpey, 2018).

Over the past 25 years, research on individual genes and “the reconstructed live 1918 virus” have classified various factors that “likely contributed to its robustness and rapid global spread” (Belser & Tumpey, 2018, para. 2). Today, numerous international health organizations and scientist groups continue to work together to track and evaluate the evolution of influenza viruses, enhance “surveillance” and “preparedness” measures (Belser & Tumpey, 2018, para. 3), and communicate crucial information to the public. To reiterate the importance of the latter, Belser and Trumpey (2018) assert that “it is critical to remember that preparation only stems from a global commitment to share data about viral isolates, support innovative research, and dedicate resources to assess the pandemic risk of new and emerging influenza viruses” (para. 5). While this statement is sensible, as this process can help prevent future outbreaks and promote public readiness, there appears to be no relevant crisis narrative to prompt further action given that it has been over a century since the 1918 influenza pandemic. However, the effects of modern crisis narratives can rekindle crises of the past and ignite new conspiratorial thinking.

As mentioned earlier, published studies on flu virus sequencing have provided data to develop preventative measures against potential diseases (Belser & Tumpey, 2018), but as time progressed, concerns about sharing such knowledge have grown due to fears of impending terrorist attacks (Sharp, 2005). While continued research and data distribution about flu viruses can be beneficial to the public and even lifesaving, debates about "the dual-use nature of biological information" and "its potential use by terrorists" began to circulate (Sharp, 2005, para. 2). While the U.S. National Science Advisory Board for Biosecurity (NSABB)—as well as the scientific community, publishing journals, and agencies representing the public—ultimately determined that "the scientific benefit of the future use of this information far outweighs the potential risk of misuse" (Sharp, 2005, para. 2), this debate demonstrates the sporadic nature of crisis narratives and the power they have to signal concerns and spark conspiratorial thinking through backdated contexts.

The HIV/AIDS Epidemic

The Human Immunodeficiency Virus (HIV) is "a virus that attacks cells that help the body fight infection, making a person more vulnerable to other infections and diseases" and is spread through "contact with certain bodily fluids of a person with HIV, most commonly during unprotected sex" ("What Are HIV and AIDS," 2023). If untreated, HIV can lead to Acquired Immunodeficiency Syndrome (AIDS), a late stage of the infection that transpires when "the body's immune system is badly damaged because of the virus" ("What Are HIV and AIDS," 2023). Similar to the 1918 flu pandemic, initial ideas about the HIV/AIDS epidemic were confounded and, in some instances, misguided, allowing for conspiratorial ideas to thrive—particularly around how the virus

can be transmitted (Heller, 2015). For context, news coverage of HIV/AIDS spiked in 1987 but has since diminished in both print and broadcast media regardless of the rising cases in the decade following (Stevens & Hull, 2013). And while the majority of cases affected minority groups in the U.S., only 3% of HIV/AIDS stories highlighted minorities (Brodie et al., 2004). Moreover, Cohen (1999) discovered that among all AIDS stories published in *The New York Times* between 1981 and 1993, only 5% of the coverage mentioned African Americans, although this group accounted for 32% of all AIDS cases in the country.

The lack of sufficient HIV/AIDS education and adequate representation in the media provided a fertile environment for conspiratorial thinking, which allowed people to fill in the narrative gaps with unverified rumors that were primarily targeted against vulnerable groups. Key ideas included: "only gay people can get AIDS," "you can catch it from a doorknob, a toilet seat, or swimming pool," "women are tricking men into having sex with them so they can give them AIDS," and "AIDS was developed by the [CIA] to kill off African American gays" (Heller, 2015, p. 43). In addition, Heller (2015) explains that such narratives "reinforce distrust by positing an explanation that assigns responsibility so explicitly: an illness that can be traced to an intentional (and familiar) actor, instead of a social and health problem that is part of an impersonal modernity with complex causes" (p. 43). In response to social activism by AIDS-affected groups, scientists and health experts were forced to emphasize "scientific knowledge to replace fears, ignorance, and uninformed suppositions" (Heller, 2015, p. 43). Due to this change in how HIV/AIDS is communicated to the public, the following advancements have been made:

> Experts no longer dispute the facts about the causes and modes of transmission for AIDS; as a direct result, we know how to stop HIV from spreading: through such measures as safe sex, clean needles, regular testing, and a screened blood supply... People who live with HIV (i.e., who are HIV-positive) can have productive, long, and relatively normal lives (Heller, 2015, pp. 43-44).

If we reconsider the hypothetical idea that President Biden's counterterrorism operation was a failed communication strategy aimed at combating the threat of terrorism and garnering political support ahead of the midterm elections, and compare it to how scientists and health professionals enhanced communication efforts about HIV/AIDS, there appears to be evidence that a strong grasp of current perceptions of crises narratives can indeed endorse—or derail—mutual understanding and trust with the public. In this case, the HIV/AIDS message mentioned above was a tactic aimed at limiting the spread of conspiratorial thinking through education, thereby saving lives.

The COVID-19 Pandemic

The Centers for Disease Control and Prevention (CDC) describes COVID-19 (or coronavirus disease 2019) as "a disease caused by a virus named SARS-CoV-2" that "most often causes respiratory symptoms" similar to "a cold, flu, or pneumonia" ("About COVID-19," 2023, para. 1-2). According to the World Health Organization (WHO), COVID-19 has claimed the lives of more than 7.02 million people worldwide as of February 2024—1.2 million of the deaths being from the U.S. alone ("WHO Coronavirus Dashboard"). Similar to the 1918 flu pandemic, due to the immediate devastation and residual impacts prompted by the virus, governmental institutions around the globe responded by recommending (and in many cases, enforcing) the practice of social

distancing through stay-at-home orders (Matias et al., 2020). While this tactic intended to slow the spread of COVID-19, it also resulted in mass isolation, increasing people's vulnerability by restricting access to basic human needs (i.e., healthcare, resources, and social connections; Matias et al., 2020). However, unlike in 1918, all popular social media platforms observed a significant rise in use (Ceci, 2022) as people gradually sought to establish community and find comfort online during COVID-19 isolation (Gilmore et al., 2022).

As is the case for all five crisis events discussed so far, conspiracy theories started to emerge soon after COVID-19 began gaining news coverage. These theories are further amplified via social media, with many ideas emulating "existing tensions within and between" cultural and political groups (Douglas, 2021, p. 270). A few examples of these ideas include claims that COVID-19 was invented to wage war between China and the United States and that the virus "was a hoax or was exaggerated by left-wingers as part of a plot to derail Donald Trump's reelection campaign" (Douglas, 2021, p. 270). Ultimately, the dissemination of conspiratorial beliefs impelled an assembly line of new polarized issues to the forefront of public discourse, with debates ensuing between factions of pro-maskers and anti-maskers, pro-vaxxers and anti-vaxxers, and so on (Douglas, 2021). Such deliberations also alluded to the political divisions across the U.S., with ideations often being linked to "strongly held social and political identities" (Douglas, 2021, p. 272). Analogous to the initial decades of the HIV/AIDS epidemic, the lack of cohesive messaging and prioritization on public education about the virus has led to the continuous spread of misinformation and conspiratorial thinking (van Mulukom et al., 2022). Further effects of the narratives surrounding the COVID-19 crisis event

include the death toll significantly surpassing that of the 1918 flu pandemic, thus earning its place as the top crisis event in U.S. history (Roos, 2022) —and the main focus of this dissertation. The next chapter reviews the literature and discusses relevant concepts surrounding crisis narratives, conspiracy theories, and the media in more detail, as well as provides specific questions and hypotheses to guide this research.

CHAPTER III

THEORY AND LITERATURE REVIEW

Uscinski and Parent (2014) state that conspiracy specialists get involved with the discipline for a plethora of reasons; however, "the most compelling is their close relationship to politics and policy" since the discipline is heavily rooted in "revolutions [and] social movements [that] fuel political stalemate, alienation, witch-hunts, and worse" (Uscinski & Parent, 2014, p. 4). In addition, they argue that conspiracy theories infiltrate all parts of society, cutting "across gender, age, race, income, political affiliation, educational level, and occupational status" (p.5). As time progresses, conspiracies expand and advance to represent the current political climate. For example, van Prooijen et al. (2022) examined how distrust and conspiracies manifest within a society and deteriorate social relationships. Discussing the implications that suspicions about institutions of power (i.e., government organizations and corporations) have on society, van Prooijen et al. (2022) introduce two main functions that organizations must uphold to regulate social relationships within society: (1) provide citizens with a sense of safety, and (2) offer models for accepted norms and values. If these functions are ignored or skewed by institutions of power, notions of conspiracy can produce damaging effects.

To date, social-psychological studies on conspiracies largely examine the links between conspiracy theories and cognitive biases (e.g., Douglas et al., 2016; van Elk, 2015; van Prooijen et al., 2018; Wagner-Egger et al., 2018) through a belief in conspiracy theories (BCT) model. More recently, Pierre (2020) proposed a two-component, socio-epistemic model of BCT as a way to inform "mitigation strategies that address both mistrust and misinformation processing, with interventions for individuals, institutions of

authority, and society as a whole" (p. 617). Pierre's approach incorporates elements of belief negation (*why one goes looking for conspiracy theories in the first place*) and affirmation (*why one comes to believe a particular conspiracy theory*) through two main components: epistemic mistrust and misinformation processing. Epistemic mistrust refers to suspicions about information from authority figures while misinformation processing describes individuals' "vulnerability to misinformation and a biased search for narratives that counter epistemic authority" (Pierre, 2020, p. 625). While the catalog of existing works on conspiracy theories is extensive, current studies generally lack substantial focus on the varying types of crisis narratives that prompt conspiratorial thinking and recommendations for curating narratives that combat the spread of conspiracy theories.

Humans are instinctively drawn to narratives because story structures help organize experiences and document significant events, as well as encourage further understanding of diverse cultures and social phenomena (Lewis & DeFaria, 2021). Stories enable people to live vicariously through narratives and consider the concepts being addressed (Stache, 2017). To describe the allure of narratives, Lewis and DeFaria (2021) write:

> We believe that [a communicator's] ability to tell stories... will directly impact humanity's collective ability to organize the necessary actions to respond to today's pressing global problems. Whether it is climate change, terrorism, global pandemics, 'great power' conflict or antimicrobial resistance, viewing complex problems through the lens of story structure, with its reliance on dramatic irony, plot foreshadowing, reversals of fortune and heroes and villains, gives [listeners] badly needed context and creates emotional connections (p. 81).

As suggested, a crisis can be better conceptualized through narratives. This process encourages the development of ideas regarding why the crisis happened and, in some cases, inspires action as a way to respond to or rectify the situation (Fisher, 1985).

The Narrative Paradigm

In 1978, Fisher introduced the Narrative Paradigm as a model to better conceptualize how people create meaning in their lives through storytelling (Fisher, 1985; Stache, 2017). The Narrative Paradigm is described as a "proposed answer to [a] question" (Fisher, 1985, p. 76) that entices the continuation of a narrative. According to Fisher, when people are presented with a scenario, such as a crisis event, they theorize about how and why the situation transpired, which may then instigate reactionary behaviors—thus allowing for the autonomous advancement of the crisis narrative. To further explain this significance, Fisher (1985) writes:

> The Narrative Paradigm sees people as storyteller-authors and co-authors who creatively read and evaluate the texts of life and literature. It envisions existing institutions as providing 'plots' that are always in the process of re-creation rather than as scripts; it stresses that people are full participants in the making of messages, whether they are agents (authors) or audience members (coauthors) (p. 86).

To Fisher (1985), behaviors are symbolic components of a narrative, which are determined by two guiding principles: coherence (*Does this narrative make sense?*) and fidelity (*Do I accept this narrative as reliable?*). Therefore, not only are concepts considered through narratives, but Fisher's principles assert that narratives are used as a rationale for adopting beliefs and action. The coherence principle assess whether the

elements of the narrative are clear and consistent while the fidelity principle examines whether the overall narrative is logically sound (see Figure 2; Scott & Borgman, n.d.). Given this context, if narrators communicated information in a manner that sustains both principles, audience members are more likely to accept the narrative as plausible and participate in its continuation.

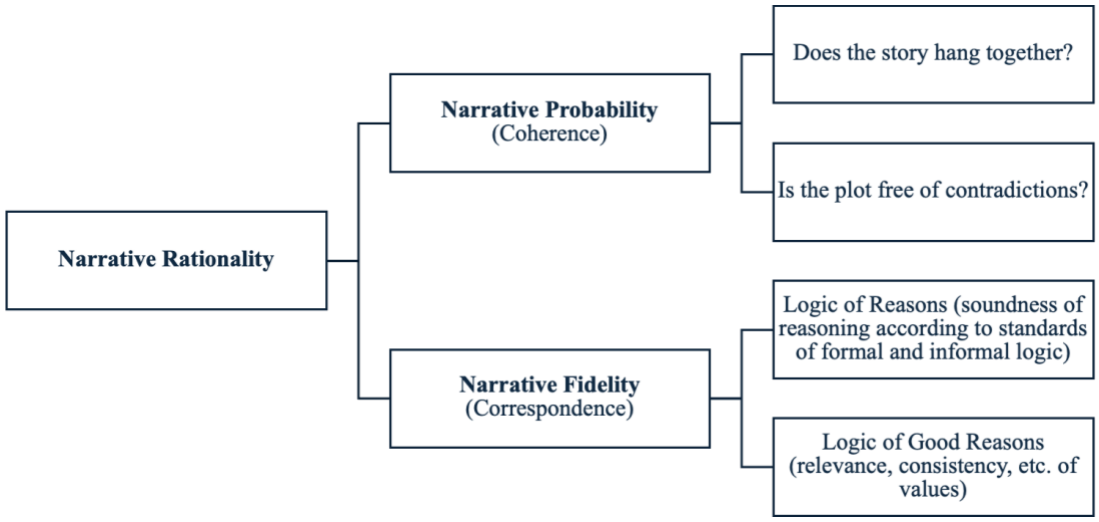


Figure 2. A flow chart that demonstrates the coherence and fidelity principles of the Narrative Paradigm (Fisher, 1985; Scott & Borgman, n.d.; Warnick, 1987). The coherence principle is concerned with the sequence of thought and whether the elements of the narrative are clear and consistent. Meanwhile, the fidelity principle assess whether the overall narrative is logically sound and reasonable. Together, both principles persuade audience members to accept or reject the narrative.

Stutts and Barker (1999) employed the Narrative Paradigm (Fisher, 1978) to conduct a content analysis that observed how advertisers use stories to incite brand loyalty among consumers and how consumers actually perceive such messages. The researchers examined responses from a sample of 73 randomly selected participants—comprised of advertising professionals from across 30 U.S. advertising agencies and undergraduate business majors from major eastern universities (Stutts & Barker, 1999). A questionnaire was distributed to each participant to gather demographic information, discuss the

narratives used in advertisements, and assess how these narratives measure up against Fisher's coherence and fidelity principles (Stutts & Barker, 1999). To determine an advertisement's degree of coherence, researchers noted a storyline's consistency, if elements were missing, if contradictions were presented, and whether the behaviors in advertisements coincided with an audience's understanding of the brand/storyteller (Stutts & Baker, 1999). The final results indicate that a majority of participants displayed more positive sentiments when stories were perceived as consistent and coherent. Furthermore, when evaluating fidelity—described as a narrative's "soundness" (Stutts & Barker, 1999, p. 230)—researchers found that while brands may not be immediately perceived as deceptive by audience members, advertisers implant messages to promote healthy skepticism towards the brand, which essentially encourages viewers to adopt attitudes and behaviors of brand loyalty.

Communication researchers (e.g., Foss, 1996; Heath, 2004) and literature scholars (e.g., Cohn, 2019; Sternberg, 2001) have also applied the concept of *sense-making* to analyze the meaning and purpose of a narrative. A narrative can be described as a method of thought and "a way of ordering the events of the world which would otherwise seem unpredictable or incoherent" (Heath, 2004, p. 171). They contain sequences that transcend the concept of time by assigning "a theme, a character, or a quality" (Foss, 1996, p. 400) to a story. When communities are faced with major crises, governing leaders are often tasked with devising a narrative that will generate trust, comfort, and support (Heath, 2004). If holes are present in a narrative, then audience members are given space to make their own inferences, which can then lead to the curation and adoption of speculative claims to satisfy the need for narrative coherence/sense and

fidelity/reliability (Fisher, 1985). For the context of this research, the allotted space to insert suppositions is referred to as a "narrative gap." Essentially, if narratives are unclear or appear incomplete, people can fill in the voids of narrative gaps to make better sense of the information they do have.

In the following sections, the relationship between crisis narratives and conspiracies are discussed, as well as accounts of conspiracy narratives in the media and the impact narratives have on conspiratorial thinking. The ways this research expands on current understandings of crisis narratives and conspiracies—particularly through contemporary media platforms—are also addressed.

The Importance of Crisis Narratives in Conspiracy Research

In line with the Narrative Paradigm, Bullock et al. (2021) agree that audiences are more easily persuaded when presented with information in the form of a narrative. They attribute this to the general public's ability to process messages more fluently in story form than non-narratives (Bullock et al., 2021). For example, when receiving medical diagnoses, narratives offer meaning, context, and perspective to patients as a way to explain how and why an illness has occurred (Greenhalgh & Hurwitz, 1999). While administering treatment for mental health issues, such as psychotherapy, therapists help patients construct and maneuver through unconscious components of a semi-structured personal story, providing an alternative narrative that is comprehensible from the patient's viewpoint (Holmes, 1998). During medical school training, students rely on anecdotes from severe and unusual cases to critically question treatment prospects, limit stereotypical thinking, and adapt to changes as situations progress (Hunter, 1996). While many more examples can be listed, the bottom line is that focusing on narratives provides

a framework for approaching issues holistically and identifying effective solutions to better respond to situations like crisis events (Greenhalgh & Hurwitz, 1999).

Over several decades, scholars have attempted to reach a consensus on what constitutes a crisis (e.g., Fink, 1986; Keown-McMullan, 1997; Shrivastava & Mitroff, 1987; Wiener & Kahn, 1972). To be considered a crisis, academics have proposed conditions like "a turning point in an unfolding sequence of events and actions" (Wiener & Kahn, 1972, p. 21) or "a triggering event causing significant change or having the potential to cause significant change" (Keown-McMullan, 1997, p. 8). Regardless of how crisis is described or defined, research on crisis narratives and conspiracies indicates that people constantly encounter considerable doubt and distress during crisis events, "such as terrorist attacks, plane crashes, natural disasters, or war" (e.g., van Prooijen & Douglas, 2017, p. 323), and since people have an inherent need to speculate on why events transpire (Fisher, 1985; Lewis and DeFaria, 2021), crises habitually stimulate sense-making narratives (Foss, 1996; Heath, 2004). Often, these narratives emerge as conspiracy theories, generally defined as "explanatory beliefs of how multiple actors meet in secret agreement to achieve a hidden goal that is widely considered to be unlawful or malevolent" (van Prooijen & Douglas, 2017, p. 324; Zonis & Joseph, 1994).

One example of how a crisis narrative can transform into conspiracy is the rumor that the 1986 Challenger Space Shuttle explosion was a hoax intended to incite fear and forced unity across the nation. On Tuesday, January 28, 1986, at 11:38 a.m. EST, the Challenger space shuttle began its assent from a launch site in Cape Canaveral, Florida (History.com Editors, 2009). On board were seven passengers: Christa McAuliffe, a teacher and mother of two; Ellison Onizuka, a military veteran and the first-ever Asian

American person of Japanese descent to voyage into space; Dr. Ronald McNair, a physics scholar and the second African American to travel to space; Dr. Judith Resnik, a biomedical engineer and the first Jewish woman in space; Lt. Col. Francis Richard "Dick" Scobee, a U.S. Air Force veteran, pilot, and aerospace engineer; Gregory Jarvis, also a U.S. Air Force veteran and satellite engineer; and Michael J. Smith, a military veteran, pilot, and father of three (Zakarin, 2020).

The mission of the 1986 Challenger flight, designated as STS-51L, was to "deploy a large communications satellite [to position] and retrieve an astronomy payload to study Halley's Comet, [so that] the first teacher in space [could] conduct lessons for schoolchildren from orbit" (Uri, 2021, para. 1). The launch was primed as a monumental, televised event that generated millions of views from onlookers across the United States. However, what was supposed to be a great moment in American history quickly turned into an awfully horrific, very public spectacle. Just 73 seconds after the Challenger's late-morning launch, hundreds of bystanders on the ground in Cape Canaveral and the many people watching the event live from home witnessed in shock and disbelief as the shuttle burst into flames, casting a blanket of smoke in the sky, and producing no survivors (History.com Editors, 2009). Following the aftermath of the explosion, President Reagan employed a special task force—led by former Secretary of State William Rogers and included astronaut Neil Armstrong—to investigate how the tragedy could have occurred and to develop preventative measures so that the event would not be repeated. The commission concluded that the explosion was initiated by the failure of a seal in one of the two solid-fuel rockets, which triggered the explosion (History.com Editors, 2009). As a result, NASA halted any operations that entailed sending humans into space for over

two years to focus on creating and implementing several space shuttle safety features. Despite applying new measures and following the successful launch of the Discovery space shuttle in 1988, the Columbia "disintegrated upon reentry of the Earth's atmosphere" on February 1, 2003, once again killing all passengers onboard (History.com Editors, 2010, para. 6). After another two-year hiatus, the Space Shuttle program resumed in 2005 and continued operations until July 2011.

One might question why NASA would even consider continuing the Space Shuttle program after the Challenger explosion in 1986 and then again after Columbia's demise in 2003, and why the government continued to support such missions even though these tragedies provoked mourning and feelings of despair around the country. As the Narrative Paradigm and extant research indicate, when exposed to catastrophe, especially on a very dramatic scale, it is human nature to try and make sense of what happened (Fisher, 1985; Lewis & DeFaria, 2021). As Williams (2003) explains, "If bad things *do* happen to good people… then a bad person needs to be responsible" (p. 443). So, would the "bad person" in this case solely be a technical error, or is it shared responsibility among the entities involved? Could it be possible that there are powerful individuals orchestrating these tragedies behind the scenes for some personal gain? Conspiracy theorists certainly believe the latter to be true, essentially dismissing the "common-sense" perspectives that leaders have communicated to the public (i.e., epistemic mistrust; Pierre, 2020). Even several decades later, the idea that the 1986 Challenger explosion was staged as a ploy for institutional gain continues to persist on new social media platforms, such as TikTok (Tisdale, 2022).

Throughout history, Americans have been shown to exhibit "high levels of suspicion towards centralized authority and their political elites… from the anti-Catholic and anti-Masonic movements in the nineteenth century to the 'Red Scares' of the twentieth" (Oliver & Wood, 2014, p. 952). In accordance with the Narrative Paradigm (Fisher, 1985), when the narratives being addressed do not make sense (*incoherent*) or feel ingenuine (*infidelity*), people are left to fill in the gaps of the story themselves (Oliver & Wood, 2014, p. 952). A conspiratorial idea would hold that, perhaps, the Challenger's demise was meant to be a distraction to allow for a hidden agenda to go into effect undetected. Given that four days after, President Reagan announced that he appointed a committee to investigate the tragic event, is it possible that his administration planned to leverage the event for political gain all along, eager to claim the protagonist role in the narrative (Oberg, 2006)? Did the federal government "sacrifice" men and women whose portfolios are synonymous with the American people's idea of a patriot (e.g., military veterans, astronauts, educators; Silver et al., 2021) as a ploy to incite enhanced national and international support for the United States? While merely conjecture, these questions demonstrate the limitless ways a single crisis event can convert into conspiracy theories.

Similar to the ideas claiming that HIV was developed to target and eradicate vulnerable groups (Heller, 2015), Pierre (2020) argues that conspiracist ideations can more effectively be understood as a result of epistemic mistrust. In accordance with Fisher's (1985) coherence and fidelity principles, if messages are not presented in a way that resonates with the audience and/or is perceived to be reliable, then the audience is more likely to develop feelings of mistrust toward the content being shared. In addition,

communicator credibility is a key contributor to the trust/mistrust of a narrative. Fiske and Dupree (2014) state that audiences generally interpret a speaker's trustworthiness as "the motivation to be truthful" (p. 13593), asserting that people can swiftly determine another's apparent intent. Furthermore, as social beings, trust is often a significant factor in how people maneuver through social interactions and make judgment-based decisions (Fiske and Dupree, 2014). However, conceptual and empirical literature suggest that such positions are malleable through effective emotional appeal. Aristotle's teachings acknowledge the power that emotions have in meticulously guiding audiences in a certain direction. Articulated feelings of passion, such as resentment for an adversary, "inclines listeners *towards* judging them [as] guilty" while "sympathy inclines listeners *away from* such a verdict" (Dow, 2019, p. 217). The effectiveness of polarized sentiments on the public's judgment is mainly dependent on a communicator's ability to understand the weight certain emotions bear on society, as well as their competence to enforce systematic ideologies (Dow, 2019). This underscores the importance of being a skillful narrator—one who can effectively present concepts about the world and/or current events (e.g., crises) through appropriate media channels and in a manner that baits action, such as implementing policies, organizing protests, garnering loyalty, and making plans for community recovery (Jerolleman, 2021).

Conspiracies and the Media

Throughout their research, Uscinski and Parent (2014) attempt to provide an enhanced understanding of conspiracy theories as well as address questions pertaining to validity, origins, theorist identities, and historical frameworks. In one study, they examine three systematic data points to cultivate a comprehensive overview of the role

conspiracies have played in American history and the impact they continue to generate in the 21st century. These sources entail 120,000 letters to the editors of *The New York Times* and the *Chicago Tribune* (dating from 1890 to 2010), a two-wave survey surrounding the 2012 presidential election (Barack Obama versus Mitt Romney), and samples of discussions from online forums. When examining the data from both media outlets in their first analysis, they found that while the *Times* represented more liberal, elitist, and coastal views and the *Tribune* represented more conservative, blue-collar, and heartland views, both samples were comparable "in terms of the relative amount of conspiracy talk and the distribution of various types of conspiracy talk" (Uscinski & Parent, 2014, pp. 57-58).

Conspiratorial ideologies and their spread through media channels have long plagued political landscapes across the globe. For example, when assessing how the media have been used to perpetuate conspiracies about the 9/11 attacks, Stempel et al. (2007) discovered that channels like talk radio, online blogs, grocery store magazines, and tabloids were instrumental in the spread of narratives like "the federal government either assisted in 9/11 or took no action to prevent the attacks because they wanted... to go to war in the Middle East" and "the Pentagon was not struck by an airliner but instead was hit by a cruise missile fired by the military" (p. 358).

Furthermore, at the beginning of 2003, Australian media coverage comprised primarily of news about the country's potential war against Iraq (Ackermann et al., 2004). As reporting persisted, pre-deployment of Australian troops to the Persian Gulf commenced, generating speculation that the country had already committed to the war despite overwhelming opposition from the public (Ackermann et al., 2004). On February

11, 2003, media focus shifted as news broke that an undisclosed number of Australian sailors were reverted back home after declining anthrax vaccination. According to statements made on mainstream broadcasting networks—e.g., *The 7.30 Report*, Australia's national current affairs television program—the sailors claimed that they were not informed about the required vaccine before deployment and after conferring with Internet sources about the vaccine, they decided against it. The main reasons cited were accounts of serious long-term health complications (Ackermann et al., 2004). Budding interest in the story continued as public disdain for potential war efforts remained. In addition to these sentiments, heightened exposure to content related to the sailors' departure increased concerns about vaccinations. Even though the anthrax vaccine is only mandatory for soldiers and not civilians, the public became more vocal about worries regarding vaccines offered to adults (Ackermann et al., 2004). Ultimately, the unprecedented popularity of the media story aided in undermining public confidence in the safety of vaccinations.

In another case, Koehler-Derrick et al. (2017) examined how a state-controlled news outlet in Egypt was used to propagate a high-profile conspiracy in an attempt to conceal police corruption. On August 14, 2013, protestors gathered in Rabaa Square to rally against the country's first democratically elected president, Muhammad Morsi. In retaliation, Egyptian security guards began using force against the crowd. Approximately 1,000 people were killed that day, signifying one of Egypt's "bloodiest internal conflict[s] in recent memory" (Koehler-Derrick et al., 2017, p. 1). Thirteen days after the massacre, *al-Ahram*, a state-run newspaper, published the following front-page headline: "New Conspiracy to Undermine Stability: Politicians, Journalists and Businessmen

Involved" (p. 1). In the leading article, *al-Ahram* reported that the attack was part of a plot staged by Anne Peterson, then-the United States' Ambassador in Egypt, to smuggle hundreds of armed militants into the country (Koehler-Derrick et al., 2017).

In recent years, the onset of new conspiracies came into fruition as a result of the COVID-19 global pandemic and the 2020 U.S. presidential election. Digital platforms like social media have also been used to disseminate election-related propaganda and incite rebellion—e.g., the January 6th insurrection at the U.S. Capitol Building in 2021. At approximately 1:10 p.m., former-President Donald Trump's supporters began gathering at the steps of the Capitol Building in response to the 2020 presential election results, which declared now-President Joe Biden as the winner (Petras et al., 2021). The monumental chaos that ensued within hours of the protest catalyzed the vehement destruction of government property. Five lives were lost during or immediately following the event, and, in subsequent months, the attack's impact led to four separate suicide deaths of officers on duty that day (Healy, 2021; Wolfe, 2021). On the eve of the insurrection, a right-wing Facebook group named Red-State Session shared: "If you are not prepared to use force to *defend* civilization, then be prepared to accept barbarism" (Barry & Frenkel, 2021, para. 6; Naylor, 2021). Under the post were dozens of comments by Trump supporters, which included photos of the weaponry users claimed to be bringing to the rally. There is also further evidence that exhibits how the attack was systemized through social media. Stop the Steal, a pro-Trump group that can be traced back to November 4, 2020, reached 320,000 Facebook members until the forum was shut down and moved to far-right platforms such as Parler and Gab. The same "Stop the Steal" motto was used by Trump via Twitter (now X) on January 1, 2021, and terms like

"stolen" and "steal" were repeated during his speech on January 6 (Barry & Frenkel, 2021; Naylor, 2021).

As demonstrated, elements of political dogmas are reflected and enhanced through the media, especially as advancements in communication technology are progressively easing access to/the dissemination of conspiracy theories. For instance, Uscinski and Parent (2014) assert that for conspiracy theories to be successful, it is imperative for concepts to align with shifts in societal dominance or hegemony, "a form of control exercised primarily through a society's *superstructure*" (Gramsci, 1971; Pitsoe & Dichaba, 2013, p. 84). Therefore, conspiracy theories symbolize perceptions of threat to foreign and domestic systems of power. Its intent is to focus or divert public attention toward certain ways of thinking, form social groups comprised of individuals with similar values, and recuperate from situations that particular groups deem as setbacks. In essence, Uscinski and Parent (2014) attribute the virality of conspiracy theories to being both flexible with shifts in power and efficient in influencing perceptions of mistrust toward dominant groups. As time progresses, conspiracies continue to flourish and evolve to mirror the current political climate. As technological advancements and current events continue to redefine societal norms across the globe, digital culture remains the cornerstone for contemporary media use and social interactions.

Digital Culture: A Media Revolution

The boundaries between the physical world and the digital landscape are quickly "blurring as we engage and communicate in digital terms" (Giannini & Bowen, 2019, p. 7), projecting a future in which voices are amplified to promote prosocial change, bring awareness to current events, and virtually tell stories. In early 2020, as social-distancing

mandates began to surge in efforts to combat the spread of the COVID-19 pandemic, people were left (*quite literally*) to their own devices to help manage the time spent in isolation. This resulted in a significant rise in the average time spent on social media—e.g., Americans consumed an average of 65 minutes of content per day as opposed to 54 minutes in years prior (Dixon, 2022). With billions of people around the globe stuck at home, all leading social media platforms witnessed an increase in monthly active usage as people strived to maintain social connections virtually (Dixon, 2022). Relatedly, short-form video applications such as TikTok, Instagram/Facebook Reels, and YouTube Shorts, have particularly increased in popularity in recent years (Zhang et al., 2019) because of their ability to promote creator-viewer participation, generally free access, the simplified production process via in-app features (e.g., music, filters, and text), and continuous flow of content tailored to a user's interests (Portel, 2022). The ease of viewing and creating content online has made such apps hotbeds for quick entertainment, sharing opinions, and disseminating information (Song et al. 2021).

A three-part study (Allington et al., 2021) was conducted to observe the correlation between conspiracy beliefs about COVID-19 and social media use. The researchers found a negative relationship between COVID-19 conspiracy beliefs and behaviors that align with COVID-19 preventative measures, and a positive relationship between COVID-19 conspiracy beliefs and exposure to COVID-19 information through social media. They state that their combined studies "suggest that conspiracy beliefs act to inhibit health-protective behaviors and that social media act as a vector for such beliefs" (Allington et al., 2021, p. 1768). Therefore, in addition to being platforms for entertainment and communication (Song et al. 2021), social media can serve as a

breeding ground for the spread of conspiratorial thinking. In their research, Allington et al. (2021) used YouTube and Facebook—traditionally long-form video applications—as their units of analysis to identify some popular conspiracies like the belief that COVID-19 was created in a lab or was a planned attack by "pharmaceutical corporations and government agencies" (p.1765). Expanding beyond this study, this dissertation is focused primarily on short-form video applications.

Given the similarities between TikTok, Instagram/Facebook Reels, and YouTube Shorts (e.g., video durations generally being between 60 to 180 seconds, portrait orientation, in-app video captions, likes, comments, shares, comparable gender and age demographics, and availability in 100 or more countries; Hindy, 2022), this research collected data from TikTok as an example of a popular short-form video platform. In 2020, TikTok's annual user growth rate in the U.S. increased to 85.3% (Dixon, 2022). The no-cost, short-form video nature of TikTok has allowed for digital culture to flourish during the midst of COVID-19 (Ceci, 2022), and the social media component of the platform has granted remote, two-way communication between content creators and their audiences. This means that users are now able to collaborate, share, and support other TikTokers online by providing immediate feedback in the form of likes, comments, shares, Duets, and Stitches. The TikTok catalog also serves as an encyclopedia of content and information across a wide array of topics, including healthcare (Song et al., 2021). Therefore, rather than just seeking information about a specific health phenomenon, users can potentially discover new health topics (like COVID-19 news) and directly engage with the messages they encounter.

There is also evidence that digital communities (like TikTok) are drawn towards peer support and validation rather than "trusted advice and information" from scientists, board-certified professionals, and the government (Giles & Newbold, 2011, p. 426). For example, Jaime et al. (2022) observed how TikTok users living with celiac disease have increasingly become sources of information and emotional support for others who have been affected by the illness. Utilizing the celiac disease hashtag (#celiacdisease), a content analysis of the 100 most-viewed TikTok videos related to the disease found that, in most cases, diagnosis-related videos garnered more likes than content on how to manage the illness. The researchers also emphasized the need for more studies in this discipline to better explain why personal narratives on TikTok persuade audiences to view such messages as credible (Jaime et al., 2022).

For this dissertation on health crisis narratives, rather than focusing on COVID-19 conspiracies in general (e.g., Allington et al., 2021), the researcher examined TikTok video content for the presence of one specific conspiracy. According to Lynas (2020), the top COVID-19 conspiracies that emerged during the height of the pandemic involved ideas like the supposed origins of COVID-19 and its intended use as a biological weapon. As a sample conspiracy type, this work is centered around the suggested origins of the COVID-19 virus. On February 28, 2023, news outlets (e.g., *NPR, The Washington Post*, and *Associated Press*) reported on new and ongoing debates about COVID-19, including the source of the infectious disease (Klepper, 2023). While FBI Director Christopher Wray conveyed that COVID-19 "most likely [arose from] a potential lab incident in Wuhan [China]" in an interview with *Fox News* (Klepper, 2023; Baier, 2023), other U.S. intelligence agencies have yet to reach a consensus. During Wray's conversation with

reporter Bret Baier, the FBI Director added that "the Chinese government seems to [have] been doing its best to try to thwart and obfuscate the [investigation]... the work that [the] U.S. government and close foreign partners are doing. And that's unfortunate for everybody" (Baier, 2023). Wray's statements come days after a report from the Department of Energy determined with "low confidence" that a lab leak was the cause of the pandemic (Gans, 2023, para. 6). Within the same week, U.S. National Security Advisor Jake Sullivan shared that "the intelligence community has not received a 'definitive answer' on the pandemic's origins" (Gans, 2023, para. 11). If we recall the definition of a conspiracy theory as "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors" (Douglas et al., 2019, p.4), it appears that statements made through mainstream media channels and by leading government intelligence agencies may essentially be contributing to the spread of speculative claims about COVID-19's origins. By dissecting two main aspects of the conspiracy theory definition, we can make the following assertions:

1. *"Attempts to explain the ultimate causes of significant social and political events and circumstances …":* Without consensus across U.S. intelligence agencies, a narrative gap is presented—thus, allowing the public to fill the voids of the story themselves to make sense of why the COVID-19 pandemic has occurred. In addition, according to Fisher's (1985) coherence (*Does this narrative make sense?*) and fidelity (*Do I accept this narrative as reliable?*) principles, this lack of unanimity may adversely affect perceptions of trust and credibility regarding messages about COVID-19's origins.

2. *"…with claims of secret plots by two or more powerful actors"*: FBI Director Wray provides an unverified explanation of how COVID-19 developed with a declaration that the virus "most likely" originated from China—one of the most powerful nations in the world, according to *U.S. News & World Report* ("Power," n.d.)— with further claims that Chinese governing bodies (i.e., two or more powerful actors) are deliberately obscuring investigations into the source of the virus (Baier, 2023; Gans, 2023; Klepper, 2023).

Therefore, as a timely, understudied, and developing phenomenon, more exploration into the proposed origins of COVID-19 provides a prime opportunity to expand upon current research and discourse. This dissertation addresses the following questions:

- Research Question 1 (RQ1): As intelligence agencies continue to determine the cause of the pandemic, how have speculative claims about COVID-19's origin manifested on TikTok?
  - RQ1a: What messages are being shared about the source of COVID-19?
  - RQ1b: In what formats are these messages being communicated and through what types of content (i.e., first-hand narrative, second-hand narrative, advice, informational report, call to action)?
  - RQ1c: What effect does video content type have on public engagement? What types of content are the most popular?

Dahlberg (2021) argues that there are two significant viewpoints that need to be addressed when attempting to understand the social and psychological effects of the COVID-19 pandemic: the **cognitive perspective** and the **resource perspective**. Dahlberg describes the former as the assertion that feelings like loneliness can be understood as a

result of unmet standards of social relations, such as *desired* versus *achieved* social interactions. Through social relations, feelings are directly impacted, thus influencing a person's thoughts and behaviors (Dahlberg, 2021). Relatedly, research (Luchetti et al., 2020) has shown that despite social limitations, such as physical distance due to a global pandemic, implications like loneliness can be buffered through a sense of collectiveness. In other words, feeling like "everyone is in this together" (Luchetti et al., 2020, p. 10) can positively enhance a person's perceived social relations.

Contrary to the cognitive perspective, the resource perspective organizes information into individual, contextual, and material categories (Dahlberg, 2021). Essentially, the more access a person has to various resources, the easier it would be for them to manage social limitations. Examples of resources include socio-economic status, social skills, and access to communication channels (Dahlberg, 2021). As technology continues to advance and be integrated into society, technological affordances for communication will remain a key component for how people socialize and engage virtually (Chewning, 2018). During COVID-19, technology became an especially popular means for social networking (Dixon, 2022)—with people utilizing various formats like embedded photos or sounds in TikTok videos as a way to enhance the content being shared and entice engagement from people online (Kaye et al. 2022).

As a "relatively new social media platform that has seen rapid adoption by adolescents and young adults," TikTok also developed as a leading platform for promoting awareness for topics like health-related issues (Yeung et al., 2022, p. 2). While these efforts can help reduce stigmas surrounding subjects like mental health and advance health literacy among the public, health professionals and scientists are concerned with

the spread of misinformation "due to the volume of unmoderated, user-generated content online" (Yeung et al., 2022, p. 2). Recent studies (e.g., Yeung et al., 2022) have found that TikTok videos addressing medical issues, such as acne, attention-deficit/hyperactivity disorder (ADHD), diabetes, and cosmetic surgery, often include elements of misinformation, with deceptive messages appearing to be a common occurrence around health topics. One specific report (Zheng et al., 2021) comprised of a content analysis of the top dermatology videos on TikTok. During their observations, researchers learned that while board-certified dermatologists were the main source of educational content on the platform, the most popular videos were first-hand accounts by laypeople. In reference to Dalberg (2021), it may be suggested that this trend is contingent upon two key elements: access to contextual materials (i.e., narratives from people on social media; *resource perspective*) and collectivist messaging (i.e., raising awareness and/or advocating for a cause; *cognitive perspective*). With this assumption and through content analysis, the researcher hypothesizes that the most popular TikTok videos regarding the supposed origins of COVID-19 include content that satisfies both the resource perspective (i.e., at least one of the following: first-hand narrative, second-hand narrative, informational report) and cognitive perspective (i.e., advice and/or call to action).

Narratives, Communication, and Conspiratorial Thinking

Lewis and DeFaria (2021) explain that "we create meaning from chaos by structuring our experiences into narratives that make sense to us; we shelter from the difficult parts of our lives by inventing stories that comfort or deceive" (p. 81). To impede the spread of conspiratorial ideologies, Uscinski et al. (2022) assert that

identifying the specific characteristics linked to conspiratorial beliefs is crucial. While researchers (e.g., Enders & Smallpage, 2019) have classified various psychological and political characteristics related to conspiracy beliefs, generalizability usually cannot be determined because individual studies largely examine only a few conspiracies. To tackle this issue, Uscinski et al. (2022) employed a national survey among U.S. adults that assessed how much participants aligned with 15 different individual-level psychological (e.g., narcissism, Machiavellianism, and psychopathy) and political (i.e., partisan and non-partisan) characteristics and their levels of belief across 39 different conspiracy theories, including sex trafficking by government officials, cover-ups of alien contact, and the origins of COVID-19. The study was designed based on the American Conspiracy Thinking Scale (ACTS), an index of questions measured on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." For their analysis, Uscinski et al. (2022) estimated the correlations between the 15 characteristics and 39 conspiracies (a total of 585 correlations). The study also examined patterns between the characteristics and the ACTS index. Their results indicate that two specific psychological characteristics (i.e., dark triad and propensity to share false information online) and non-partisan ideologies (i.e., populism, Manichaeism, and support for political violence) tend to display the "strongest and most consistent" correlations across conspiracy beliefs while partisan attitudes and identities were "less strongly correlated with specific conspiracy theory beliefs, on average, and exhibited a great deal of variability across beliefs" (Uscinski et al., 2022, p. 7).

Furthermore, when surveying Americans about their perceptions of conspiratorial ideations surrounding the 2012 presidential election, Uscinski and Parent (2014)

discovered that conspiracy theories *targeting* in-power groups gained more popularity than conspiracy theories *created by* in-power groups. In this case, the in-power group consisted of the opposing presidential candidates (Barack Obama and Mitt Romney) and their campaign administrations. For example, during a reelection campaign commercial, President Obama accused "secretive oil billionaires" (Uscinski & Parent, 2014, p. 135) of making misleading claims against him. However, the initiative ultimately failed to generate considerable acceptance from the public. Uscinski and Parent (2014) hypothesize that since conspiracy theories are linked to "feelings of uncertainty, anxiety, and a lack of control in the face of high stakes" (p. 135), it is more difficult for constituents to view organizations or people in positions of power as a victim, therefore, increasing the likelihood of conspiracies aimed at higher institutions to be accepted rather than vice-versa. Given this context, it may be inferred that people tend to consider conspiracy topics associated with people or organizations of power rather than narratives disseminated by people or organizations of power.

Expanding upon Uscinski et al.'s (2022) and Uscinski and Parent's (2014) findings and survey approaches, this current research not only observes the elements in crisis narratives that influence conspiratorial thinking but also attempts to identify communication tactics that can be used by in-power organizations to potentially limit or prevent the overall spread of conspiratorial thinking. To supplement the content analysis of COVID-19 origin videos on TikTok for Research Question 1 (RQ1), Study 2 concentrates on COVID-19 narratives from the Centers for Disease Control and Prevention (CDC) as an example of an authoritative (i.e., in-power) entity responsible for relaying information about the virus. According to its official website, the CDC is "the

sole entity authorized by [U.S.] Congress to mobilize philanthropic partners and private-sector resources to support [its] critical health protection mission" ("Our Story," n.d.). The CDC was chosen for this research because it has been a leader in U.S. COVID-19 communication efforts throughout the pandemic. Furthermore, the CDC is an ideal focus because the organization already has a history of provoking public mistrust. The main areas of critique against the CDC's COVID-19 communication efforts were the organization's dissemination of confusing and contradictory messages and their slower-than-needed response time when it came to informing the public. In August of 2022, CDC Director Dr. Rochelle Walensky publicly addressed the short-comings of the organization in the handling of COVID-19, making a plea for a "reset" among growing criticism of their response to the pandemic (Stobbe, 2022, para. 2). The *Associated Press* reported:

> The agency has long been criticized as too ponderous, focusing on the collection and analysis of data but not acting quickly against new health threats. Public unhappiness with the agency grew dramatically during the COVID-19 pandemic. Experts said the CDC was slow to recognize how much the virus was entering the U.S. from Europe, to recommend people wear masks, to say the virus can spread through the air, and to ramp up systematic testing for new variants (Stobbe, 2022, para. 6).

Heller (2015) states that communication efforts are only successful when "people trust the sources of official information," and alternatively, "no [health crisis mitigation] program that requires action by the public—however valid or well-originated—can succeed when people distrust the program's sponsors or the sources of information about

the disease" (p. 43). Therefore, considering the CDC's recognition of its communication shortcomings, studying the U.S. public's perceptions of CDC messages about COVID-19 may produce insights into the perceived reliability and effectiveness of the CDC's messaging, perception of narrative gaps in the messaging, and their implications. In doing so, Study 2 addresses this overarching question (RQ2): How do messages from the CDC, a leading health organization, influence perceptions about COVID-19? Specifically, it asks:

- RQ2a: What effects does the CDC's messaging have on the public's perceived reliability and the presence of narrative gaps in the messages?
- RQ2b: What effects does the CDC's messaging have on the public's trust in the government and scientists?

Based on the literature addressed throughout this chapter (e.g., Fisher, 1985; Fiske & Dupree, 2014; Pierre, 2020; Stutts & Barker, 1999; Uscinski & Parent, 2014), Study 2 poses the following hypotheses:

- H1: Exposure to the CDC's contradictory messages (i.e., narrative gap messages) is linked with lower (H1a) narrative fidelity/reliability/effectiveness, (H1b) message credibility, and (H1c) trust in the government and scientists.
- H2: Public trust in the government and scientists is weakened when the CDC's messages about COVID-19 are (1) perceived as ineffective and (2) perceived as having narrative gaps.
- H3: Conspiratorial beliefs are associated with the CDC's messages about COVID-19 being (1) perceived as ineffective/unreliable and (2) perceived as having narrative gaps.

By seeking to examine how narrative gaps in official COVID-19 messages affect public perceptions, trust, and conspiratorial beliefs, Study 2 offers results-informed and empirically derived communication recommendations that can be used to limit narrative gaps and promote trust during a health-related crisis—thus, restricting the potential spread of conspiratorial thinking.

CHAPTER IV

ANALYZING #COVIDORIGIN CONTENT ON TIKTOK

As previously mentioned, the overall objective of this work is to identify how crisis narratives have reinforced the spread of speculative claims over time and in what ways contemporary communication channels boost the dissemination of such ideas. This chapter outlines the research methods, procedures, and results for Study 1, which addresses the following research question (RQ1): As intelligence agencies continue to determine the cause of the pandemic, how have speculative claims about COVID-19's origin manifested on TikTok?

- RQ1a: What messages are being shared about the source of COVID-19?
- RQ1b: In what formats are these messages being communicated and through what types of content (i.e., first-hand narrative, second-hand narrative, advice, informational report, call to action)?
- RQ1c: What effect does video content type have on public engagement? What types of content are the most popular?

Platform Selection: TikTok's Socio-Technical Affordances

When considering what factors will be the most useful to observe amongst COVID-19 origin content on TikTok, two lateral inquiries arose: (1) does it matter who is posting the video; and (2) how much does poster intention matter when observing videos for conspiratorial content? Across social media research, scholars (e.g., Hara et al., 2019; Lai et al., 2020; Williams et al. 2012) have considered the importance of the person or group posting content online and the intentions behind doing so. Certainly, group identification is an influential factor that helps determine how, where, why, and with whom people

interact online. For example, sports fans may find themselves on social platforms, blogs, and content-sharing sites dedicated to the discourse of their favorite sports and/or teams (Williams et al. 2012). On TikTok, the spaces in which people congregate and the types of content they are likely to engage are further amplified through the platform's algorithm. Due to TikTok's carefully curated algorithmic technology—namely, the endless scroll feature and content recommender system—videos posted on TikTok become more visible, thus enhancing potential virality and spreadability (Kaye et al., 2022). The endless scroll feature is further enhanced since TikTok does not include a "viewing history" option for users to easily go back to videos that appeared on their feed. This then persuades users to engage with the content they encounter because "if a user does not interact with the video in some way, for instance by liking or commenting on the video, saving the video link, or following the creator, it can be difficult to find that particular video or its creator again" (Kaye et al., 2022, p. 21). Simultaneously, TikTok's content recommender system is a machine-learning operation that determines what types of content to produce in a user's news feed (based on the creators, videos, and topics in which they search and interact) as a way to keep users on the platform longer (Kaye et al., 2022). Therefore, while the person or group posting the content does matter in the sense that users with similar interests are likely to view and interact with the content, TikTok's programming is instrumental in shaping the various types of people users encounter (as pre-determined by the platform's algorithm and user behaviors). In other words, due to TikTok's algorithm, users are more likely to see content that matches their viewing preferences. Consequently, regardless of the identity of content creators, users are bound to encounter their posts anyway, as the platform tailors content to individual

interests. Furthermore, one can argue that despite who these creators are and what their intentions may be for posting content (e.g., trolling viewers, seeking information, or answering questions), it is not guaranteed that every viewer will interpret the content exactly as the creator intended (Marwick & Boyd, 2014). This argument aligns with the view that audiences can decode media messages by coalescing personal contexts and social observations (Hall, 1973). Hence, factors such as cultural values, social norms, and current events can influence how content is translated and determined by viewers. So, for the context of Study 1, despite a creator's intent behind their video, the sample used was coded based on the explicit messages expressed in each post. Since it is difficult to determine for certain how each viewer interpreted the content (and conversely, how creators meant the content to be received), the researcher chose to examine each post on face-value. The parameters of the TikTok content analysis are described below.

COVID-19 Conspiracy Theory Selection

During the peak of the COVID-19 pandemic, the Alliance for Science, a coalition that conducts "policy advocacy, communications campaigns, and research amplification to promote an enabling environment for science-based solutions to challenges" such as global health and misinformation ("Who We Are," n.d., para. 2), identified the top 10 COVID-19 conspiracies to be: (1) The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic, therefore, the two events are connected; (2) Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people; (3) The COVID-19 virus escaped from a Chinese lab; (4) COVID-19 was created as a biological weapon; (5) The U.S. military imported COVID-19 into China; (6) Pollution from genetically modified crops caused the spread of COVID-19; (7)

COVID-19 does not actually exist; (8) The COVID-19 pandemic is/was manipulated by America's elite; (9) Big pharmaceutical companies are behind the spread of COVID-19; and (10) COVID-19 death rates are inflated (Lynas, 2020). In addition, other scholars (e.g., Islam et al., 2021) found vaccine-related conspiracies such as "the COVID-19 vaccine causes infertility" or "the vaccine uses experimental technology and permanently alters a receiver's DNA" to be common among the most popular theories, thus contributing to vaccine hesitancy. Ultimately, all of these COVID-19 conspiracy theories align with a much broader view of conspiracy theories—what is being referred to as "speculative claims" in this research. Similar to the "climate change is a hoax" claim (Cassam, 2023), the notion of a small group of covert actors operating to influence events in COVID-19 conspiracy theories may be explicit or implied. Thus, while some claims, such as "the COVID-19 virus escaped from a Chinese lab," do not explicitly explain COVID-19 in terms of a relatively small group of conspirators acting in secret (Keeley, 2006), they may satisfy other elements of conspiracy theories: they are speculative, based on errant data, include causal explanations, are opposed to official or "obvious" accounts and self-sealing, or suggest that the truths that underlie events they purport to explain are well-guarded secrets.

Given that the purpose of Study 1 is to focus on narrative content on TikTok to examine how speculative claims/conspiratorial ideas—both explicit and implicit—about COVID-19 manifested on the platform, the researcher centered this study on the supposed origins of COVID-19 for two reasons. First, while U.S. intelligence agencies have declared mandatory vaccination policies for workers (e.g., "Coronavirus: Latest DoD Guidance," 2023; "COVID Policy Notice," n.d.)—thus signifying that the vaccine

is an important public safety measure—such entities have yet to announce a determined birthplace of the infectious disease publicly and unanimously (see Baier, 2023; Gans, 2023). As stated earlier and throughout this dissertation, when people are exposed to narratives that do not make sense/have gaps or that they do not trust, they are prompted to continue the story by filling in the gaps of the narratives themselves (Fisher, 1985). In this respect, the contradictory (or otherwise heterogeneous) statements made by leading U.S. intelligence agencies give way to the spread of speculative claims about COVID-19's origin through the public's suppositions of what they consider plausible explanations. Second, nine of the top 10 COVID-19 conspiracies listed above are related to ideas about virus' origin: (1) The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic, therefore, the two events are connected; (2) Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people; (3) The COVID-19 virus escaped from a Chinese lab; (4) COVID-19 was created as a biological weapon; (5) The U.S. military imported COVID-19 into China; (6) Pollution from genetically modified crops caused the spread of COVID-19; (7) COVID-19 does not actually exist; (8) The COVID-19 pandemic is/was manipulated by America's elite; and (9) Big pharmaceutical companies are behind the spread of COVID-19.

Method: Quantitative Content Analysis

A content analysis can be described as a logical, replicable method for condensing many words across observed texts into fewer content classifications through pre-determined, explicitly defined guidelines of coding (Stemler, 2000). Over the past few decades, technological advancements and growing interests in 'big data' have prompted

the methodological technique of content analysis to enter a renaissance period (Stemler, 2015). Researchers attribute this ongoing trend to "the massive explosion in permanent, archived linguistic, photographic, video, and audio data arising from the proliferation of technology," as well as the versatility of content analyses to sufficiently "apply to textual, visual, and audio data" over a diverse range of disciplines like education, social intelligence, and criminology (Stemler, 2015, p. 1). Given the variety of topics and types of media that can be studied through content analyses, this method was selected to address the question of how conspiratorial ideas are presented on a popular short-video format social media platform—namely, TikTok. Content analysis endorses deeper insights into theoretical concepts through empirical evidence, thus, allowing us to comprehensively understand the target phenomenon and providing a natural and effective segue to explore subsequent methods such as experiments, interviews, or focus groups.

Unit of Analysis

This research builds on existing knowledge about how crisis narratives are used to perpetuate speculative claims through the media (e.g., Koehler-Derrick et al., 2017; Stempel et al., 2007) while considering newer communication platforms like popular short-form video applications. For this specific study, the researcher analyzed TikTok videos for content about the proposed origins of COVID-19.

Sample and Sampling

Similar to Jaime et al.'s (2022) TikTok content analysis of videos about celiac disease, this research examined all videos (i.e., a universal sample) that used the COVID-19 hashtag, #covidorigin (N = 74). Previous studies involving TikTok content analyses (e.g., Akbari et al., 2022; Basch et al., 2022; Jaime et al., 2022) have incorporated the use

of hashtags to categorize videos on the platform and garner a sample specifically related to the interests of researchers. During the time of data collection for Study 1, the #covidorigin hashtag garnered more than 2.2 million views on TikTok. Not only is the hashtag specifically tailored to the topic of COVID-19's origin, but it was also the most popular one of its kind. Therefore, videos were gathered from TikTok by searching for all content using the #covidorigin hashtag. In addition, to ensure the sensitivity of the search strategy, supplementary data was collected via Exolyt, a TikTok analytic database used by social media influencers and agencies. This source allowed the researcher to view comprehensive information about the videos examined, the content creators who posted them, and statistical information about the hashtag's growth. Data was entered via Qualtrics and then transferred to SPSS for analysis and R for visualization.

Procedures

The researcher developed a content analysis coding protocol (see Appendix A) and enlisted an external coder to test for intercoder reliability. Following a detailed discussion of the categories addressed in the coding scheme and a step-by-step example of how to code a TikTok video using the codesheet in Appendix B, both the researcher and external coder individually analyzed 16 randomly selected videos (21.62% of the total sample). Three separate rounds of coding were conducted to achieve intercoder reliability (92.63% agreement overall). Meetings were held between each round to clarify how TikTok features can be identified through the videos. Visual examples of TikTok's Duet and Stitch features were also added to the coding protocol. Once intercoder reliability was achieved (see Appendix C), the researcher proceeded to analyze the entire

sample (N = 74). A sample of the final coding guidelines and operational descriptions of key variables are listed below.

Date Posted. Coders wrote the date each video was posted on TikTok. The date was coded with a two-digit month, two-digit date, and four-digit year. For example, March 15, 2020 was coded as 03/15/2020. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Views. Coders wrote the number of views each video received. If the number of video views totaled over 1,000 and displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), coders recorded the unabbreviated number. For example, 7.2K views was written as 7200 (no commas) while 848 views was written as 848. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Likes. Coders wrote the number of likes each video received. If the number of video likes totaled over 1,000 and displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), coders recorded the unabbreviated number. For example, 7.2K likes was written as 7200 (no commas) while 848 likes was written as is. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Comments. Coders wrote the number of comments each video received. If the number of comments totaled over 1,000 and displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), coders recorded the unabbreviated number. For example, 7.2K comments was written as 7200 (no commas) while 848 views

was written as is. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Shares. Coders reported the number of times each video has been shared. If the number of video shares totaled over 1,000 and displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), coders recorded the unabbreviated number. For example, 7.2K shares was written as 7200 (no commas) while 848 views was written as is. In the final round of intercoder reliability testing, the researcher and external coder achieved 88.2% agreement.

Stitch. The coders indicated if the video incorporated TikTok's "Stitch" feature (1 = Present; 0 = Absent). A Stitch is a creator tool that permits users to combine another video on TikTok with their own video. In the final round of intercoder reliability testing, the researcher and external coder achieved 88.2% agreement.

Duet. Coders indicated if the video incorporated TikTok's "Duet" feature (1 = Present; 0 = Absent). A Duet is a creator tool that permits users to post their videos side-by-side with another video from TikTok. A Duet is comprised of two videos via split screen that play simultaneously. In the final round of intercoder reliability testing, the researcher and external coder achieved 88.2% agreement.

Text. Coders indicated if any text appeared on the individual user's video (1 = Present; 0 = Absent). The text must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Photos/Videos. Coders indicated if additional photos and/or videos (i.e., background photos and/or videos) were embedded within an individual user's video

(1 = Present; 0 = Absent). The embedded photos and/or videos must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. In the final round of intercoder reliability testing, the researcher and external coder achieved 88.2% agreement.

Sound/Music. Coders indicated if sound or music from TikTok was embedded within an individual user's video (1 = Present; 0 = Absent). If the sound icon shows the user's account name, then no additional TikTok sound was embedded. The embedded sound must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Content Category. Coders specified which content categories (first-hand narrative, second-hand narrative, advice, informational report, and/or call to action) were applicable to each individual video. The relevant content category must be evident throughout the video and may also be indicated in the video caption (1 = Present; 0 = Absent).

First-hand Narrative. A first-hand narrative is a personal account in which the individual user shares a story in the first-person. Typically, first-hand narratives detail the experiences of an individual user through verbal and/or non-verbal (i.e., text, sound, photos, or videos) communication. The narrative should be from the individual user's video, not from external videos via TikTok's Stitch and/or Duet features. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Second-hand Narrative. A second-hand narrative is an account in which the

individual user shares a story they heard from other people rather than from their own experience. Second-hand narratives can be shared through verbal and/or non-verbal (i.e., text, sound, photos, or videos) communication. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Advice. Advice content entails explicitly stated recommendations regarding a decision or course of conduct. For example, a user may suggest strategies to avoid getting sick. Advice can be declared verbally or via text. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Informational Report. Informational reports entail other narrative content (i.e., content that does not give an account of events from a first-hand or second-hand narrative perspective). Examples of informational reports include (but are not limited to) legislative documents, news reports, and book summaries. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Call to Action. Call to action content entails a prompt that explicitly tells the audience to perform a desired action. For example, a user may urge followers to vote in an upcoming election. A call to action can be declared verbally or via text. In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Origin Statement. According to the video, coders wrote any explicitly stated/suggested origins of COVID-19. Origins may be conveyed verbally by the user or other users (if the Stitch and/or Duet features were used) or non-verbally (e.g., through on-screen text or video caption). In the final round of intercoder reliability testing, the researcher and external coder achieved 94.1% agreement.

Limitations

The main challenges of conducting a TikTok content analysis around COVID-19 include obtaining access to data, the possibility that previously posted content about COVID-19 have since been deleted or are otherwise unviewable to the public (e.g., private user accounts or videos set to restricted viewing access), the continuing threat of a TikTok ban in places like the U.S. (Maheshwari et al., 2024), and, in this case, the possibility that some videos addressing COVID-19's supposed origins do not incorporate the hashtag observed (#covidorigin). Aligning with prior TikTok content analyses (e.g., Akbari et al., 2022; Basch et al., 2022; Jaime et al., 2022), #covidorigin was used to acquire a specific sample related to this study. While the #covidorigin hashtag was used as the search term in this research because it was the most popular hashtag about the origin of COVID-19, and the entire universe of videos that used this hashtag were content analyzed, it may not be representative of all speculative claims about the health crises. Hence, there is a need for caution when generalizing the results. Furthermore, at the time of data collection, TikTok was in its initial phase of accepting applications for access to the platform's developing API (Application Programming Interface; "Supporting independent research," 2023). Moving forward, researchers may be able to utilize TikTok's API to mitigate the limitations of hashtags for content analysis sampling.

Results

The final dataset was made up of all #covidorgin videos (N = 74), which were posted across a three-year timeframe: 25 videos from 2021 (33.78%), nine from 2022 (12.16%), and 40 from 2023 (54.05%). To examine how speculative claims about COVID-19's origins manifested on TikTok, this study focuses on three subsets of

questions. In regard to RQ1a (i.e., What messages are being shared about the source of COVID-19?), 39.19% of videos (N = 29) did not explicitly state a supposed origin of COVID-19 despite using the hashtag (see Figure 3 below). Meanwhile, another 39.19% of videos discussed China as a possible origin—e.g., a lab leak in Wuhan, a Chinese wet market, or an engineered attack by the Chinese Communist Party (CCP). Furthermore, 12.16% of videos (N = 9) indicated a non-Chinese lab leak as the source of COVID-19 (e.g., Fort Detrick, a U.S. military base in Maryland) while the remaining 9.46% (N = 7) spoke to other claims like snakes, lobsters, and monkeys.

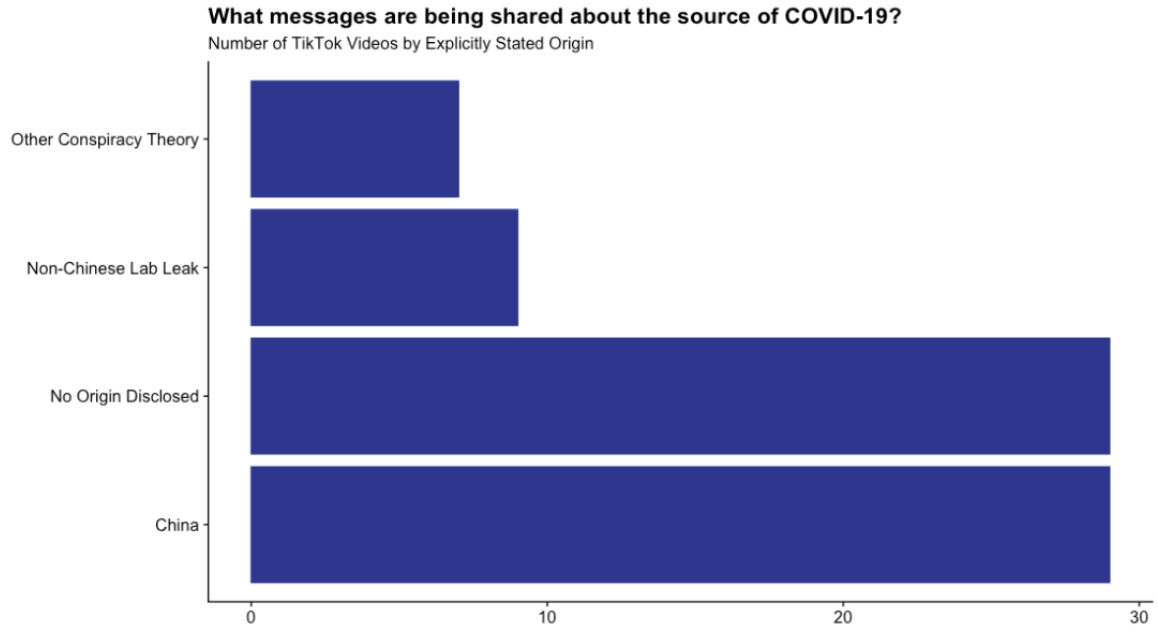


Figure 3. A bar graph representing the amount of explicitly stated COVID-19 origin types, as well as the number of videos that did not specify a supposed origin. These results demonstrate that nearly 40% of videos in the sample offered China as the supposed origin of COVID-19.

In relation to the communication formats used throughout the sample (RQ1b), 64.86% of videos (N = 48) included text, 16.22% (N = 12) were overlayed with additional photos and/or videos, 35.14% (N = 26) embedded sound or music from

TikTok, 10.81% (N = 8) used TikTok's Duet feature, and 2.7% (N = 2) used the Stitch feature. In addition, the distribution of content types present across the sample were as follows: 13.51% of videos (N = 10) incorporated first-hand narrative content, 77.03% (N = 57) integrated second-hand narratives, and 86.49% (N = 64) included informational reports. Moreover, 12.16% (N = 9) offered advice and 29.73% (N = 22) incorporated a call to action (see Figure 4).

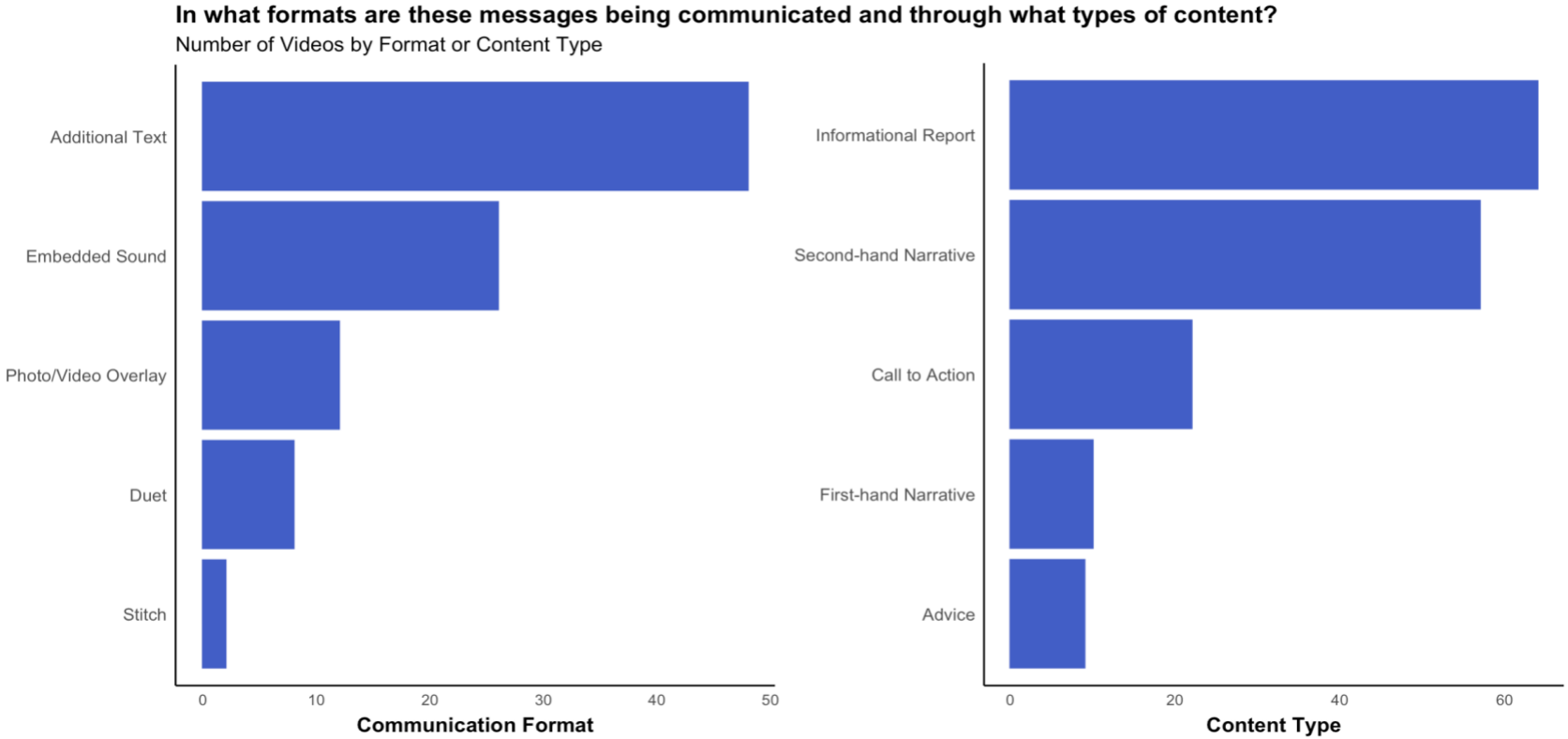


Figure 4. A bar graph representing the volume of videos per communication format (left) or content type (right). According to the results, sound and text were the most used TikTok features across #covidorigin videos while informational reports and second-hand narratives were the most used content types.

Communication Formats, Video Content, and Engagement

With regard to RQ1c (i.e., What effect does video content type have on public engagement? What types of content are the most popular?), four categories of popularity were examined: number of views, likes, comments, and shares. Similar to the standard of using a 20% subsample to test intercoder reliability in content analysis studies (O'Connor & Joffe, 2020), the top 15 videos (20.27% of the total sample) for each of the four popularity categories were analyzed.

Views. Among the 15 most-viewed videos, 86.67% (N = 13) included text, 20% (N = 3) overlayed photos/videos, and 33.33% (N = 5) embedded sound. None of the most-viewed videos incorporated TikTok's Stitch feature while two applied the Duet feature. In addition, all videos included an informational report, one entailed a first-hand narrative, all videos had second-hand narratives, two offered advice, and one included a call to action.

Beyond descriptive statistics, to further examine the significance of format and content type on video views among the entire sample, a series of non-parametric tests were conducted. However, tests revealed no statistically significant differences in the distribution of average video views across formats—Stitch ($U = 42$, $p = 0.36$), Duet ($U = 333.50$, $p = 0.23$), text ($U = 768.50$, $p = 0.10$), photos/videos ($U = 480$, $p = 0.11$), and sound/music ($U = 641.50$, $p = 0.84$)—and most content types—first-hand narrative ($U = 309.50$, $p = 0.87$), second-hand narrative ($U = 393.50$, $p = 0.24$), informational report ($U = 422.50$, $p = 0.11$), and advice ($U = 188$, $p = 0.08$). However, results did indicate evidence of statistical difference for call to action ($U = 348.50$, $p = 0.008$), indicating that videos with this content type ($M = 2203.41$, $SD = 5875.79$) received a significantly lower

number of views compared to those without (M = 37507.85, SD = 167940.22). Linear regression showed that a unit increase in call to action is associated with a 0.12 decrease in views, but overall, the model was not significant ($F(1,72) = 0.97$, $p = 0.32$, $R^2 = 0.01$, SE = 141378.38, t = 1.91, 95% CI: -0.01 to 0.04, b = -35304.44, $\beta = 0.12$).

Likes. Among the 15 most-liked videos, 86.67% (N = 13) included text, 26.67% (N = 4) overlayed photos/videos, and 20% (N = 3) embedded sound. Similar to the most-viewed videos, none of the most-liked videos included a Stitch while two employed the Duet feature. Likewise, all of the most-liked videos included an informational report, one entailed a first-hand narrative, 11 had second-hand narratives (73.33%), and two offered advice. However, unlike the most-viewed videos, two of the most-liked videos included a call to action.

To further examine the significance of format and content type on likes among the entire sample, a series of non-parametric tests were conducted. Mann-Whitney U tests revealed a statistically significant difference in the distribution of average likes across the category of photos/videos (U = 514.00, p = 0.037), indicating that videos with this format type (M = 8505.67, SD = 25596.26) received significantly higher likes compared to those without (M = 621.65, SD = 2068,13). Linear regression showed that a unit increase in the use of photos/videos is associated with a 0.28 increase in likes, with the model being statistically significant ($F(1,72) = 6.03$, $p = 0.017$, $R^2 = 0.08$, SE = 10184.25, t = 0,48, 95% CI: 1481.27 to 14286.77, b = 7884.02, $\beta = 0.28$).

Comments. Among the 15 most-commented videos, 73.33% (N = 11) included text, 26.67% (N = 4) overlayed photos/videos, and 33.33% (N = 5) embedded sound. Once again, none of the most-commented videos included the Stitch feature and two involved a

Duet. Fourteen videos included an informational report, two entailed a first-hand narrative, 12 had second-hand narratives, two offered advice, and one included a call to action.

To further examine the significance of format and content type on comments among the entire sample, a series of non-parametric tests were conducted. Mann-Whitney U tests did not find significant differences across content types: first-hand narrative (U = 309.50, p = 0.47), second-hand narrative (U = 393.50, p = 0.93), informational report (U = 422.50, p = 0.11), advice (U = 188, p = 0.10), and call to action (U = 348.50, p = 0.09). However, Mann-Whitney U tests found evidence of significance for two format types. Results revealed statistically significant differences in the distribution of average comments across the categories of Duets (U = 382.50, p = 0.038) and photos/videos (U = 507.00, p = 0.047), indicating that videos with Duets (M = 147.13, SD = 271.29) or videos overlayed with photos/videos (M = 305.25, SD = 573.39) received significantly higher numbers of comments compared to those without Duets (M = 76.91, SD = 264.40) or without overlayed photos/videos (M = 41.77, SD = 113.06). Linear regression showed that a unit increase in Duets is associated with a 0.08 increase in comments; however, this model was not statistically significant ($F(1,72) = 0.50$, $p = 0.481$, $R^2 = 0.01$, SE = 265.08, t = 2.36, 95% CI: -127.61 to 268.04, $b = 70.21$, $\beta = 0.08$). Although linear regression found that a unit increase in photos/videos is associated with 0.37 increase in comments, with this model being statistically significant ($F(1,72) = 11.43$, $p = 0.001$, $R^2 = 0.14$, SE = 247.10, t = 1.33, 95% CI: 108.12 to 418.83, $b = 263.48$, $\beta = 0.37$).

Shares. Finally, among the 15 most-shared videos, 86.67% (N = 13) included text, 26.67% (N = 4) overlayed photos/videos, and 33.33% (N = 5) embedded sound. Three

videos included the Duet feature while none used the Stitch feature. Fourteen videos included an informational report, two entailed a first-hand narrative, 10 had second-hand narratives (66.67%), two offered advice, and two included a call to action. Figure 5 illustrates the frequency distribution of content types among the top engagement videos.

To further examine the significance of format and content type on shares among the entire sample, a series of non-parametric tests were conducted. Mann-Whitney U tests found no significant differences across format types: Stitch ($U = 42$, $p = 0.48$), Duet ($U = 333.50$, $p = 0.09$), text ($U = 768.50$, $p = 0.09$), photos/videos ($U = 480$, $p = 0.06$), and sound/music ($U = 641.50$, $p = 0.87$). However, a Mann-Whitney U test found a significant difference in the distribution of average shares for one content type. Specifically, results indicated that videos with informational reports ($M = 47.13$, $SD = 126.39$) ($U = 461.00$, $p = 0.022$) received a significantly higher number of shares compared to those without informational reports ($M = 4.30$, $SD = 9.41$). Linear regression showed that a unit increase in informational reports is associated with a 0.13 increase in shares, however, this model was not statistically significant ($F(1,72) = 1.13$, $p = 0.291$, $R^2 = 0.02$, $SE = 118.28$, $t = 0.12$, 95% CI: -37.35 to 123.00, $b = 42.83$, $\beta = 0.13$).

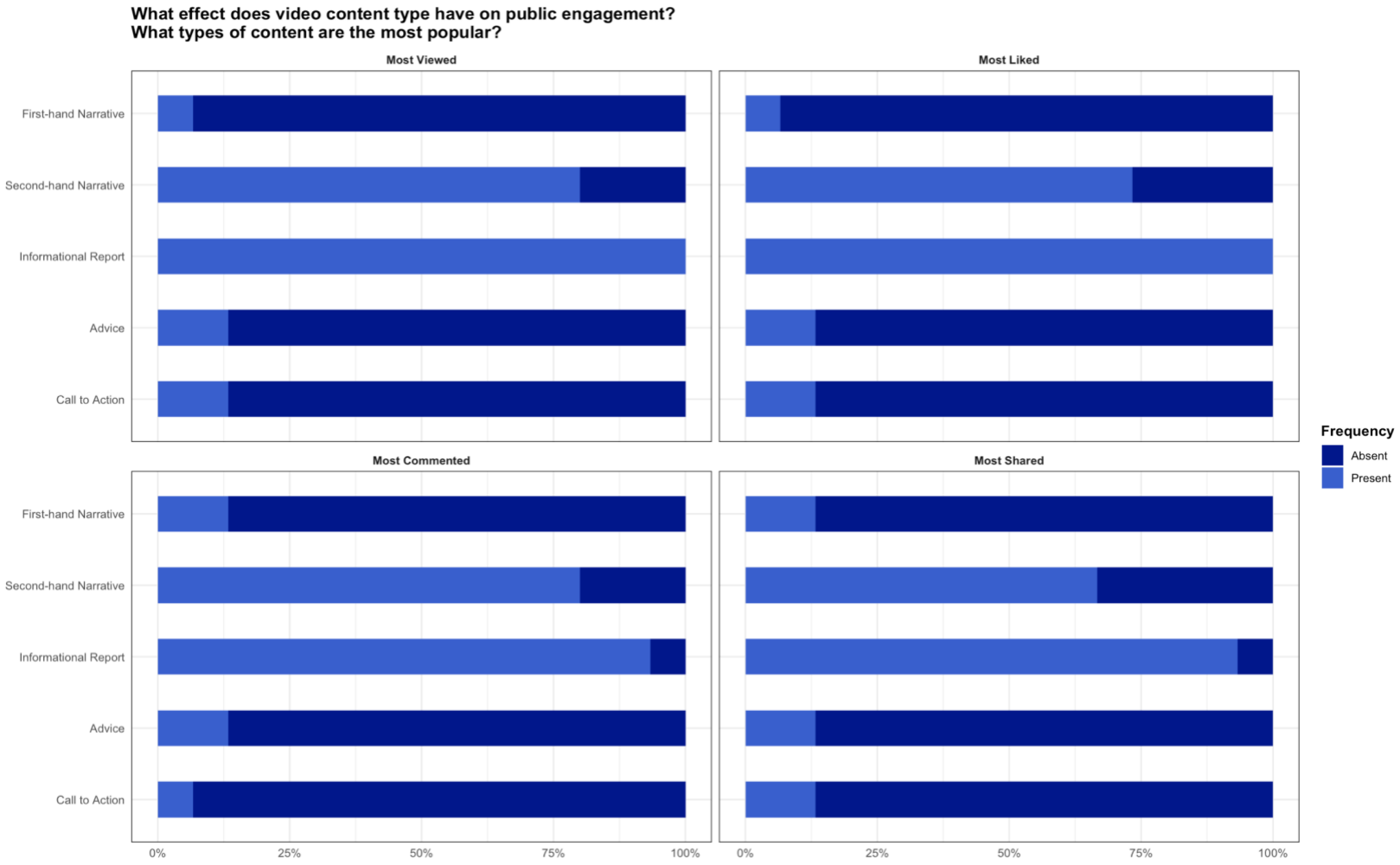


Figure 5. A graph demonstrating the frequency of content types among the most-viewed, most-liked, most-commented, and most-shared videos in the sample.

To test the hypothesis that the most popular videos (in terms of average views, likes, comments, and shares) included at least one resource perspective (i.e., first-hand narrative, second-hand narrative, informational report) and one cognitive perspective (i.e., advice, call to action), linear regression was conducted. The researcher controlled for the presence of informational reports (a resource perspective) and calls to action (a cognitive perspective) to test for significances among engagement types. The informational report variable was chosen as it is the most incorporated content type across the entire sample (86.49%). In addition, call to action was used more frequently (29.73%) than advice (12.16%).

Ultimately, the results were not significant for views ($F(2,71) = 0.81$, $p = 0.450$, $R^2 = 0.02$, SE = 141716.36, t = 0.11, 95% CI: -84926.71 to 94383.39), likes ($F(2,71) = 0.67$, $p = 0.514$, $R^2 = 0.02$, SE = 10576.49, t = 0.10, 95% CI: -6366.73 to 7015.44), comments ($F(2,71) = 1.82$, $p = 0.170$, $R^2 = 0.05$, SE = 261.25, t = 0.29, 95% CI: -141.68 to 188.88), and shares ($F(2,71) = 2.05$, $p = 0.136$, $R^2 = 0.06$, SE = 116.72, t = 0.26, 95% CI: -64.38 to 83.30). However, the researcher observed that across all top engagement groups (i.e., videos with the most likes, most views, most comments, and most shares), each video contained at least one resource perspective (i.e., a first-hand narrative, second-hand narrative, and/or informational report). In addition, 26.67% (N = 4) of the most-viewed, most-liked, and most-shared videos, as well 20% (N = 3) of the most-commented videos, had at least one resource perspective *and* one cognitive perspective.

Discussion

As stated, this study hypothesized that the most popular TikTok videos regarding the supposed origins of COVID-19 tend to include content that satisfies both the resource

perspective (i.e., at least one of the following: first-hand narrative, second-hand narrative, informational report) and cognitive perspective (i.e., advice and/or call to action). However, analyses to test this assumption did not produce statistically significant results, therefore, there is not enough evidence to support the validity of the hypothesis.

In terms of the resource perspective, the researcher observed that popular videos (i.e., those that garnered the most engagement through views, likes, comments, and shares) did tend to incorporate content with second-hand narratives (75.56% average) and/or informational reports (95.56% average). Moreover, all of the videos in each top engagement group included at least one resource perspective—demonstrating that a first-hand narrative, second-hand narrative, and/or an informational report was present among the most popular #covidorigin TikTok videos. Although very few incorporated advice (13.33% average) and/or a call to action (6.67% average). Among videos in each of the top engagement groups, between 20-26.67% had at least one resource narrative and one cognitive narrative simultaneously. Additionally, the lack of significance in the results demonstrates that the presence of both a resource perspective and a cognitive perspective did not play a significant role in generating greater engagement among #covidorigin videos.

Based on observations, perhaps for content to be popular on TikTok, the resource perspective must be satisfied. Meanwhile, the cognitive perspective provides viewers with a supplemental narrative in which audience members can choose to continue through their own actions (e.g., heeding advice or carrying out the call to action). While this assumption cannot be verified with these current results, Study 1 serves as only one example of how TikTok videos can be examined for the presence of resource and

cognitive perspectives. As previously stated, further limitations associated with conducting this type of TikTok content analysis include the possibility that previously posted content about COVID-19 have since been deleted or are otherwise unviewable to the public and that some videos addressing COVID-19's supposed origins do not incorporate the hashtag observed for this study (#covidorigin). Therefore, more research is needed to further develop current understandings of how crisis narratives are presented on short-form video platforms, what other types of speculative claims are produced as a result of such narratives, and if combinations of content types impact the popularity or engagement of videos. In addition, future research can expand upon the one hashtag used for this study to explore TikTok content using other relevant COVID-19 origin hashtags. For example, hashtags related to the speculative claims found in Study 1 (e.g., a lab leak) can be incorporated to generate a larger sample size and promote greater generalizability of COVID-19 origin content on TikTok. Furthermore, while there were no statistical significances between the various content and engagement types, there were statistical significances found for the presence of overlayed photos/videos. Notably, the results revealed that the use of additional photos/videos in #covidorigin videos tend to acquire more likes and comments. This creates an opportunity for further research to consider the role that various communication formats and technological affordances play in content engagement.

Interestingly, among all videos posted in 2023 (N = 40), 36 were shared on or following FBI Director Wray's February 28 interview—accounting for 90% of all #covidorigin videos publicly shared on TikTok in 2023 and nearly half of the videos overall. Moreover, since informational reports were majorly present across all videos, the

data suggests that details from legislative documents, book summaries, research articles, and media reports are primary tools used to communicate #covidorigin content—emphasizing the role of media sources in the dissemination of COVID-19 information on TikTok. Throughout this dissertation, it has been discussed that crisis narratives and the ways in which they are communicated matter because narratives guide people to process messages more fluently (Bullock et al., 2022). As evident from other health crises, such as the HIV/AIDS epidemic, mutual understanding and proactive vigilance during times of crisis can be achieved through enhanced communication efforts, education, and adequate representation (Heller, 2015). Conversely, as apparent through the numerous accounts of crisis narratives presented (e.g., 9/11, the Rabaa Square massacre, and the January 6th insurrection), when people encounter a narrative that they perceive as incoherent and/or unreliable, they are allotted space to fill in gaps with speculative claims as a way to make better sense of the information they do have (Fisher, 1985). In this scenario, it seems possible that reignited attention on the fact that U.S. intelligence agencies have yet to agree on the exact origin of COVID-19 has boosted conversations around the matter—as seen through the increase of #covidorigin videos posted on TikTok. Moreover, these discussions may have prompted people to disclose their own personal suppositions about the source of COVID-19—with over 60% of videos explicitly stating a hypothetical cause—thus, contributing to the further spread of speculative claims around this health crisis.

While speculative claims can certainly have implications on the ways people think and behave, continued research in this area can provide meaningful insights into how to improve communication processes and combat the spread of conspiratorial

thinking. In addition, the TikTok coding protocol designed for this study may be able to serve as a guide to investigate other types of conspiracy phenomena on popular short-form video platforms (including other widespread COVID-19 conspiracies). As entities around the world continue to gather more information about where COVID-19 came from, scholars can also gather data into the conversations and ideations surrounding the virus, as well as how they came into fruition. Aforementioned, history has no shortage of crisis events and as unfortunate as they may be, they are inevitable. Therefore, staying informed, making critical assessments, and continuously cultivating enhanced strategies for managing crises are always going to be necessary.

CHAPTER V

EVALUATING CDC MESSAGES ABOUT COVID-19

As Fisher (1985) explains, narratives represent communication frameworks that help people make sense of the information they are being provided. Conversely, if gaps are present in the narrative, audiences can make their own inferences about the information they receive (see Cohn, 2019; Sternberg, 2001), such as the COVID-19 conspiracy theories mentioned throughout this dissertation. Moreover, the allotted space to make inferences about COVID-19 widened as the Centers for Disease Control and Prevention (CDC), a U.S. government-appointed, official source for COVID-19 communication, faced much public scrutiny for disseminating confusing and contradictory messages and being slow to share COVID-19 information with the public (Stobbe, 2022). Drawing from the Narrative Paradigm (Fisher, 1985), Study 2 seeks to identify possible communication patterns that may contribute to a lack of trust in government sources and scientists and affect perceptions of message reliability and credibility. This study's main objective is outlined by Research Question 2 (RQ2): How do messages from the CDC, a leading health organization, influence perceptions about COVID-19?

- RQ2a: What effects does the CDC's messaging have on the public's perceived reliability and the presence of narrative gaps in the messages?
- RQ2b: What effects does the CDC's messaging have on the public's trust in the government and scientists?

Given that the study objective is geared towards actual messages from the CDC, their reliability and effectiveness, and whether narrative gaps are present, focusing on

confusing and contradictory messages from the CDC would be ideal for the context of this research—more so than concentrating on the CDC's lagged messaging time. Of the numerous reports criticizing the CDC's handling of COVID-19 communication (e.g., Edwards, 2020; Mandavilli, 2020; Miller & Foody, 2021; Stobbe, 2020; Walker, 2021), the most confusing messages from the CDC entailed testing protocols, quarantine protocols, and travel protocols. Hence, as a sample COVID-19 message type, Study 2 focuses on CDC messages about testing protocols from 2020, the inaugural year of the global pandemic. This timeframe was selected to observe how COVID-19 information was disseminated to the public in the earlier stages of the pandemic—largely setting the tone for COVID-19 communication in the U.S. More specifically, the study focused on three contradictory CDC messages (listed in chronological order):

1. "Testing is recommended for all close contacts of persons with SARS-CoV-2 infection. Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested" (Gumbrecht et al., 2020, para. 4).
2. "You do not necessarily need a test unless you are a vulnerable individual or your health care provider or State or local public health officials recommend you take one" (Lee, 2020, para. 3).
3. "If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test" ("Overview of Testing for SARS-CoV-2," 2020, para. 8).

Method: Multi-Group Experiment

A multi-group experiment is a research design that observes the same independent variable across three or more levels or conditions (Ross & Morrison, 2013). Typically, one of the levels is nothing at all to serve as a baseline (i.e., the control group) while the others are variants (i.e., the experimental groups). Each experimental group is introduced to a unique change. The condition of change is what makes a group distinct from the others so that the varying levels of change can be observed and compared. For Study 2, an independent measure (i.e., between-groups) design was chosen, meaning diverse participants were used in each condition through random allocation (i.e., each participant had an equal chance of being placed in one group; McLeod, 2023).

Procedures

As stated, the CDC's key areas of backlash entail conflicting messaging regarding information and recommendations about COVID-19 and their lagged response time. Since this study is focused on crisis narratives, it centers on the confusing and contradictory messages shared by the CDC. The most confusing messages from the CDC entailed testing protocols, quarantine protocols, and travel protocols (Edwards, 2020; Mandavilli, 2020; Miller & Foody, 2021; Stobbe, 2020; Walker, 2021). Hence, this research uses CDC's messaging on testing protocols to test the proposed hypotheses. To reiterate, the study tested the following assumptions:

- H1: Exposure to the CDC's contradictory messages (i.e., narrative gap messages) is linked with lower (H1a) narrative fidelity/reliability/effectiveness, (H1b) message credibility, and (H1c) trust in the government and scientists.

- H2: Public trust in the government and scientists is weakened when the CDC's messages about COVID-19 are (1) perceived as ineffective and (2) perceived as having narrative gaps.
- H3: Conspiratorial beliefs are associated with the CDC's messages about COVID-19 being (1) perceived as ineffective/unreliable and (2) perceived as having narrative gaps.

For this study, a four-condition online experiment was conducted (see the stimuli in Appendix D). Participants were randomly assigned to one of four manipulations (see Appendices E-H). Among the various types of participant groups, three separate group sets were exposed to versions of CDC messages about COVID-19 testing protocols, and one control group was exposed to no CDC messages. The first group (CDC Narrative Gap Condition) was exposed to treatment that contained the three contradictory messages from the CDC about testing protocols in chronological order (an original message, a message that contradicts the original message, and an updated message that retracts the contradictory message). The second group (CDC Updated No Narrative Gap Condition) received only the updated message from the CDC that retracted the contradictory message (i.e., the third message in the CDC Narrative Gap Condition). The messages provided for the first and second groups are verbatim messages from the CDC. The third group (Researcher's Updated No Narrative Gap Condition) received one message that combines elements from the first two conditions, which the researcher modified with additional/explicit information to further limit the narrative gaps in the CDC's messaging (see Figure 6). In addition, any mention of the CDC was omitted from each experimental group's survey and replaced with the moniker "Organization A, an American public

health agency," to limit biased results due to participants' possible preconceptions about the CDC.

"If you have been in close contact with a person who has either tested positive for COVID-19 or is showing symptoms of infection, you need to get tested. Close contact may entail (but is not limited to) 6 feet or less of distance between you and the possibly infected person for any given amount of time (typically 15 minutes or more). Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested."

Figure 6. The message shown to participants in Condition 3 (i.e., the Researcher's Updated No Narrative Gap Message; see Appendix D).

Manipulation Check

After exposure to the experimental stimuli, both attention and manipulation checks were conducted. The attention check asked participants in the experimental groups how many messages they received from Organization A (the correct answer being "1" for the and CDC Updated No Narrative Gap and Researcher's Updated No Narrative Gap groups and "3" for the CDC Narrative Gap group). It also asked participants to indicate the type of recommendation shared in the message(s) (the correct answer being "COVID-19 Testing"). In reference to the manipulation check, participants in each of the three experimental groups were provided three supposition statements and two questions to assess for the presence of narrative gaps and narrative coherence in the message(s) they received. More details about the supposition test and narrative assessment are discussed in the Measures section below.

Measures

The dependent variables were measured using previously validated scales. While participants in each experimental group were exposed to COVID-19 testing protocol

messages with varying degrees of narrative gaps, all participants across experimental groups were asked to rate their given message's perceived reliability and effectiveness (Zhao et al., 2011), credibility (Roberts, 2010), trust in the government and scientists (see Grimmelikhuijsen & Knies, 2017; Herati et al., 2023; Holroyd et al., 2021), and presence of narrative gaps (see Lind et al., 2020; Yale, 2013). For each of the scales, the researcher used Cronbach's alpha to assess the reliability/internal consistency of the scale sets and reported the scale mean (the average score of the items on the scale being analyzed) and standard deviation (SD; the amount of variation or dispersion in a set of values).

Reliability and Effectiveness Scale. In reference to reliability and effectiveness (Zhao et al., 2011), participants were given a five-point scale ranging from "Strongly Disagree" to "Strongly Agree" to measure items like how reliable of a source they perceived the narrator of their given message to be and if the message(s) were convincing, helpful, confusing, contradictory/inconsistent, and clear/made sense. Nine items in this scale were used to assess how well the items measure reliability and effectiveness. Reliability statistics indicated solid internal consistency within the scale set (Cronbach's alpha = 0.78, Scale Mean = 2.93, SD = 6.48), as shown in Appendix I.

Credibility Scale. For credibility (Roberts, 2010), participants were asked to rate their perceptions on Organization A's message(s). A five-point scale was provided, ranging from "very inaccurate" to "very accurate," "very untrustworthy" to "very trustworthy," and "very biased" to "very unbiased." In addition, they were prompted to measure how strong or weak of a communicator they perceived Organization A to be and how trustworthy of a source Organization A is for COVID-19 information. All five items in this scale were used to assess how well the items measure credibility. Reliability

statistics indicated strong internal consistency within the scale set (Cronbach's alpha = 0.94, Scale Mean = 3.35, SD = 4.97), as shown in Appendix J.

Trust in the Government and Scientists Scale. The perceived trust in the government and scientists scale (Grimmelikhuijsen & Knies, 2017; Herati et al., 2023; Holroyd et al., 2021) included prompts like: "If Organization A was appointed an official source for COVID-19 information, their message would have _____ on my trust in the government." Five-point rating measures were also used for this section, ranging from "a strong negative impact" to a "strong positive impact" and "Strongly Disagree" to "Strongly Agree." All six items in this scale were used to assess how well the items measure trust in the government and scientists. Reliability statistics indicated strong internal consistency within the scale set (Cronbach's alpha = 0.91, Scale Mean = 3.11, SD = 5.84), as shown in Appendix K.

Narrative Gap Scales. As mentioned, participants were provided three supposition statements. Their task was to assess if their given message makes each supposition plausible. The supposition tests were used to evaluate messages for narrative gaps by checking if participants were able to fill in gaps with a given supposition. For these, participants who answered with "Disagree" or "Strongly Disagree" rejected the supposition provided to them while those who answered with "Agree" or "Strongly Agree" accepted the supposition—essentially filling the gaps in their given message(s) with a proposed inference. An example of a supposition provided is the following: "If you are more than 6 feet away from a person who is infected with COVID-19, you <u>do not</u> need to test."

For the remaining two narrative gap questions (see Lind et al., 2020; Yale, 2013), participants were given the following prompt: "When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?" Two five-point scales were provided, ranging from "The recommendation tells a complete message with no gaps" to "The recommendation has so many gaps that it's hard to tell what the message is" and "The recommendation tells a coherent message with no inconsistencies" to "The recommendation has so many inconsistencies that it's hard to tell what the message is."

All five items in this scale were initially used to assess how well the items measure narrative gaps, but reliability statistics did not indicate strong internal consistency within the collective scale set (Cronbach's alpha = 0.46, Scale Mean = 3.18, SD = 3.19). However, reliability statistics did indicate solid internal consistencies when separately testing the **supposition set** (Cronbach's alpha = 0.69, Scale Mean = 2.76, SD = 2.79) and the **narrative gap assessment set** (Cronbach's alpha = 0.92, Scale Mean = 3.85, SD = 2.01), as respectively shown in Appendices L and M.

Conspiracy Beliefs Scale. The researcher also collected data on participants' COVID-19 conspiracy beliefs. Similar to the American Conspiracy Thinking Scale (ACTS) index used by Uscinski et al. (2022), conspiracy beliefs were measured using information adapted from Lynas' (2020) list of top 10 COVID-19 conspiracies. The measure assessed participants' conspiracy beliefs on a five-point Likert-type scale across the following conspiracies: (1) The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic, therefore, the two events are connected; (2) Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping

people; (3) The COVID-19 virus escaped from a Chinese lab; (4) COVID-19 was created as a biological weapon; (5) The U.S. military imported COVID-19 into China; (6) Pollution from genetically modified crops caused the spread of COVID-19; (7) COVID-19 does not actually exist; (8) The COVID-19 pandemic is/was manipulated by America's elite; (9) Big pharmaceutical companies are behind the spread of COVID-19; and (10) COVID-19 death rates are inflated. All 10 items in this scale were used to assess how well the items measure conspiracy beliefs. Reliability statistics indicated strong internal consistency within the scale set (Cronbach's alpha = 0.89, Scale Mean = 1.98, SD = 7.67), as shown in Appendix N.

Through these measures and conditions (as outlined in Figure 7), this study investigated which types of messages are better received by the public based on perceptions— like narrative fidelity/reliability and effectiveness and coherence/the presence of narrative gaps (Cohn, 2019; Fisher, 1985; Sternberg, 2001)—in a unique manner that expands upon previous risk communication, conspiratorial belief, and health crisis research (e.g., Drinkwater et al., 2020; Erokhin et al., 2022; Uscinski et al., 2022; Zhao et al., 2011). Furthermore, the researcher collected data on all participants' social media use ("Most Popular Social Media in the US," n.d.), information-seeking behaviors ("News Platform Fact Sheet," 2023; Watson, 2024), and demographic information (e.g., age range, race, gender, geographic location, and political affiliation).

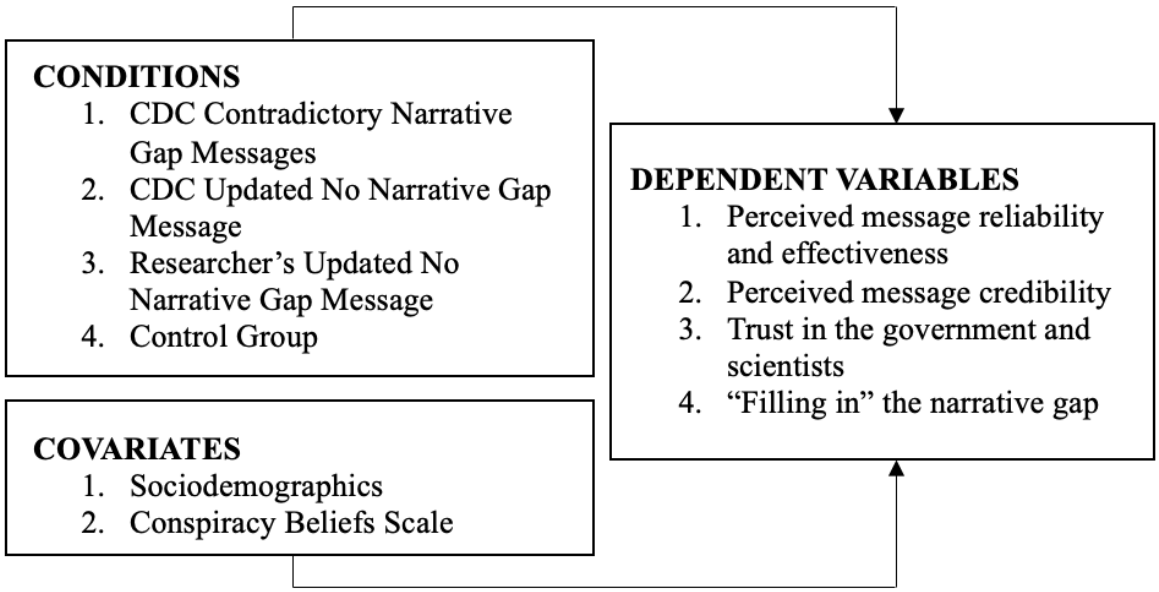


Figure 7. A flowchart demonstrating the experimental design for Study 2. This figure illustrates what variables were considered for this study and how they were tested.

Data Analysis. Survey results were recorded via Qualtrics and then transferred to Excel and SPSS for data analysis and R for visualization. One-way Analysis of Variance (ANOVA) and Tukey's Honest Significant Difference (HSD) tests were used to check the hypotheses, exploring the statistical differences in the predicted outcomes based on individuals receiving contradictory (i.e., narrative gap) CDC messages at face-value (CDC Narrative Gap Condition), the updated CDC message at face-value (CDC Updated No Narrative Gap Condition), one modified CDC message with more detailed information (Researcher's Updated No Narrative Gap Condition), and no CDC messages at all (Control Group).

Sampling and Sample Size

As previously mentioned, the CDC is "the sole entity authorized by [U.S.] Congress to mobilize philanthropic partners and private-sector resources to support [their] critical health protection mission" ("Our Story," n.d.). Since the CDC is a U.S.

organization—and in order to access a large and diverse participant pool—American adults (ages 18-plus) living across the U.S. were recruited via Connect, one of CloudResearch's education and research participant platforms. CloudResearch is a data service that provides "academic and market researchers immediate access to millions of diverse, high-quality respondents around the world" ("Online Participation Recruitment," n.d., para. 1).

Through G*Power analysis, it was determined a priori that the minimum sample size to detect a small effect is 1,095 participants (i.e., 274 per group). However, to account for invalid results and ensure greater generalizability overall, the actual sample size entailed 1,610 participants total (~400 per group). Prior to official data collection, two series of tests were conducted to ensure that each survey was working as intended. The first test was applied to verify that the survey was indeed randomly allocating participants (N = 20) proportionally across the four conditions; the prompts, questions, and answer choices made sense; and participants were able to complete their given survey in approximately 15 minutes or less. The second pilot test was administered to a larger sample of university students (N = 128) to assess the effectiveness of the manipulations and compare how participants rated the dependent variables (i.e., narrative gap test, perceived message reliability and effectiveness, perceived message credibility, and trust in the government and scientists) and the conspiracy beliefs scale across the four conditions.

Limitations

Common limitations of collecting online survey data are survey errors and invalid or unusable results (Nayak & Narayan, 2019), needing proper resources and/or funding to

recruit volunteers (Douglas et al., 2023), and the lack of interaction with participants—which inhibits nuanced data responses compared to data collected through interviews or focus groups (Kabir, 2016). Surveys measuring perceptions also provide a layer of complexity. Perceptions are "shaped by many complex factors that may not be captured in surveys" (Herbert, 2013, p. 6), such as personal circumstances, beliefs, and level of knowledge about the topic(s) addressed in a survey—underlining the value of supplementing survey data with other methodologies (e.g., interviews, focus groups).

Pilot Test Results

All participants in the second pilot study (N = 128) indicated being born between 1995-2005, signaling that the sample is comprised of late-Millennials and Generation Z respondents. In terms of gender, 28.57% identified as male, 70.63% as female, and one classified as "Other" (i.e., "Trans Woman"). Most of the participants identify as Caucasian (71.03%), followed by Latino or Hispanic (17.24%), Asian (5.52%), % Black or African American (1.38%), "Other/Unknown" (2.07%), and Native Hawaiian or Pacific Islander (0.69%). When asked to identify political party affiliation, 3.97% of respondents identified as Republican, 50% as Democratic, 19.84% as Independent, 1.59% as "Other," and 24.6% indicated no political party affiliation. Meanwhile, none described their political views as "Very Conservative" while 8.73% identified as "Conservative," 31.75% as "Centrist," 43.65% as "Liberal," and 15.87% as "Very Liberal." Across the entire sample, the most used/popular social media platforms were identified as Instagram (N = 123), TikTok (N = 111), Snapchat (N = 111), and Pinterest (N = 79). Participants' top sources were identified as *The New York Times* (N = 91), Google (N = 81), and *The Washington Post* (N = 51). In terms of how participants

receive news and information, 56.88% reported digital devices (e.g., smartphone, tablet, computer), 27.98% television, 7.8% radio, and 7.34% print publications.

As previously stated, this experiment involves four types of conditions: participants who received contradictory CDC messages (CDC Narrative Gap Condition), participants who received only the updated CDC message (CDC Updated No Narrative Gap Condition), participants who received one modified CDC message with more detailed information (Researcher's Updated No Narrative Gap Condition), and participants who received no CDC messages at all (Control Group). Participants in the three experimental groups were asked to rate their perceptions of their given message's reliability/effectiveness, credibility, trust in government and scientists, and the presence of narrative gaps.

To test for reliability and effectiveness (H1a), participants were given prompts such as: "Organization A is a reliable source for COVID-19 testing recommendations." Among those who answered "Agree" or "Strongly Agree," 43.33% more participants in the Researcher's Updated No Narrative Gap Condition found Organization A to be more reliable than those in the CDC Narrative Gap Condition and 20.42% more than those in the CDC Updated No Narrative Gap Condition. An Analysis of Variance (ANOVA) test showed evidence of significant differences between the experimental groups (Sum of Squares Between Groups = 9.34, df = 2, Variance = 4.67, F = 4.92, p = 0.0094). In addition, a Tukey post hoc test determined a significant difference between the CDC Narrative Gap Condition (M = 3.07, SD =1.03) and the Researcher's Updated No Narrative Gap Condition (M = 3.83, SD = 0.93) (Diff = 0.76, 95% CI: 0.16 to 1.36, p = 0.0091).

Another prompt stated, “Organization A’s recommendation(s) are convincing.” Among those who answered “Agree” or “Strongly Agree,” 8.75% more participants in the Researcher’s Updated No Narrative Gap Condition found Organization A to be convincing than those in the CDC Updated No Narrative Gap Condition. However, 13.33% more participants in the CDC Narrative Gap Condition found Organization A to be convincing compared to those in the Researcher’s Updated No Narrative Gap Condition. An ANOVA test was conducted, but it did not produce evidence of statistical significances between groups (Sum of Squares Between Groups = 4.23, df = 2, Variance = 2.11, F = 2.81, p = 0.653).

To test for message credibility (H1b), participants in the experimental groups were given the following prompt: “Overall, Organization A is a ___ communicator.” More participants (6.67%) in the Researcher’s Updated No Narrative Gap Condition indicated that Organization A was a “strong” or “very strong” communicator compared to participants in the CDC Narrative Gap Condition and 9.37% more than those in the CDC Updated No Narrative Gap Condition. However, an ANOVA test (Sum of Squares Between Groups = 1.29, df = 2, Variance = 0.65, F = 1.01, p = 0.37) indicated no statistical significances. Another prompt that tested for credibility stated: “Overall, I think Organization A is a ___ source for COVID-19 information.” Thirty percent more participants in the Researcher’s Updated No Narrative Gap Condition indicated that Organization A was a “trustworthy” or “very trustworthy” source for COVID-19 information compared to participants in the CDC Narrative Gap Condition and 26.45% more than those in the CDC Updated No Narrative Gap Condition. Although an ANOVA

test (Sum of Squares Between Groups = 1.76, df = 2, Variance = 0.88, F = 1.17, p = 0.32) indicated no statistical significances.

To test for the impact that each set of messages had on trust in the government and scientists (H1c), participants were given the following prompt: "If Organization A was appointed an official source for COVID-19 information, their message(s) would have ___ on my trust in the government and scientists." Twenty percent more participants in the CDC Narrative Gap Condition found Organization A's recommendations to have some level of negative impact on their trust in the government and scientists compared to participants in the Researcher's Updated No Narrative Gap Condition. Meanwhile, 5.84% more participants in the CDC Updated No Narrative Gap Condition found Organization A's recommendation to have some level of negative impact on their trust in the government and scientists compared to participants in the Researcher's Updated No Narrative Gap Condition. Furthermore, 13.33% more participants in the Researcher's Updated No Narrative Gap Condition shared that if Organization A were to be appointed an official source for COVID-19 information, it would have "a positive impact" or "a strong positive impact" on their trust in the government and scientist compared to those in the CDC Narrative Gap Condition. However, in this case, the Researcher's Updated No Narrative Gap Condition had 2.51% less positive sentiments compared to participants in the CDC Updated No Narrative Gap Condition. An ANOVA test (Sum of Squares Between Groups = 1.76, df = 2, Variance = 0.88, F = 1.17, p = 0.32) indicated that these results are not significant.

To test messages for the presence of narrative gaps, participants were given three suppositions. Essentially, if narrative gaps were present, participants would have some

level of agreement with each supposition since it can be used to fill gaps in the narrative. In reference to the first supposition ("According to Organization A, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test"), 37.93% of participants in the Researcher's Updated No Narrative Gap Condition (those who answered with "Agree" or "Strongly Agree") accepted the supposition to fill in the narrative. This is 5.41% less than participants in the CDC Narrative Gap Condition, but 9.8% more than the CDC Updated No Narrative Gap Condition. Meanwhile, 51.72% of participants in the Researcher's Updated No Narrative Gap Condition (those who answered "Disagree" or "Strongly Disagree") explicitly did not use the supposition to fill in the narrative. This is 5.05% more than those in the CDC Narrative Gap Condition, but 1.41% less than the CDC Updated No Narrative Gap Condition.

In reference to the second supposition ("According to Organization A, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test") 37.93% of participants in the Researcher's Updated No Narrative Gap Condition (those who answered with "Agree" or "Strongly Agree") accepted the supposition to fill in the narrative. This is 7.93% more than participants in the CDC Narrative Gap Condition and 12.93% more than the CDC Updated No Narrative Gap Condition. Furthermore, 51.72% of participants in the Researcher's Updated No Narrative Gap Condition (those who answered "Disagree" or "Strongly Disagree") explicitly did not use the supposition to fill the narrative. This is 1.72% more than the CDC Narrative Gap Condition and 1.71% more than the CDC Updated No Narrative Gap Condition.

Finally, in reference to the third supposition ("According to Organization A, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test"), 20.69% of participants (those who answered with "Agree" or "Strongly Agree") in the Researcher's Updated No Narrative Gap Condition accepted the supposition to fill in the narrative. This is 15.97% less than participants in the CDC Narrative Gap Condition, but 8.18% more than the CDC Updated No Narrative Gap Condition. In addition, 62.07% of participants in the Researcher's Updated No Narrative Gap Condition (those who answered "Disagree" or "Strongly Disagree") explicitly did not use the supposition to fill in the narrative. This is 15.4% more than the CDC Narrative Gap Condition and 2.69% more than the CDC Updated No Narrative Gap Condition. ANOVA tests were conducted for each of the supposition results in chronological order. The first two ANOVA tests indicated no statistical significances, however, the final ANOVA test for the third supposition did indicate evidence of significance (Sum of Squares Between Groups = 6.02, df = 2, Variance = 3.01, F = 3.23, p = 0.04). A Tukey post hoc test determined a significant difference between the CDC Narrative Gap Condition (M = 2.87, SD =1.06) and the Researcher's Updated No Narrative Gap Condition (M = 2.24, SD = 0.93) (Diff = 0.63, 95% CI: -1.23 to -0.031, p = 0.0369).

Pilot Test Discussion

According to the pilot test results, the most reliable, helpful, and coherent (i.e., less confusing; made the most sense) message came from the Researcher's Updated No Narrative Gap Condition. While the results from the narrative gap tests were mixed, overall, participants in the CDC Updated No Narrative Gap Condition and the

Researcher's Updated No Narrative Gap Condition did not fill in the narratives with the provided suppositions more than those in the CDC Narrative Gap Condition. This indicates that the CDC's verbatim, contradictory messages about COVID-19 testing protocols allowed more space for the public to fill in the narratives with their own suppositions. Moreover, the CDC Updated No Narrative Gap Condition, which only provided the final/updated CDC message from the CDC Narrative Gap Condition, actually demonstrated to have the least narrative gaps overall, which suggests that the back-and-forth contradictory statements made by the CDC contributed to the perceived incoherence and infidelity of the overall narrative. Conversely, the CDC Narrative Gap Condition showed to have the most narrative gaps across groups. Therefore, the contradictory statements from the CDC do suggest higher negative impact on public perceptions, more gaps in the narrative, and overall low effectiveness. According to these results, it appears that the proposed assumptions may hold merit since the analysis demonstrates that exposure to the CDC's contradictory messages (i.e., narrative gap messages) is linked with lower narrative reliability and effectiveness, credibility, and trust in the government and scientists. However, the lack of statistical significances across dependent variable tests encouraged the researcher to make adjustments to the items in each scale. These changes include adding the following questions to the narrative gap test (see Lind et al., 2020; Yale, 2013):

1. When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?
    a) The recommendation(s) tell a complete message with no gaps.
    b) The recommendation(s) have some gaps, but the overall message is clear.

c) The recommendation(s) have several gaps, making it hard to follow.
d) The recommendation(s) have significant gaps, making it difficult to understand.
e) The recommendation(s) have so many gaps that it's hard to tell what the message is.

2. When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?
   a) The recommendation(s) tell a coherent message with no inconsistencies.
   b) The recommendation(s) have some inconsistencies, but the overall message still makes sense.
   c) The recommendation(s) have several inconsistencies, making it hard to follow.
   d) The recommendation(s) have significant inconsistencies, making it difficult to understand.
   e) The recommendation(s) have so many inconsistencies that it's hard to tell what the message is.

Through these modifications and given that ResearchCloud is capable of distributing surveys more representatively across sociodemographics (e.g., gender, age, location, race, and political views), the researcher anticipated acquiring richer and more generalizable data for the official study to better reflect perceptions about CDC messages on COVID-19 among adults across the U.S.

Official Study Results

The official study accumulated 1,665 responses—with 1,610 completed surveys. Across the entire sample, ages ranged from 18-29 (19.78%), 30-43 (28.23%), 44-58 (26.3%), 59-77 (23.82%), and 78-98 (0.78%). Fifty percent of participants identified as male, 49.76% identified as female, 0.18% identified as non-binary, and 0.06% identified as "Other." The sample also encompassed residents from all 50 U.S. states—the top five being California (11.76%; Western U.S.), New York (7.78%; Northeastern U.S.), Texas (7.29%; Southern U.S.), Florida (6.27%; Southeastern U.S.), and Ohio (5.31%; Midwestern U.S.). As shown in Figure 8, 73.88% of participants identified as Caucasian, 14.48% identified as Black or African American, 14.41% identified as Latino or Hispanic, 5.97% identified as Asian, 1.15% identified as Native American, 0.24% identified as Native Hawaiian or Pacific Islander, and 0.54% identified as "Other/Unknown." As for political party affiliation, 29.49% of participants identified as Republican, 41.74% identified as Democratic, 25.27% identified as Independent, 0.48% identified as "Other," and 3.02% indicated having no affiliation to any political party. When describing political views, participants ranged from "Very Conservative" (8.26%), "Conservative" (27.44%), "Centrist" (22.01%), "Liberal" (31.66%), and "Very Liberal" (10.62%).

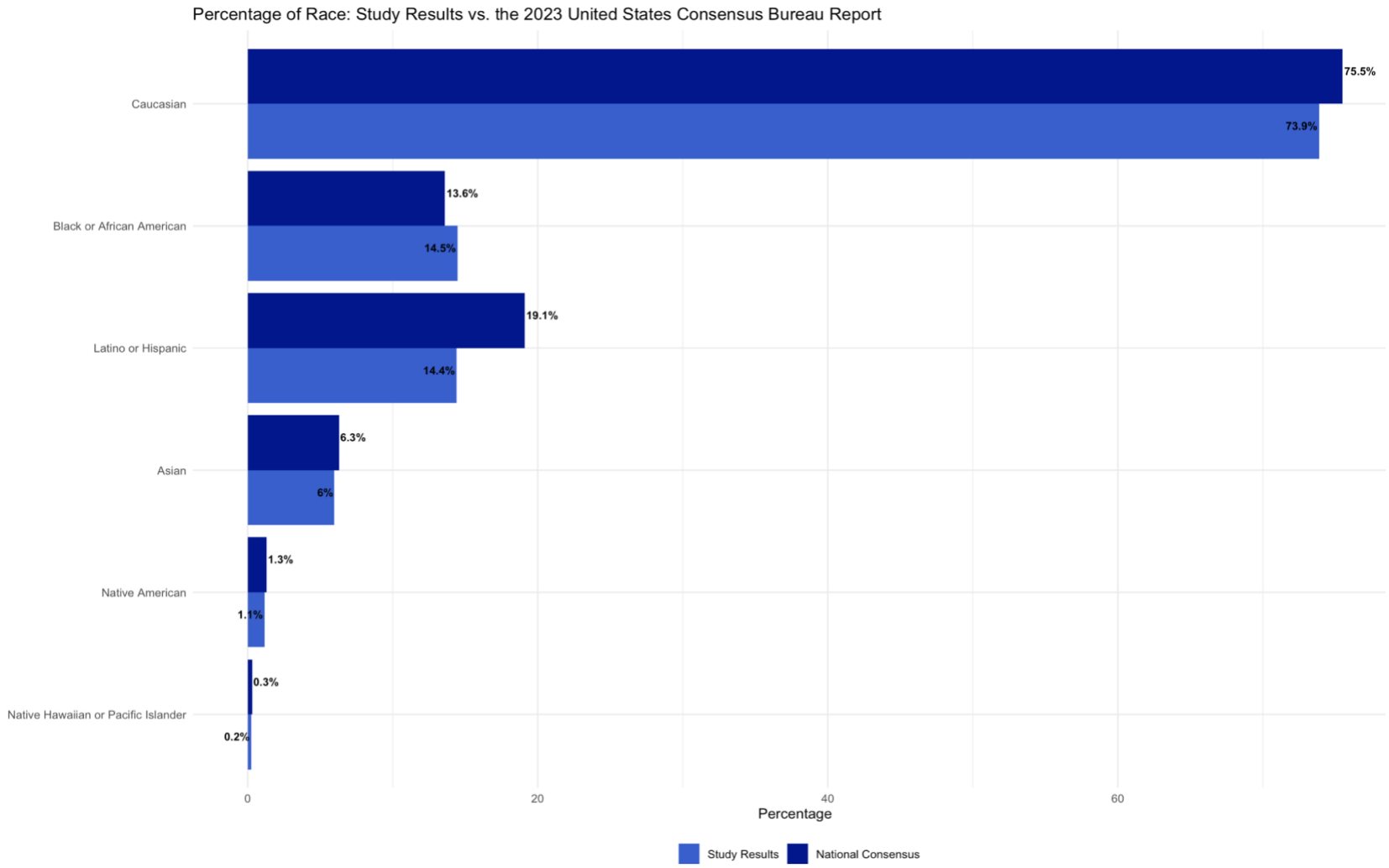


Figure 8. A graph comparing percentages of race among participants in this study against the 2023 United States Consensus Bureau report ("Quick Facts: United States," n.d.). The plot demonstrates that the distribution of races among participants in this study is comparable to the actual U.S. consensus.

In reference to social media, 99.40% of participants shared that they are active on at least one platform—the most popular social media platforms being YouTube (85.22%), Facebook (74.91%), Reddit (65.5%), Instagram (64.54%), and X (54.34%; formerly known as Twitter). Moreover, 91.92% receive news through digital devices (e.g., smartphone, tablet, computer), 55.19% through television, 24.31% through radio, and 11.76% through print publications—with the most popular news sources being Google (46.56%), *CNN* (40.29%), *The New York Times* (32.99%), *Fox News* (28.11%), and *NBC* (27.44%).

Among participants who completed the survey in its entirety (N = 1,610), 400 were randomly assigned to Condition 1 (CDC Contradictory Narrative Gap Condition), 402 were randomly assigned to Condition 2 (CDC Updated No Narrative Gap Condition), 400 were randomly assigned to Condition 3 (Researcher's Updated No Narrative Gap Condition), and 408 were randomly redirected to the conspiracy beliefs scale after concluding the sociodemographics questionnaire (i.e., no CDC message exposure; Control Group). Across experimental groups (Conditions 1-3), participants were asked to indicate their level of agreement on a series of prompts tailored toward each dependent variable: perceived message reliability and effectiveness, perceived message credibility, trust in the government and scientists, and perceived narrative gaps.

Regarding the distribution of conspiracy beliefs across all four conditions, in line with the view that degree—absence or presence—of conspiratorial thinking among study participants precedes the experimental manipulation, participants indicated their attitudes towards each of the 10 COVID-19 conspiracy theories on a five-point scale ("Definitely Not True" = 1 to "Definitely True" = 5). As expected, no significant differences were

found between the four groups on 10 conspiracies (e.g., the COVID-19 virus escaped from a Chinese lab, COVID-19 was created as a biological weapon) (Sum of Squares Between Groups = 0.46, df = 3, Variance = 0.15, F = 0.26, p = 0.8528). However, interestingly, a general consensus (i.e., a median threshold of 75% or more; Diamond et al., 2014) was observed across all groups for one specific conspiracy. A vast majority (83.54%) of participants overall indicated that the idea that "COVID-19 doesn't actually exist" is *definitely not true*, as shown in Figure 9 below.

COVID-19 doesn't actually exist.

Answer Choice: "Definitely Not True"

Condition 1 – N (count) = 400; Answered = 334; Percentage = 83.50%
Condition 2 – N (count) = 402; Answered = 332; Percentage = 82.59%
Condition 3 – N (count) = 400; Answered = 330; Percentage = 82.50%
Condition 4 – N (count) = 408; Answered = 349; Percentage = 85.54%
Total – N (count) = 1,610; Answered = 1,345; Percentage = 83.54%

Figure 9. A frequency distribution table demonstrating the percentage of participants who responded with "Definitely Not True" when given the following conspiracy prompt: "COVID-19 doesn't actually exist." According to the results, 83.54% of all study respondents selected this sentiment, which is greater than the median threshold needed for a general consensus (i.e., 75%; Diamond et al., 2014).

Effect of Message Exposure on Perceived Reliability and Effectiveness

Immediately after being exposed to their given message(s), participants in each experimental condition were asked to rate various prompts. These prompts captured attitudes like how reliable of a source they perceive the speaker to be when it comes to disseminating information about COVID-19 testing protocols, the convincingness of the recommendation(s) they received, how important the recommendation(s) are to them, how confident they felt about best COVID-19 testing practices after reading the recommendation(s), and their perceived levels of confusion, contradiction/inconsistency,

and coherence upon reading the recommendation(s) (Zhao et al., 2011). To test the hypothesis that exposure to the CDC's contradictory messages is linked with lower message fidelity/reliability/effectiveness (H1a), ANOVA was conducted to assess for statistical significances between each experimental group across the reliability and effectiveness scale; and the results were significant (Sum of Squares Between Groups = 4.20, df = 2, Variance = 2.10, F = 4.68, p = 0.0171). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition (M = 2.89, SD = 0.70) and the Researcher's Updated No Narrative Gap Condition (M = 3.01, SD = 0.72) (Diff = 0.13, 95% CI: 0.01 to 0.24, p = 0.0343) and the CDC Updated No Narrative Gap Condition (M = 2.89, SD = 0.74) and the Researcher's Updated No Narrative Gap Condition (M = 3.01, SD = 0.71) (Diff = 0.12, 95% CI: 0.01 to 0.24, p = 0.0375).

As mentioned earlier in the dissertation, beliefs tend to be predetermined based on a person's individual and group identities (Biddlestone et al., 2021; Williams, 2022). As a way to check if message exposure had any effect on participant perceptions of message reliability and effectiveness (despite existing ideological beliefs), an Analysis of Covariance (ANCOVA) test was conducted. Results indicate that the significant differences between conditions via the reliability and effectiveness scale remain robust when controlling for political views and conspiracy beliefs as covariates. While both political views ($F(1, 1165) = 61.98$, $p < 0.001$, $\eta^2 = 0.05$) and conspiracy beliefs ($F(1, 1165) = 96.61$, $p < 0.001$, $\eta^2 = 0.08$) are significant, the main effect of narrative gap message exposure on reliability and effectiveness are still significant after accounting for these covariates ($F(4, 1165) = 100.12$, $p < 0.001$, $\eta^2 = 0.26$). Therefore, while a person's political views and conspiracy beliefs were already established before participating in this

experiment, exposure to varying COVID-19 testing protocol messages had a significant—and much larger—effect on participants' perceptions of message reliability and effectiveness. Specifically, the contradictory messages in the CDC Narrative Gap Condition were associated with lower perceived reliability and effectiveness while the message in the Researcher's Updated No Narrative Gap Condition was associated with higher perceived reliability and effectiveness.

When assessing if Organization A is a reliable source for COVID-19 testing recommendations, 75.59% of participants in the Researcher's Updated No Narrative Gap Condition (N = 301) indicated Organization A as a reliable source—selecting "Agree" or "Strongly Agree" as their answer choice—while 56.23% of participants in the CDC Updated No Narrative Gap Condition (N = 230) and 48.28% of participants in the CDC Narrative Gap Condition (N = 196) shared the same sentiment. An ANOVA testing the effect of the experimental manipulations on individuals' perceived reliability and effectiveness of Organization A as a source for COVID-19 recommendations found evidence of statistical significance (Sum of Squares Between Groups = 89.21, df = 2, Variance = 44.61, $F = 37.01$, $p < 0.0001$). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition ($M = 3.17$, $SD = 1.21$) and the CDC Updated No Narrative Gap Condition ($M = 3.46$, $SD = 1.11$) (Diff = 0.29, 95% CI: 0.11 to 0.47, $p = 0.0005$), the CDC Narrative Gap Condition ($M = 3.17$, $SD = 1.21$) and the Researcher's Updated No Narrative Gap Condition ($M = 3.83$, $SD = 0.96$) (Diff = 0.66, 95% CI: 0.48 to 0.84, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition ($M = 3.46$, $SD = 1.11$) and the Researcher's Updated No Narrative Gap Condition ($M = 3.83$, $SD = 0.96$) (Diff = 0.37, 95% CI: 0.19 to 0.55, $p < 0.0001$). An

ANCOVA test controlling for political views ($F(1, 1169) = 29.35$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1169) = 89.34$, $p < 0.001$, $\eta^2 = 0.07$) as covariates found the effect of narrative gap message exposure on perceived source reliability remains significant after accounting for these factors ($F(2, 1169) = 123.87$, $p < 0.001$, $\eta^2 = 0.18$).

Upon evaluating if Organization A's message(s) are convincing, 67.24% of participants in the Researcher's Updated No Narrative Gap Condition (N = 275) indicated some level of agreement that Organization A's message(s) are convincing, which is a greater amount compared to the 40.83% of participants in the CDC Updated No Narrative Gap Condition (N = 167) and 44.33% of participants in the CDC Narrative Gap Condition (N = 180). An ANOVA test determined these results to be significant (Sum of Squares Between Groups = 80.18, df = 2, Variance = 40.09, F = 31.20, $p < 0.0001$), with Tukey HSD confirming significant differences between the CDC Narrative Gap Condition (M = 3.10, SD = 1.14) and the Researcher's Updated No Narrative Gap Condition (M = 3.61, SD = 1.10) (Diff = 0.51, 95% CI: 0.32 to 0.70, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 3.04, SD = 1.16) and the Researcher's Updated No Narrative Gap Condition (M = 3.61, SD = 1.10) (Diff = 0.57, 95% CI: 0.38 to 0.76, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 33.59$, $p < 0.001$, $\eta^2 = 0.02$) and conspiracy beliefs ($F(1, 1169) = 51.10$, $p < 0.001$, $\eta^2 = 0.04$) as covariates found the effect of narrative gap message exposure on perceived convincingness remains significant after accounting for these factors ($F(2, 1169) = 89.87$, $p < 0.001$, $\eta^2 = 0.13$).

When asked to rate if Organization A's recommendation(s) helped participants feel confident about best COVID-19 testing practices, 56.72% of participants in the

Researcher's Updated No Narrative Gap Condition (N = 232) had some level of agreement while 38.88% of participants in the CDC Updated No Narrative Gap Condition (N = 159) and 37.44% in the CDC Narrative Gap Condition (N = 152) shared the same sentiment. ANOVA determined these results to be statistically significant (Sum of Squares Between Groups = 63.04, df = 2, Variance = 31.52, F = 21.75, $p < 0.0001$) and Tukey HSD confirmed significant differences between the CDC Narrative Gap Condition (M = 2.87, SD = 1.20) and the Researcher's Updated No Narrative Gap Condition (M = 3.40, SD = 1.16) (Diff = 0.53, 95% CI: 0.33 to 0.73, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 2.99, SD = 1.25) and the Researcher's Updated No Narrative Gap Condition (M = 3.40, SD = 1.16) (Diff = 0.41, 95% CI: 0.21 to 0.61, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 20.85$, $p < 0.001$, $\eta^2 = 0.02$) and conspiracy beliefs ($F(1, 1169) = 70.70$, $p < 0.001$, $\eta^2 = 0.06$) as covariates found the effect of narrative gap message exposure on perceived helpfulness remains significant after accounting for these factors ($F(2, 1169) = 98.87$, $p < 0.001$, $\eta^2 = 0.15$).

Similarly, when evaluating if Organization A's recommendation(s) would help participants' friends feel confident about best COVID-19 testing practices, more participants in the Researcher's Updated No Narrative Gap Condition had some level of agreement (N = 210) than participants in the CDC Narrative Gap Condition (N = 129) and the CDC Updated No Narrative Gap Condition (N = 148). ANOVA determined these results to also be significant (Sum of Squares Between Groups = 55.60, df = 2, Variance = 27.80, F = 23.53, $p < 0.0001$), with Tukey HSD identifying significant differences between the CDC Narrative Gap Condition (M = 2.88, SD = 1.11) and the Researcher's

Updated No Narrative Gap Condition (M = 3.38, SD = 1.05) (Diff = 0.50, 95% CI: 0.32 to 0.68, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 3.00, SD = 1.10) and the Researcher's Updated No Narrative Gap Condition (M = 3.38, SD = 1.05) (Diff = 0.38, 95% CI: 0.20 to 0.56, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 16.27$, $p < 0.001$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 25.11$, $p < 0.001$, $\eta^2 = 0.02$) as covariates found the effect of narrative gap message exposure on perceived helpfulness remains significant after accounting for these factors ($F(2, 1169) = 47.05$, $p < 0.001$, $\eta^2 = 0.08$).

When told that "Organization A's recommendation(s) are confusing," 48.77% of participants in the CDC Narrative Gap Condition (N = 198) had some level of agreement, which is higher than the 22.25% of participants in the CDC Updated No Narrative Gap Condition (N = 92) and 8.31% in the Researcher's Updated No Narrative Gap Condition (N = 32). ANOVA determined these results to be significant (Sum of Squares Between Groups = 379.43, df = 2, Variance = 189.72, F = 135.53, $p < 0.0001$). Tukey HSD confirmed significant differences between the CDC Narrative Gap Condition (M = 3.14, SD = 1.36) and the CDC Updated No Narrative Gap Condition (M = 2.29, SD = 1.22) (Diff = -0.85, 95% CI: -1.04 to -0.66, $p < 0.0001$), the CDC Narrative Gap Condition (M = 3.14, SD = 1.36) and the Researcher's Updated No Narrative Gap Condition (M = 1.79, SD = 0.93) (Diff = -1.35, 95% CI: -1.54 to -1.16, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 2.29, SD = 1.22) and the Researcher's Updated No Narrative Gap Condition (M = 1.79, SD = 0.93) (Diff = -0.50, 95% CI: -0.69 to -0.31, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 0.91$, $p = 0.341$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 6.66$, $p = 0.010$, $\eta^2 = 0.01$) as covariates

found the effect of narrative gap message exposure on perceived confusion remains significant after accounting for these factors ($F(2, 1169) = 7.58$, $p < 0.001$, $\eta^2 = 0.01$).

When told that "Organization A's recommendation(s) are contradictory/ inconsistent," 54.68% of participants in the CDC Narrative Gap Condition (N = 222) had some level of agreement while only 19.80% of participants in the CDC Updated No Narrative Gap Condition (N = 81) and 5.87% in the Researcher's Updated No Narrative Gap Condition (N = 24) shared the same sentiment. ANOVA determined this to be statistically significant (Sum of Squares Between Groups = 481.89, df = 2, Variance = 240.94, F = 185.84, $p < 0.0001$), with Tukey HSD confirming significant differences between the CDC Narrative Gap Condition (M = 3.34, SD = 1.30) and the CDC Updated No Narrative Gap Condition (M = 2.33, SD = 1.18) (Diff = -1.01, 95% CI: -1.20 to -0.82, $p < 0.0001$), the CDC Narrative Gap Condition (M = 3.34, SD = 1.30) and the Researcher's Updated No Narrative Gap Condition (M = 1.83, SD = 0.90) (Diff = -1.51, 95% CI: -1.70 to -1.32, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 2.33, SD = 1.18) and the Researcher's Updated No Narrative Gap Condition (M = 1.83, SD = 0.90) (Diff = -0.50, 95% CI: -0.69 to -0.31, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 0.78$, $p = 0.38$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 17.66$, $p < 0.001$, $\eta^2 = 0.02$) as covariates found the effect of narrative gap message exposure on perceived inconsistency remains significant after accounting for these factors ($F(2, 1169) = 16.57$, $p < 0.001$, $\eta^2 = 0.03$).

Lastly, when told that "Organization A's recommendation(s) are clear/make sense," 83.86% of participants in the Researcher's Updated No Narrative Gap Condition (N = 343) had some level of agreement while only 62.84% of participants in the CDC

Updated No Narrative Gap Condition (N = 257) and 41.87% in the CDC Narrative Gap Condition (N = 170) shared the same sentiment. ANOVA determined these results to be significant (Sum of Squares Between Groups = 242.22, df = 2, Variance = 121.11, F = 93.56, $p < 0.0001$), with a Tukey post hoc test confirming significant differences between the CDC Narrative Gap Condition (M = 2.99, SD = 1.23) and the CDC Updated No Narrative Gap Condition (M = 3.56, SD = 1.22) (Diff = 0.57, 95% CI: 0.38 to 0.76, $p < 0.0001$), the CDC Narrative Gap Condition (M = 2.99, SD = 1.23) and the Researcher's Updated No Narrative Gap Condition (M = 4.08, SD = 0.94) (Diff = 1.09, 95% CI: 0.90 to 1.28, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.56, SD = 1.22) and the Researcher's Updated No Narrative Gap Condition (M = 4.08, SD = 0.94) (Diff = 0.52, 95% CI: 0.33 to 0.71, $p < 0.0001$). To view a comprehensive report of ANOVA and post hoc test results for this study, see Appendix P. In addition, an ANCOVA test controlling for political views ($F(1, 1169) = 8.84$, $p = 0.003$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 25.49$, $p < 0.001$, $\eta^2 = 0.02$) as covariates found the effect of narrative gap message exposure on perceived clarity remains significant after accounting for these factors ($F(2, 1169) = 37.59$, $p < 0.001$, $\eta^2 = 0.06$).

Message Effects on Perceived Credibility of Message Source

Following the reliability and effectiveness questionnaire, participants in the experimental conditions were given a series of prompts to assess their perceptions of message accuracy, trustworthiness, and level of bias, as well as how strong or weak of a communicator they believe the speaker to be and if the speaker is a trustworthy source for COVID-19 information (Roberts, 2010). To test the hypothesis that exposure to the CDC's contradictory messages is linked with lower message credibility (H1b), ANOVA

was conducted to assess the statistical significance between each experimental group across the credibility scale. The results were significant (Sum of Squares Between Groups = 92.15, df = 2, Variance = 46.07, F = 49.50, $p < 0.0001$). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition (M = 3.06, SD = 0.98) and the CDC Updated No Narrative Gap Condition (M = 3.26, SD = 1.02) (Diff = 0.21, 95% CI: 0.04 to 0.36, p = 0.0059), the CDC Narrative Gap Condition (M = 3.06, SD = 0.98) and the Researcher's Updated No Narrative Gap Condition (M = 3.71, SD = 0.86) (Diff = 0.66, 95% CI: 0.50 to 0.81, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.26, SD = 1.02) and the Researcher's Updated No Narrative Gap Condition (M = 3.71, SD = 0.86) (Diff = 0.45, 95% CI: 0.29 to 0.61, $p < 0.0001$).

To check if message exposure had any effect on participant perceptions of message credibility (above and beyond individuals' existing ideological beliefs), an ANCOVA test was conducted. Results indicate that the significant differences between conditions via the credibility scale hold true when controlling for political views and conspiracy beliefs as covariates. While both political views ($F(1, 1165) = 40.66$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1165) = 67.84$, $p < 0.001$, $\eta^2 = 0.07$) are significant, the main effect of narrative gap message exposure on credibility remains significant after accounting for these covariates ($F(4, 1165) = 102.88$, $p < 0.001$, $\eta^2 = 0.26$). Therefore, while a person's political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to varying COVID-19 testing protocol messages had a significant—and much larger—effect on participants' perceptions of message credibility. Specifically, the contradictory messages in the CDC

Narrative Gap Condition were associated with lower perceived credibility while the message in the Researcher's Updated No Narrative Gap Condition was associated with higher perceived credibility.

In terms of message accuracy, 75.06% of participants in the Researcher's Updated No Narrative Gap Condition (N = 307) indicated that the message was "accurate" or "very accurate," which is greater than the 52.57% of participants in the CDC Updated No Narrative Gap Condition (N = 215) and 42.86% in the CDC Narrative Gap Condition (N = 174). An ANOVA test indicated these results to be statistically significant (Sum of Squares Between Groups = 111.86, df = 2, Variance = 55.9, $F = 49.25$, $p < 0.0001$). Tukey HSD found significant differences between the CDC Narrative Gap Condition (M = 3.12, SD = 1.08) and the CDC Updated No Narrative Gap Condition (M = 3.33, SD = 1.14) (Diff = 0.21, 95% CI: 0.03 to 0.39, $p = 0.01$), the CDC Narrative Gap Condition (M = 3.12, SD = 1.08) and the Researcher's Updated No Narrative Gap Condition (M = 3.84, SD = 0.97) (Diff = 0.72, 95% CI: 0.54 to 0.90, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.33, SD = 1.14) and the Researcher's Updated No Narrative Gap Condition (M = 3.84, SD = 0.97) (Diff = 0.51, 95% CI: 0.33 to 0.68, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 34.42$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1169) = 59.58$, $p < 0.001$, $\eta^2 = 0.05$) as covariates found the effect of narrative gap message exposure on perceived accuracy remains significant after accounting for these factors ($F(2, 1169) = 106.37$, $p < 0.001$, $\eta^2 = 0.15$).

In reference to trustworthiness, 74.33% of participants in the Researcher's Updated No Narrative Gap Condition (N = 304) agreed that their given message is "trustworthy" or "very trustworthy"—a higher outcome than the 52.57% of participants

in the CDC Updated No Narrative Gap Condition (N = 215) and 43.35% in the CDC Narrative Gap Condition (N = 176). Again, ANOVA determined this to be significant (Sum of Squares Between Groups = 96.48, df = 2, Variance = 48.24, F = 41.25, $p < 0.0001$), with Tukey HSD confirming significant differences between the CDC Narrative Gap Condition (M = 3.11, SD = 1.11) and the CDC Updated No Narrative Gap Condition (M = 3.36, SD = 1.13) (Diff = 0.25, 95% CI: 0.07 to 0.43, $p < 0.0001$), the CDC Narrative Gap Condition (M = 3.11, SD = 1.11) and Researcher's Updated No Narrative Gap Condition (M = 3.79, SD = 1.00) (Diff = 0.68, 95% CI: 0.50 to 0.86, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.36, SD = 1.13) and the Researcher's Updated No Narrative Gap Condition (M = 3.79, SD = 1.00) (Diff = 0.43, 95% CI: 0.25 to 0.61, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 31.97$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1169) = 85.98$, $p < 0.001$, $\eta^2 = 0.07$) as covariates found the effect of narrative gap message exposure on perceived trustworthiness remains significant after accounting for these factors ($F(2, 1169) = 129.83$, $p < 0.001$, $\eta^2 = 0.18$).

Furthermore, when evaluating bias, 55.75% of participants in the Researcher's Updated No Narrative Gap Condition (N = 228) viewed their given message as "unbiased" or "very unbiased," which is more than the 43.03% in the CDC Updated No Narrative Gap Condition (N = 176) and 37.68% in the CDC Narrative Gap Condition (N = 153). ANOVA also found these results to be significant (Sum of Squares Between Groups = 41.32, df = 2, Variance = 20.66, F = 16.95, $p < 0.0001$), with a Tukey post hoc test confirming significant differences between the CDC Narrative Gap Condition (M = 3.11, SD = 1.06) and the Researcher's Updated No Narrative Gap Condition (M = 3.54,

SD = 1.09) (Diff = 0.43, 95% CI: 0.25 to 0.61, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 3.21, SD = 1.16) and the Researcher's Updated No Narrative Gap Condition (M = 3.54, SD = 1.09) (Diff = 0.33, 95% CI: 0.15 to 0.51, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 46.67$, $p < 0.001$, $\eta^2 = 0.04$) and conspiracy beliefs ($F(1, 1169) = 112.79$, $p < 0.001$, $\eta^2 = 0.09$) as covariates found the effect of narrative gap message exposure on perceived bias remains significant after accounting for these factors ($F(2, 1169) = 176.92$, $p < 0.001$, $\eta^2 = 0.23$).

In assessing the strength of Organization A as a communicator, 66.26% of participants in the Researcher's Updated No Narrative Gap Condition (N = 271) perceived Organization A to be a "strong" or "very strong" communicator. This is greater than the 43.28% of participants in the CDC Updated No Narrative Gap Condition (N = 177) and 31.28% in the CDC Narrative Gap Condition (N = 127) who shared the same sentiment. ANOVA determined these results to be significant (Sum of Squares Between Groups = 140.39, df = 2, Variance = 70.19, F = 67.70, $p < 0.0001$), with Tukey HSD confirming significant differences between the CDC Narrative Gap Condition (M = 2.85, SD = 1.10) and the CDC Updated No Narrative Gap Condition (M = 3.15, SD = 1.07) (Diff = 0.30, 95% CI: 0.13 to 0.47, $p < 0.0001$), the CDC Narrative Gap Condition (M = 2.85, SD = 1.10) and the Researcher's Updated No Narrative Gap Condition (M = 3.67, SD = 0.87) (Diff = 0.82, 95% CI: 0.65 to 0.99, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.15, SD = 1.07) and the Researcher's Updated No Narrative Gap Condition (M = 3.67, SD = 0.87) (Diff = 0.52, 95% CI: 0.35 to 0.69, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 7.01$, $p = 0.008$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 14.72$, $p < 0.001$, $\eta^2 = 0.01$) as covariates

found the effect of narrative gap message exposure on perceived communicator strength remains significant after accounting for these factors ($F(2, 1169) = 24.32$, $p < 0.001$, $\eta^2 = 0.04$).

Moreover, 71.15% of participants in the Researcher's Updated No Narrative Gap Condition (N = 291) indicated that Organization A is a "trustworthy" or "very trustworthy" source for COVID-19 information—with 49.39% of participants in the CDC Updated No Narrative Gap Condition (N = 202) and 43.84% in the CDC Narrative Gap Condition (N = 178) sharing the same sentiment. Once again, ANOVA determined this to be significant (Sum of Squares Between Groups = 88.14, df = 2, Variance = 44.07, F = 38.33, $p < 0.0001$). Tukey HSD confirmed significant differences between the CDC Narrative Gap Condition (M = 3.09, SD = 1.13) and the CDC Updated No Narrative Gap Condition (M = 3.28, SD = 1.11) (Diff = 0.19, 95% CI: 0.01 to 0.37, p = 0.03), the CDC Narrative Gap Condition (M = 3.09, SD = 1.13) and the Researcher's Updated No Narrative Gap Condition (M = 3.73, SD = 0.97) (Diff = 0.64, 95% CI: 0.46 to 0.82, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.28, SD = 1.11) and the Researcher's Updated No Narrative Gap Condition (M = 3.73, SD = 0.97) (Diff = 0.45, 95% CI: 0.27 to 0.63, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 29.10$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1169) = 85.76$, $p < 0.001$, $\eta^2 = 0.07$) as covariates found the effect of narrative gap message exposure on perceived source trustworthiness remains significant after accounting for these factors ($F(2, 1169) = 126.82$, $p < 0.001$, $\eta^2 = 0.18$).

Message Effects on Perceived Trust in the Government and Scientists

Participants in the experimental conditions were also asked to indicate how much of an impact their given message(s) would have on their trust in the government and scientists if the speaker was appointed to be an official source for COVID-19 communication (see Grimmelikhuijsen & Knies, 2017; Herati et al., 2023; Holroyd et al., 2021). To test the hypothesis that exposure to the CDC's contradictory messages is linked with lower trust in the government and scientists (H1c), ANOVA was conducted to assess for statistical significances between each experimental group across the trust in the government and scientists scale. The results were significant (Sum of Squares Between Groups = 16.43, df = 2, Variance = 8.21, $F = 8.68$, $p = 0.0002$). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition ($M = 2.98$, $SD = 0.96$) and the Researcher's Updated No Narrative Gap Condition ($M = 3.26$, $SD = 0.94$) (Diff = 0.28, 95% CI: 0.12 to 0.44, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition ($M = 3.09$, $SD = 1.00$) and the Researcher's Updated No Narrative Gap Condition ($M = 3.26$, $SD = 0.94$) (Diff = 0.17, 95% CI: 0.02 to 0.33, $p < 0.0001$).

To check if message exposure had any effect on participant perceptions of trust in the government and scientists (above and beyond existing ideological beliefs), an ANCOVA test was conducted. Results indicate that the significant differences between conditions via the trust in the government and scientists scale hold true when controlling for political views and conspiracy beliefs as covariates. While both political views ($F(1, 1165) = 34.39$, $p < 0.001$, $\eta^2 = 0.05$) and conspiracy beliefs ($F(1, 1165) = 150.16$, $p < 0.001$, $\eta^2 = 0.17$) are significant, the main effect of narrative gap messaging on trust

remains significant after accounting for these covariates ($F(4, 1165) = 100.79$, $p < 0.001$, $\eta^2 = 0.36$). Therefore, while a person's political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to COVID-19 testing protocol messages with varying degrees of narrative gap still had an effect on participants' perceptions of trust in the government and scientists. Specifically, the contradictory messages in the CDC Narrative Gap Condition were associated with lower perceived trust in the government and scientists while the message in the Researcher's Updated No Narrative Gap Condition was associated with higher perceived trust in the government and scientists.

More than half of the participants in the Researcher's Updated No Narrative Gap Condition (N = 209) shared that if Organization A was appointed an official source for COVID-19 information, their given message would have a "positive impact" or "strong positive impact" on their trust in the government. Meanwhile, 41.08% of participants in the CDC Updated No Narrative Gap Condition (N = 168) and 29.06% in the CDC Narrative Gap Condition (N = 118) shared the same sentiment. Conversely, 13.69% of participants in the Researcher's Updated No Narrative Gap Condition (N = 56) shared that if Organization A was appointed an official source for COVID-19 information, their given message would have a "negative impact" or "strong negative impact" on their trust in the government, which is less than the 24.21% of participants in the CDC Updated No Narrative Gap Condition (N = 99) and 40.39% in CDC Narrative Gap Condition (N = 164). When testing if exposure to the CDC's contradictory messages had an impact on participants' trust in the government (H1c), ANOVA determined these results to be significant (Sum of Squares Between Groups = 78.55, df = 2, Variance = 39.27, F =

36.98, $p < 0.0001$). A Tukey HSD post hoc test subsequently confirmed significant differences between the CDC Narrative Gap Condition (M = 2.83, SD = 1.07) and the CDC Updated No Narrative Gap Condition (M = 3.17, SD = 1.04) (Diff = 0.34, 95% CI: 0.17 to 0.51, $p < 0.0001$), the CDC Narrative Gap Condition (M = 2.83, SD = 1.07) and the Researcher's Updated No Narrative Gap Condition (M = 3.45, SD = 0.98) (Diff = 0.62, 95% CI: 0.45 to 0.79, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.17, SD = 1.04) and the Researcher's Updated No Narrative Gap Condition (M = 3.45, SD = 0.98) (Diff = 0.28, 95% CI: 0.11 to 0.45, $p = 0.0003$). An ANCOVA test controlling for political views ($F(1, 1169) = 43.40$, $p < 0.001$, $\eta^2 = 0.04$) and conspiracy beliefs ($F(1, 1169) = 59.04$, $p < 0.001$, $\eta^2 = 0.05$) as covariates found the effect of narrative gap message exposure on perceived impact remains significant after accounting for these factors ($F(2, 1169) = 116.98$, $p < 0.001$, $\eta^2 = 0.17$).

Furthermore, 51.34% of participants in the Researcher's Updated No Narrative Gap Condition (N = 210) shared that if Organization A was appointed an official source for COVID-19 information, their given message would have a "positive impact" or "strong positive impact" on their trust in scientists, which is more than the 36.92% of participants in the CDC Updated No Narrative Gap Condition (N = 151) and 31.28% in the CDC Narrative Gap Condition (N = 127). On the other hand, 12.47% of participants in the Researcher's Updated No Narrative Gap Condition (N = 51) shared that if Organization A was appointed an official source for COVID-19 information, their given message would have a "negative impact" or "strong negative impact" on their trust in scientists, which is less than the 22.25% of participants in the CDC Updated No Narrative Gap Condition (N = 91) and 33% in the CDC Narrative Gap Condition (N = 134). When

testing if exposure to the CDC's contradictory messages had an impact on participants' trust in scientists (H1c), ANOVA determined these results to also be significant (Sum of Squares Between Groups = 59.87, df = 2, Variance = 29.94, F = 29.09, $p < 0.0001$). Tukey HSD confirmed significant differences between the CDC Narrative Gap Condition (M = 2.93, SD = 1.08) and the CDC Updated No Narrative Gap Condition (M = 3.16, SD = 1.00) (Diff = 0.23, 95% CI: 0.06 to 0.40, p = 0.0035), the CDC Narrative Gap Condition (M = 2.93, SD = 1.08) and the Researcher's Updated No Narrative Gap Condition (M = 3.47, SD = 0.96) (Diff = 0.54, 95% CI: 0.37 to 0.71, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.16, SD = 1.00) and the Researcher's Updated No Narrative Gap Condition (M = 3.47, SD = 0.96) (Diff = 0.31, 95% CI: 0.14 to 0.48, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 40.32$, $p < 0.001$, $\eta^2 = 0.03$) and conspiracy beliefs ($F(1, 1169) = 88.71$, $p < 0.001$, $\eta^2 = 0.07$) as covariates found the effect of narrative gap message exposure on perceived impact remains significant after accounting for these factors ($F(2, 1169) = 144.06$, $p < 0.001$, $\eta^2 = 0.20$).

Message Effects on Perceived Narrative Gap

Following the trust in the government and scientists scale, participants in the experimental groups were taken to the narrative gap section (i.e., the manipulation check). Here, participants were provided three supposition statements and two questions to assess for the presence of narrative gaps and narrative coherence in the message(s) they received. In reference to the supposition tests, participants who answered with "Disagree" or "Strongly Disagree" rejected the supposition provided to them while those

who answered with “Agree” or “Strongly Agree” accepted the supposition—essentially filling in gaps in their given message(s) with a proposed inference.

An ANOVA test was conducted to assess for statistically significant differences between each experimental group across the narrative gap supposition scale. The results were significant (Sum of Squares Between Groups = 64.51, df = 2, Variance = 32.25, $F = 39.56$, $p < 0.0001$). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition ($M = 2.91$, $SD = 0.91$) and the Researcher’s Updated No Narrative Gap Condition ($M = 2.43$, $SD = 0.76$) (Diff = -0.48, 95% CI: -0.63 to -0.33, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition ($M = 2.93$, $SD = 1.02$) and the Researcher’s Updated No Narrative Gap Condition ($M = 2.43$, $SD = 0.76$) (Diff = -0.50, 95% CI: -0.65 to -0.35, $p < 0.0001$). To assess if message exposure had any effect on participant perceptions of narrative gaps (despite existing ideological beliefs), an ANCOVA test was conducted using the narrative gap supposition scale. Results indicate that while both political views ($F(1, 1165) = 6.76$, $p = 0.009$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1165) = 7.34$, $p = 0.007$, $\eta^2 = 0.01$) are significant, the overall main effect of narrative gap exposure on perceived narrative gaps are still significant after accounting for these covariates ($F(4, 1165) = 22.94$, $p < 0.001$, $\eta^2 = 0.01$). Therefore, while a person’s political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to varying COVID-19 testing protocol messages still had a significant effect on participants’ perceptions of narrative gaps. Specifically, the contradictory messages in the CDC Narrative Gap Condition were associated with higher perceived narrative gaps while the message in the

Researcher's Updated No Narrative Gap Condition was associated with lower perceived narrative gaps.

In addition, an ANOVA test was conducted to assess mean differences between each experimental group across the narrative gap assessment scale. The results were also significant (Sum of Squares Between Groups = 184.46, df = 2, Variance = 92.23, $F = 107.84$, $p < 0.0001$). A Tukey post hoc test then established significant differences between the CDC Narrative Gap Condition ($M = 3.28$, $SD = 1.05$) and the CDC Updated No Narrative Gap Condition ($M = 3.90$, $SD = 0.94$) (Diff = 0.62, 95% CI: 0.47 to 0.77, $p < 0.0001$), the CDC Narrative Gap Condition ($M = 3.28$, $SD = 1.05$) and the Researcher's Updated No Narrative Gap Condition ($M = 4.23$, $SD = 0.77$) (Diff = 0.94, 95% CI: 0.79 to 1.10, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition ($M = 3.90$, $SD = 0.94$) and the Researcher's Updated No Narrative Gap Condition ($M = 3.28$, $SD = 1.05$) (Diff = 0.32, 95% CI: 0.17 to 0.48, $p < 0.0001$). To check if message exposure had a significant effect on participants' perceptions of narrative gaps via the narrative gap assessment scale (above and beyond individuals' existing ideological beliefs), an ANCOVA test was conducted. Again, results indicate that the significant differences between narrative gap message conditions remain true when controlling for political views and conspiracy beliefs as covariates. While both political views ($F(1, 1165) = 4.11$, $p = 0.04$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1165) = 17.93$, $p < 0.001$, $\eta^2 = 0.02$) are significant, the condition effects on perceived narrative gaps are still significant after accounting for these covariates ($F(4, 1165) = 66.36$, $p < 0.001$, $\eta^2 = 0.19$). Once more, this indicates that despite pre-existing political views and conspiracy beliefs, exposure to varying COVID-19 testing protocol messages still had an effect on participants'

perceptions of narrative gaps. Particularly, the contradictory messages in the CDC Narrative Gap Condition were associated with higher perceived narrative gaps while the message in the Researcher's Updated No Narrative Gap Condition was associated with lower perceived narrative gaps. The effect of the CDC's messaging on the individual measures of the narrative gap section are presented in below.

First Supposition. The narrative gap section began with the following statement: "According to Organization A, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test." Nearly half (49.63%) of participants in the Researcher's Updated No Narrative Gap Condition (N = 199) rejected the supposition (i.e., they selected "Disagree" or "Strongly Disagree") compared to 30.52% of participants in the CDC Updated No Narrative Gap Condition (N = 123) and 29.25% in the CDC Narrative Gap Condition (N = 117). On the other end of the scale, 37.91% of participants in the Researcher's Updated No Narrative Gap Condition (N = 152) accepted the supposition (i.e., they selected "Agree" or "Strongly Agree"), which is less than the 54.34% in the CDC Updated No Narrative Gap Condition (N = 219) and 61.50% in the CDC Narrative Gap Condition (N = 246). An ANOVA test indicated that these results were statistically significant (Sum of Squares Between Groups = 56.30, df = 2, Variance = 28.15, $F = 17.97$, $p < 0.0001$). Tukey HSD determined significant differences between the CDC Narrative Gap Condition (M = 3.33, SD = 1.26) and the Researcher's Updated No Narrative Gap Condition (M = 2.82, SD = 1.17) (Diff = -0.51, 95% CI: -0.72 to -0.30, $p < 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 3.20, SD = 1.32) and the Researcher's Updated No Narrative Gap Condition (M = 2.82, SD = 1.17) (Diff = -0.38, 95% CI: -0.59 to -0.17, $p = 0.0001$). Although an ANCOVA test controlling for

political views ($F(1, 1169) = 1.38$, $p = 0.24$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 2.63$, $p = 0.105$, $\eta^2 = 0.01$) as covariates did not find a significant effect after accounting for these factors ($F(2, 1169) = 1.37$, $p = 0.256$, $\eta^2 = 0.01$).

Second Supposition. Next, participants were given the statement: "According to Organization A, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test." 56.61% of participants in the Researcher's Updated No Narrative Gap Condition (N = 227) rejected the supposition—compared to 37.22% of participants in the CDC Updated No Narrative Gap Condition (N = 150) and 40% in the CDC Narrative Gap Condition (N = 160). On the other hand, 27.68% of participants in the Researcher's Updated No Narrative Gap Condition (N = 111) accepted the supposition, which is less than the 46.40% in the CDC Updated No Narrative Gap Condition (N = 187) and 46.75% in the CDC Narrative Gap Condition (N = 187). An ANOVA test indicated that these results were statistically significant (Sum of Squares Between Groups = 39.93, df = 2, Variance = 19.97, $F = 13.58$, $p < 0.0001$). Tukey HSD determined significant differences between the CDC Narrative Gap Condition (M = 2.96, SD = 1.27) and the Researcher's Updated No Narrative Gap Condition (M = 2.62, SD = 1.10) (Diff = -0.34, 95% CI: -0.54 to -0.14, $p = 0.0002$) and the CDC Updated No Narrative Gap Condition (M = 3.04, SD = 1.26) and the Researcher's Updated No Narrative Gap Condition (M = 2.62, SD = 1.10) (Diff = -0.42, 95% CI: -0.62 to -0.21, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 5.90$, $p = 0.015$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 6.56$, $p = 0.011$, $\eta^2 = 0.01$) as covariates found the effect of message exposure on perceived

narrative gaps remains significant after accounting for these factors ($F(2, 1169) = 3.99$, $p = 0.019$, $\eta^2 = 0.01$).

Third Supposition. The final supposition read: "According to Organization A, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test." 87.78% of participants in the Researcher's Updated No Narrative Gap Condition (N = 352) rejected the supposition—compared to 53.10% of participants in the CDC Updated No Narrative Gap Condition (N = 214) and 60% in the CDC Narrative Gap Condition (N = 240). On the other end of the scale, 3.99% of participants in the Researcher's Updated No Narrative Gap Condition (N = 16) accepted the supposition, which is less than the 23.82% in the CDC Updated No Narrative Gap Condition (N = 96) and 20.25% in the CDC Narrative Gap Condition (N = 81). An ANOVA test indicated that these results are statistically significant (Sum of Squares Between Groups = 112.95, df = 2, Variance = 112.95, $F = 55.47$, $p < 0.0001$). Tukey HSD determined significant differences between the CDC Narrative Gap Condition (M = 2.45, SD = 1.07) and the Researcher's Updated No Narrative Gap Condition (M = 1.85, SD = 0.75) (Diff = -0.6000, 95% CI: -0.7673 to -0.4327, $p = 0.0001$) and the CDC Updated No Narrative Gap Condition (M = 2.54, SD = 1.16) and the Researcher's Updated No Narrative Gap Condition (M = 1.85, SD = 0.75) (Diff = -0.69, 95% CI: -0.86 to -0.52, $p < 0.0001$). Although an ANCOVA test controlling for political views ($F(1, 1169) = 4.89$, $p = 0.027$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 3.84$, $p = 0.050$, $\eta^2 = 0.01$) as covariates did not find a significant effect after accounting for these factors ($F(2, 1169) = 2.82$, $p = 0.060$, $\eta^2 = 0.01$). Figure 10 illustrates the results across each of the three supposition tests.

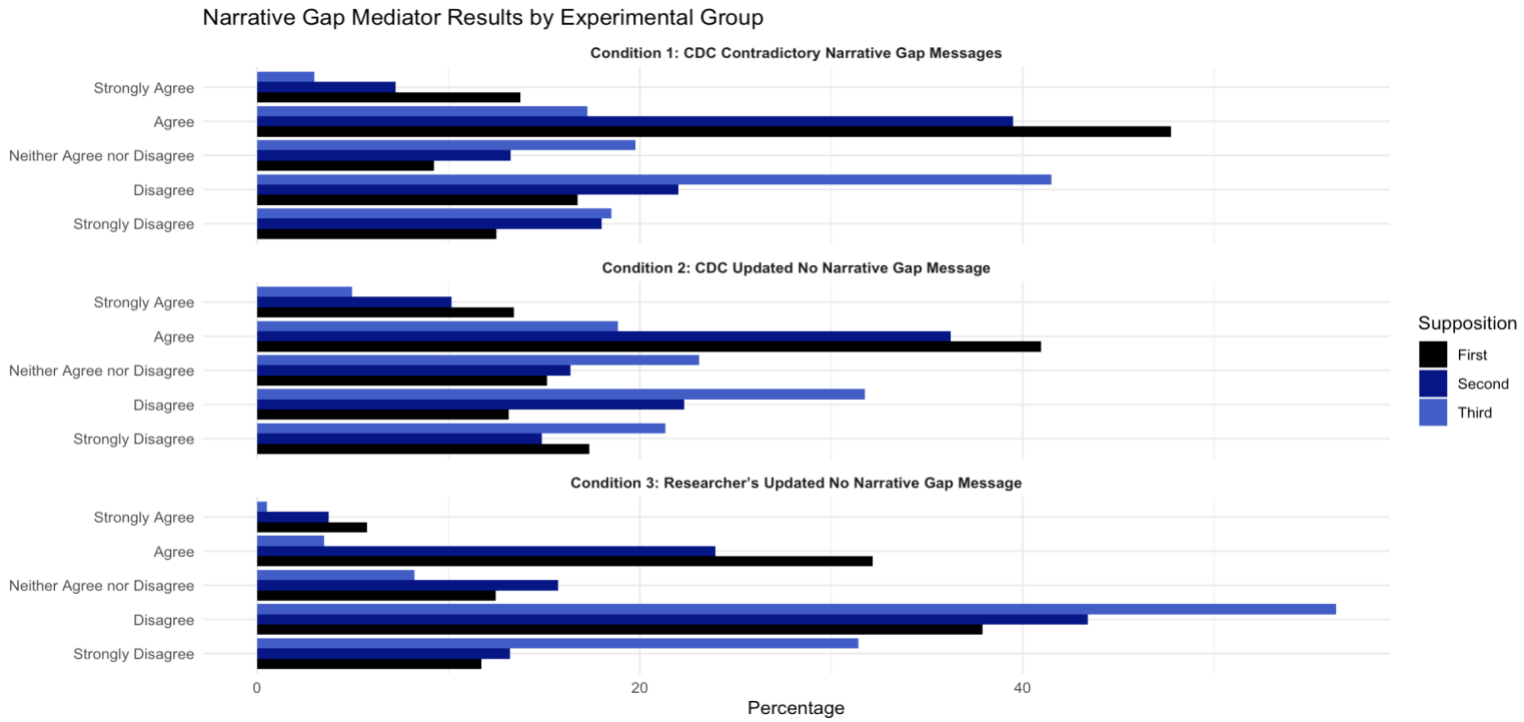


Figure 10. A graph demonstrating narrative gap results for each supposition test across all three experimental groups. Participants who answered with "Disagree" or "Strongly Disagree" rejected the supposition provided while those who answered with "Agree" or "Strongly Agree" accepted the supposition—essentially filling in gaps in their given message(s) with a proposed inference.

Narrative Gap Assessment. In addition to the three narrative gap suppositions, participants were asked to rate their perceived level of narrative gaps present in their given message(s) (Lind et al., 2020). Nearly nine in 10 (88.28%) participants in the Researcher's Updated No Narrative Gap Condition (N = 354) stated that the message is either complete with no gaps or has "some gaps, but the overall message is clear," which is greater than the 75.68% of participants in the CDC Updated No Narrative Gap Condition (N = 305) and 48.75% in the CDC Narrative Gap Condition (N = 195). Conversely, 5.24% of participants in the Researcher's Updated No Narrative Gap Condition (N = 21) stated that the message has "significant " or "so many gaps that it's hard to tell what the message is," which is less than the 12.41% in the CDC Updated No Narrative Gap Condition (N = 50) and 25.25% in the CDC Narrative Gap Condition (N = 101). An ANOVA test indicated that these results are statistically significant (Sum of Squares Between Groups = 166.03, df = 2, Variance = 83.01, $F = 89.50$, $p < 0.0001$). Tukey HSD determined significant differences between the CDC Narrative Gap Condition (M = 3.24, SD = 1.08) and the CDC Updated No Narrative Gap Condition (M = 3.81, SD = 0.98) (Diff = 0.57, 95% CI: 0.41 to 0.73, $p < 0.0001$), the CDC Narrative Gap Condition (M = 3.24, SD = 1.08) and the Researcher's Updated No Narrative Gap Condition (M = 4.14, SD = 0.81) (Diff = 0.90, 95% CI: 0.74 to 1.06, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.81, SD = 0.98) and the Researcher's Updated No Narrative Gap Condition (M = 4.14, SD = 0.81) (Diff = 0.33, 95% CI: 0.17 to 0.49, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 1.25$, $p = 0.265$, $\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 11.64$, $p < 0.001$, $\eta^2 = 0.01$) as

covariates found the effect of message exposure on perceived narrative gaps remains significant after accounting for these factors ($F(2, 1169) = 12.59$, $p < 0.001$, $\eta^2 = 0.02$).

Narrative Coherence Assessment. Finally, participants were asked to rate their perceived level of coherence in their given message(s) (Yale, 2013). A vast majority (88.53%) of participants in the Researcher's Updated No Narrative Gap Condition (N = 355) stated that either the message is coherent with no inconsistencies or has "some inconsistencies, but the overall message still makes sense," which is more than the 78.41% of participants in CDC Updated No Narrative Gap Condition (N = 316) and 51% in the CDC Narrative Gap Condition (N = 204). Conversely, 3.24% of participants in the Researcher's Updated No Narrative Gap Condition (N = 13) stated that their message has "significant inconsistencies" or "so many inconsistencies that it's hard to tell what the message is," which is less than the 8.44% in the CDC Updated No Narrative Gap Condition (N = 34) and 22.50% in the CDC Narrative Gap Condition (N = 90). An ANOVA test indicated that these results are statistically significant (Sum of Squares Between Groups = 204.42, df = 2, Variance = 102.21, F = 108.50, $p < 0.0001$). Tukey HSD determined significant differences between the CDC Narrative Gap Condition (M = 3.32, SD = 1.10) and the CDC Updated No Narrative Gap Condition (M = 3.99, SD = 0.98) (Diff = 0.67, 95% CI: 0.51 to 0.83, $p < 0.0001$), the CDC Narrative Gap Condition (M = 3.32, SD = 1.10) and the Researcher's Updated No Narrative Gap Condition (M = 4.31, SD = 0.81) (Diff = 0.99, 95% CI: 0.83 to 1.15, $p < 0.0001$), and the CDC Updated No Narrative Gap Condition (M = 3.99, SD = 0.98) and the Researcher's Updated No Narrative Gap Condition (M = 4.31, SD = 0.81) (Diff = 0.32, 95% CI: 0.16 to 0.48, $p < 0.0001$). An ANCOVA test controlling for political views ($F(1, 1169) = 4.05$, $p = 0.044$,

$\eta^2 = 0.01$) and conspiracy beliefs ($F(1, 1169) = 15.24$, $p < 0.001$, $\eta^2 = 0.01$) as covariates found the effect of message exposure on perceived narrative gaps remains significant after accounting for these factors ($F(2, 1169) = 20.63$, $p < 0.001$, $\eta^2 = 0.03$).

Association between Perceived Message Effectiveness, Perceived Narrative Gaps, and Public Trust in the Government and Scientists

To test the hypothesis that public trust in the government and scientists is weakened when messages about COVID-19 are perceived as ineffective/unreliable and having narrative gaps (H2), linear regression was calculated using the reliability and effectiveness, narrative gap supposition, and narrative gap assessment scales as predictors. The researcher as controlled for each of the three experimental groups (the CDC Narrative Gap Condition, the CDC Updated No Narrative Gap Condition, and the Researcher's Updated No Narrative Gap Condition), political views, and conspiracy beliefs as covariates. The overall regression model was significant ($F(7, 1169) = 315.81$, $p < 0.001$, $R^2 = 0.66$, SE = 0.58, t = 11.05, 95% CI: 1.46 to 2.10). First, controlling for the other factors, a unit increase in perceived reliability and effectiveness is associated with a 0.65 increase in participants' trust in the government and scientists (95% CI: 0.60 to 0.70, $p < 0.001$, $b = 0.57$, $\beta = 0.65$). Second, controlling for all other factors, a unit decrease in perceived narrative gaps via the supposition scale is not associated with participants' trust in the government and scientists (95% CI: -0.01 to 0.06, $p = 0.186$, $b = 0.02$, $\beta = 0.03$). Third, controlling for the two other predictors, a unit decrease in narrative gaps via the narrative gap assessment scale is associated with a 0.11 increase in participants' trust in the government and scientists (95% CI: -0.15 to -0.07, $p < 0.001$, $b = -0.11$, $\beta = -0.11$). These associations are demonstrated in Table 1.

MULTIPLE REGRESSION: TRUST IN THE GOVERNMENT AND SCIENTISTS TEST

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	Sig.	95% Confidence Interval for B Lower Bound	95% Confidence Interval for B Upper Bound
(Constant)	1.78	0.16		<0.001	1.46	2.10
Reliability Average	0.65	0.03	0.57	<0.001	0.60	0.70
Narrative Gap Supposition Average	0.03	0.02	0.02	0.186	-0.01	0.06
Narrative Gap Assessment Average	-0.11	0.02	-0.11	<0.001	-0.15	-0.07
Political Views	0.06	0.02	0.07	0.001	0.02	0.09
Condition 1	0.05	0.05	0.02	0.31	-0.05	0.14
Condition 2	-0.01	0.02	-0.01	0.66	-0.05	0.03
Condition 3	-0.01	0.02	-0.01	0.54	-0.04	0.02

Dependent Variable: Trust Average

Table 1. Linear regression was conducted to test the hypothesis that public trust in the government and scientists is weakened when messages about COVID-19 are perceived as ineffective/unreliable and having narrative gaps (H2). Using the reliability and effectiveness, narrative gap supposition, and narrative gap assessment scales as predictors and controlling for each of the three experimental groups, political views, and conspiracy beliefs as covariates, the overall model was significant. This table demonstrates that a unit increase in perceived reliability and effectiveness is associated with a 0.65 increase in participants' trust in the government and scientists and a unit decrease in narrative gaps via the narrative gap assessment scale is associated with a 0.11 increase in participants' trust in the government and scientists.

Association between Perceived Message Effectiveness, Perceived Narrative Gaps, and Conspiracy Beliefs

To test the hypothesis that CDC messages that are perceived as being ineffective/unreliable and having narrative gaps are associated with conspiratorial belief ratings (H3), linear regression models were calculated to assess the dependent variables: (1) the reliability and effectiveness scale, (2) the narrative gap supposition scale, and (3) the narrative gap assessment scale. All models controlled for each of the three experimental groups (the CDC Narrative Gap Condition, the CDC Updated No Narrative Gap Condition, and the Researcher's Updated No Narrative Gap Condition) and political views as covariates, with conspiracy beliefs serving as the predictor.

First, linear regression was calculated using reliability and effectiveness as the outcome variable and conspiracy beliefs as the predictor. The overall regression model was significant ($F(4,1165) = 100.12$, $p < 0.001$, $R^2 = 0.26$, SE = 0.75, t = 23.20, 95% CI: 2.75 to 3.26). Controlling for the other factors, a unit increase in conspiracy beliefs is associated with a 0.34 decrease in participants' perceptions of message reliability and effectiveness (95% CI: -0.41 to -0.25, $p < 0.001$, $b = -0.30$, $\beta = -0.34$). This association is demonstrated in Table 2. Furthermore, the results show that while a person's political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to varying types of COVID-19 testing protocol messages still had an effect on participants' perceptions of message reliability and effectiveness.

MULTIPLE REGRESSION: PERCEIVED RELIABILITY AND EFFECTIVENESS TEST

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	Sig.	95% Confidence Interval for B Lower Bound	95% Confidence Interval for B Upper Bound
(Constant)	3.00	0.13		<0.001	2.75	3.26
Conspiracy Beliefs Average	-0.34	0.04	-0.30	<0.001	-0.41	-0.27
Political Views	0.18	0.02	0.24	<0.001	0.14	0.23
Condition 1	-0.35	0.05	-0.30	<0.001	-0.45	-0.24
Condition 2	0.06	0.03	0.06	0.04	0.01	0.11
Condition 3	0.12	0.02	0.19	<0.001	0.08	0.15

Dependent Variable: Reliability and Effectiveness

Table 2. Linear regression was conducted to test the hypothesis that CDC messages that are perceived as being ineffective/unreliable and having narrative gaps are associated with conspiratorial belief ratings (H3). A linear regression model was calculated to assess the associations between conspiratorial beliefs (the predictor) and perceived reliability and effectiveness (the outcome variable). Using the reliability and effectiveness scale and controlling for each of the three experimental groups and political views as covariates, this table demonstrates that a unit increase in conspiracy beliefs is associated with a 0.34 decrease in participants' perceptions of message reliability and effectiveness. Therefore, while political views and conspiracy beliefs are predetermined factors, exposure to varying types of COVID-19 messages still had an effect on participants' perceptions of message reliability and effectiveness.

Next, linear regression was calculated to assess the associations between conspiratorial beliefs (the predictor) and perceived narrative gaps (the outcome variable) via the narrative gap supposition scale. The overall regression model was significant ($F(4,1165) = 22.94$, $p < 0.001$, $R^2 = 0.07$, SE = 0.90, t = 21.66, 95% CI: 3.07 to 3.68). Adjusting for all other factors, a unit increase in conspiracy beliefs is associated with a 0.11 increase in participants' perceptions of narrative gaps (95% CI: -0.20 to -0.03, $p = 0.007$, $b = -0.09$, $\beta = -0.11$). This association is demonstrated in Table 3. Moreover, the results show that while a person's political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to varying types of COVID-19 testing protocol messages still had an effect on participants' perceived narrative gaps.

Finally, linear regression was calculated to assess the associations between conspiratorial beliefs (the predictor) and perceived narrative gaps (the outcome variable) via the narrative gap assessment scale. Again, the overall regression model was significant ($F(4,1165) = 66.36$, $p < 0.001$, $R^2 = 0.19$, SE = 0.91, t = 16.25, 95% CI: 2.24 to 2.85). Controlling for all other factors, a unit increase in conspiracy beliefs is associated with a 0.18 increase in participants' perceptions of narrative gaps (95% CI: 0.10 to 0.26, $p < 0.001$, $b = 0.14$, $\beta = 0.18$). This association is demonstrated in Table 4. Once more, the results show that while a person's political views and conspiracy beliefs were already established prior to participating in this experiment, exposure to varying types of COVID-19 testing protocol messages still had an effect on participants' perceived narrative gaps.

MULTIPLE REGRESSION: PERCEIVED NARRATIVE GAP TEST (NARRATIVE GAP SUPPOSITION SCALE)

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	Sig.	95% Confidence Interval for B Lower Bound	95% Confidence Interval for B Upper Bound
(Constant)	3.37	0.16		<0.001	3.07	3.68
Conspiracy Beliefs Average	-0.11	0.04	-0.09	0.007	-0.20	-0.03
Political Views	-0.07	0.03	-0.09	0.009	-0.13	-0.02
Condition 1	0.50	0.06	0.25	<0.001	0.38	0.63
Condition 2	0.01	0.03	0.01	0.875	-0.06	0.07
Condition 3	-0.17	0.02	-0.26	<0.001	-0.21	-0.13

Dependent Variable: Narrative Gap

Table 3. Linear regression was conducted to test the hypothesis that CDC messages that are perceived as being ineffective/unreliable and having narrative gaps are associated with conspiratorial belief ratings (H3). A linear regression model was calculated to assess the associations between conspiratorial beliefs (the predictor) and perceived narrative gaps (the outcome variable). Using the narrative gap supposition scale and controlling for each of the three experimental groups and political views as covariates, this table demonstrates that a unit increase in conspiracy beliefs is associated with a 0.11 increase in participants' perceptions of narrative gaps. Therefore, while political views and conspiracy beliefs are predetermined factors, exposure to varying types of COVID-19 messages still had an effect on participants' perceived narrative gaps.

MULTIPLE REGRESSION: PERCEIVED NARRATIVE GAP TEST (NARRATIVE GAP ASSESSMENT SCALE)

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	Sig.	95% Confidence Interval for B Lower Bound	95% Confidence Interval for B Upper Bound
(Constant)	2.54	0.16		<0.001	2.24	2.85
Conspiracy Beliefs Average	0.18	0.04	0.14	<0.001	0.10	0.26
Political Views	-0.06	0.03	-0.07	0.043	-0.11	-0.01
Condition 1	0.95	0.07	0.45	<0.001	0.10	0.26
Condition 2	-0.31	0.03	-0.30	<0.001	-0.38	-0.25
Condition 3	-0.32	0.02	-0.45	<0.001	-0.36	-0.28

Dependent Variable: Narrative Gap

Table 4. Linear regression was conducted to test the hypothesis that CDC messages that are perceived as ineffective/unreliable and having narrative gaps are associated with conspiratorial belief ratings (H3). A linear regression model was calculated to assess the associations between conspiratorial beliefs (the predictor) and perceived narrative gaps (the outcome variable). Using the narrative gap assessment scale and controlling for each of the three experimental groups and political views as covariates, this table demonstrates that a unit increase in conspiracy beliefs is associated with a 0.18 increase in participants' perceptions of narrative gaps. Therefore, while political views and conspiracy beliefs are predetermined factors, exposure to varying types of COVID-19 messages still had an effect on participants' perceived narrative gaps.

Discussion

The official study results reveal significant differences in participants' perceptions of COVID-19 communication messages across experimental conditions. Specifically, participants exposed to contradictory CDC messages (Condition 1) exhibited lower perceptions of message reliability and effectiveness (H1a), credibility (H1b), and trust in the government and scientists (H1c) compared to those who received the updated CDC message (Condition 2) or a modified message with additional information (Condition 3). This supports the assumption in Hypothesis 1 that exposure to the CDC's contradictory messages has an effect on participants' perceptions. Moreover, while statistical tests demonstrated that the message in the CDC Updated No Narrative Gap Condition outperformed the messages in the CDC Narrative Gap Condition in some aspects (e.g., message clarity and communicator strength), the Researcher's Updated No Narrative Gap Condition significantly achieved more positive results than the other two experimental groups across dependent variable tests—i.e., higher perceptions of message reliability and effectiveness, higher perceptions of message credibility, higher trust in the government and scientists, and less narrative gaps.

Furthermore, the results suggest that perceived ineffectiveness and narrative gaps in the CDC messages about COVID-19 are associated with weakened trust in the government and scientists (H2) and conspiracy belief ratings (H3). In terms of trust in the government and scientists, statistical significances were observed when controlling for message reliability and effectiveness and perceived narrative gaps via the narrative gap assessment scale. When messages were viewed as more reliable and effective and having less narrative gaps, trust in the government and scientists increased. Statistical

significances were also observed when using the reliability and effectiveness, narrative gap supposition, and narrative gap assessment scales as outcome variables and conspiracy beliefs as the predictor. The results show that an increase in conspiracy belief ratings is significantly associated with lower perceptions of message reliability and effectiveness and higher perceived narrative gaps. It is also interesting to note that despite participants' beliefs (e.g., conspiracy beliefs) and political views existing prior to message exposure (as indicated by Biddlestone et al., 2021, and Williams, 2022), this study observed that participants exposed to messages that had fewer perceived narrative gaps indicated higher ratings of reliability and effectiveness, credibility, coherence, and trust in the government and scientists. In addition, while interaction effects between message exposure and ideologies/beliefs were not the focus of this work, this may be a viable avenue for future testing. With additional statistical tests maintaining significant results when controlling for political views and conspiracy beliefs, further studies may explore if coherent messaging of COVID-19 testing protocols reduces the effect of conspiratorial beliefs and/or political identity against the dependent variables tested in this research (e.g., perceived message credibility, narrative gap assessment, and trust in scientists). Furthermore, ongoing research could delve into the specific cognitive, emotional, and persuasive processes through which narrative coherence impacts the dependent variables.

Overall, as the analyses from this study indicate, coherent communication with minimal narrative gaps is associated with audiences' increased perceptions of message reliability and effectiveness, credibility, and trust in government sources and scientists. This accentuates the importance of minimizing narrative gaps and promoting message coherence in health communication efforts. Moreover, it emphasizes the critical role of

narrative coherence in shaping public perceptions of health-related messages. In the next chapter, the results for Study 1 and Study 2 are further discussed within the context of the conceptual frameworks considered in this dissertation.

CHAPTER VI

DISCUSSION

This dissertation aimed to explore the relationship between health crisis narratives, speculative claims, message perceptions, political identity, and conspiracism. As future crises are to be expected, the results from this and continued research can help provide a rich overview of perceptions around crisis events and allow for improved communication measures to be identified and utilized moving forward. As stated in the introduction chapter, the goal is not to silence conspiracies, but rather promote better communication practices so that the public feels less inclined to fill in the voids of narratives they do not necessarily trust or understand with conspiracies, especially during major crisis events. Furthermore, data from the following studies can be used as a catalyst to guide future communication and social science research centered around risk communication, public decision-making, and social and psychological aspects of behavior.

Study 1: Analyzing #covidorigin Content on TikTok

Throughout this dissertation, Fisher's (1985) Narrative Paradigm has served as a guiding framework to comprehend how individuals construct meaning through storytelling (Stache, 2017). This paradigm underscores the significance of narrative continuation. During times of crisis, individuals engage in speculation about the origins and causes of the situation, fueling reactionary behaviors and perpetuating the crisis narrative. Moreover, this research has discussed conspiracies to be "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors" (Douglas et al., 2019, p.4).

Integrating these concepts with the findings of Study 1, there is evidence to suggest that conflicting and inconsistent messages about COVID-19's origin may contribute to the adoption of speculative claims in the COVID-19 narrative. Prior conspiracy studies (e.g., van Prooijen and Douglas, 2017) demonstrate that when information is not perceived as coherent or logically sound, suppositions are more likely to be accepted. In the case of Study 1, conflicting messages about COVID-19's origin may impact the likelihood of speculative claims (alternative inferences/explanations) to emerge. The Narrative Paradigm (Fisher, 1985) demonstrates that when information is perceived as incoherent or unreliable, people tend to fill in the gaps with details that help the narrative make more sense to them. In taking the definition of conspiracies, this act of sense-making has the potential to encourage the spread of speculative claims in an effort to create a narrative that seems plausible. In addition, the dissemination of conspiratorial ideations have also been shown to garner greater attention and acceptance for conspiracy beliefs (Stempel et al., 2007; Koehler-Derrick et al., 2017).

When "powerful actors," like government agencies, share statements of public interest on major communication platforms, people are likely to continue the narrative through behaviors like engaging in public discourse (Barry & Frenkel, 2021; Naylor, 2021). This can be especially problematic when fear or ignorance are influencing the continuation of the narrative (Allington et al., 2021; Barry & Frenkel, 2021; Naylor, 2021). As evident through Study 1, various unverified ideas have circulated on TikTok about the supposed origin of COVID-19. Conflicting public declarations about the matter may also have had an effect on the rate in which speculative claims were shared. The results show that 90% of all #covidorigin videos publicly shared on TikTok in 2023 and

nearly half of the videos overall succeeded FBI Director Wray's interview and the Department of Energy's report, in which both parties communicated conflicting statements about COVID-19's origin (Baier, 2023; Gans, 2023). In this case, public figures not only provided contradictory information, but encouraged suspicions against another "powerful actor," with Director Wray explicitly accusing China of besmirching U.S. COVID-19 investigations (Baier, 2023). Research (Heath, 2004) indicates that when the public encounters a major crisis, leaders are often responsible for creating a narrative that will engender hope, comfort, and support—instead of fear and uncertainty. Relatedly, if the communicated narrative is unclear or unreliable, people are prompted to cultivate alternative inferences to satisfy the need to make better sense of the crisis (Fisher, 1985). To explore this idea further for Study 1, the researcher also observed how the types of messages, content, and formats used in COVID-19 origin videos may affect levels of engagement on TikTok.

Hypothesis: The most popular TikTok videos regarding the supposed origins of COVID-19 include content that satisfies both the resource perspective (i.e., at least one of the following: first-hand narrative, second-hand narrative, informational report) and cognitive perspective (i.e., advice and/or call to action).

Study 1 was informed by Dahlberg's (2021) proposed resource and cognitive perspectives and their influence on social relations. While the results did not validate the proposed hypothesis, the findings do encourage further evaluation into the types of narrative content and technological affordances that enhance engagement on popular social media platforms, like TikTok. More investigation into the incorporation of various communication features may also produce interesting outcomes. This is made evident

through the significant results observed in this study for overlayed photos/videos and how the presence of this in #covidorigin videos were likely to generate more likes and comments. Perhaps communication formats can be better examined through the resource perspective lens since resources are tools for organizing information into individual and contextual categories (Dahlberg, 2021). Nevertheless, increased understandings of the types of formats that generate greater engagement not only can be used to investigate how crisis narratives are being circulate online, but it may have implications for how to communicate important information about crises more effectively.

Study 2: Evaluating CDC Messages About COVID-19

The main objective of Study 2 was to address how COVID-19 testing protocol messages from the CDC, a leading health organization, shape public perceptions. The findings in this study underscore the critical importance of message reliability, credibility, and coherence in communication practices during health crises. What makes this study unique is that it not only tests the effects of the CDC's verbatim COVID-19 messages on public perceptions, but it also evaluates how a modified message may impact perceptions. When creating the modified COVID-19 message, the researcher attempted to create a narrative that **promoted consistency** through one central idea, **enhanced clarity** by offering additional details, and **provided a rationale** to accept the narrative, as outlined below:

- Consistency: "If you have been in close contact with a person who has either tested positive for COVID-19 or is showing symptoms of infection, you need to get tested."

- Clarity: “Close contact may entail (but is not limited to) 6 feet or less of distance between you and the possibly infected person for any given amount of time (typically 15 minutes or more).”
- Rationale: “Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested.”

The study findings show that, overall, the most positive results were achieved when participants were exposed the Researcher’s Updated No Narrative Gap Condition. In addition, the contradictory messages provided in the CDC Narrative Gap Condition produced the least positive results among the three conditions—providing evidence to support the proposed hypotheses.

Hypothesis 1: Exposure to the CDC’s contradictory messages (i.e., narrative gap messages) is linked with lower (H1a) narrative fidelity/reliability/effectiveness, (H1b) message credibility, and (H1c) trust in the government and scientists.

As mentioned, the Study 2 results display a significant difference in narrative reliability and effectiveness (H1a) among participants exposed to contradictory CDC messages (Condition 1) compared to those who received updated (Condition 2) or modified messages (Condition 3). Specifically, participants in Condition 1 conveyed lower perceptions of message reliability and effectiveness, indicating a negative impact on message fidelity. According to Fisher’s (1985) fidelity principle, when narratives are perceived as unreliable, people are less likely to accept the information received and more likely to fill in the narrative with ideas that make sense to them. In addition, narrative reliability directly affects the public’s collective ability to establish the

necessary actions to mitigate crises (Lewis & DeFaria, 2021). Bridging these concepts together with the results of H1a, the researcher proposes that messages are more likely to be effective or invoke a desired response if communicators are able to convey a narrative that is perceived as reliable.

The results also reveal a significant difference in credibility ratings (H1b) among participants exposed to contradictory CDC messages (Condition 1) compared to those who received updated (Condition 2) or modified messages (Condition 3). Overall, participants in Condition 1 reported lower feelings of credibility towards the CDC's messaging. This provides empirical evidence for H1b, suggesting that the CDC's credibility is more likely reduced when people are exposed to the organization's confusing and contradictory COVID-19 messages. These findings emphasize the importance of clear, consistent, and transparent communication in maintaining message credibility during health crises. Moreover, it suggests that policymakers and communication practitioners should prioritize strategies that enhance message credibility, such as providing accurate information, acknowledging uncertainty, and addressing misinformation proactively. In accordance with the HIV/AIDS example in the "Context of Research" chapter, when messages are consistent and backed by scientific knowledge, the public becomes more likely to accept the information communicated to them (Heller, 2015).

In addition, the findings in Study 2 illuminate a significant relationship between exposure to contradictory messages from the CDC, specifically those characterized by narrative gaps and trust in the government and scientists. The ANOVA analysis reveals compelling statistical evidence supporting H1c, with significant differences observed

across experimental groups concerning trust in the government and scientists. Importantly, the Tukey post hoc test further elucidates these differences, showing that participants exposed to CDC narrative gap messages exhibited lower levels of trust compared to those who received updated messages with lower perceived narrative gaps. These results coincide with the importance of consistent and coherent communication from authoritative sources in maintaining public trust during crises (Heath, 2004). By highlighting the negative impact of contradictory messages on trust, this study emphasizes the significance of transparent and unified messaging strategies to foster trust and credibility among the public during a health crisis.

Furthermore, while there are no significant differences in how participants responded to the conspiracy beliefs scale, it is worthy to note that there was a general consensus across all groups for one specific conspiracy: "COVID-19 doesn't actually exist"—the precise consensus being that the statement is *definitely not true*. This suggests that despite not finding statistical significance in differences between groups overall, there might still be interesting patterns or trends worth exploring further—namely that despite varying ideologies and beliefs—the general consensus is that COVID-19 *does* exist. Prior works (e.g., Greenhalgh & Hurwitz, 1999; Lewis & DeFaria, 2021) suggest that focusing on narratives provides a holistic view to approach problems and identify efficient solutions to better respond to issues. The narrative in this case is that the general population believes that COVID-19 is real. So, while other COVID-19 conspiracy beliefs may vary among individuals, the idea that COVID-19 does not exist is not one that is widely accepted. If most people already reject the conspiracy (because they believe COVID-19 is real), then perhaps an effective way to keep the public informed about

COVID-19 and mitigate the potential spread of conspiracy theories is to focus on producing narratives that generate high perceptions of reliability (H1a), credibility (H1b), and trust in the government and scientists (H1c). As studies have shown (e.g., Heller, 2015), when the public is properly educated through scientific knowledge and contextual information and health experts take a proactive role in communicating with the public, the detrimental effects of health crises can be better moderated. Overall, these insights emphasize the necessity of effective communication strategies to address this and future health crises and to lessen confusion, suppositions not supported by scientists and other health experts, and the potential spread of conspiratorial ideologies.

Hypothesis 2: Public trust in the government and scientists is weakened when the CDC's messages about COVID-19 are (1) perceived as ineffective and (2) perceived as having narrative gaps.

The research findings provide valuable insights into the dynamics of public trust when exposed to COVID-19 messages. Through analysis, it is evident that trust in the government and scientists is profoundly influenced by the perceived reliability and effectiveness of the CDC's messages and presence of narrative gaps. The linear regression model underscores the significance of this relationship, revealing a substantial increase in trust when messages are perceived as reliable and effective and when narrative gaps are minimized. This accentuates the critical role of clear, consistent, and credible communication in fostering public trust amidst crises.

Hypothesis 3: Conspiratorial beliefs are associated with the CDC's messages about COVID-19 being (1) perceived as ineffective/unreliable and (2) perceived as having narrative gaps.

Similar to Hypothesis 2, further examination demonstrates that conspiratorial belief ratings are associated with CDC messages being perceived as ineffective/unreliable and as having narrative gaps. Using the reliability and effectiveness scale, the narrative gap supposition scale, and then the narrative gap assessment scale as dependent variables and controlling for each experimental condition and political views as covariates, the linear regression models underscore the significance of this connection. Specifically, the models observed a notable decrease in perceived reliability and effectiveness and an increase in perceived narrative gaps when conspiracy belief ratings were higher. Moreover, exposure to COVID-19 messages in general improved the model significantly beyond the effect of conspiratorial and political beliefs, and for all three outcome variables (see Tables 2, 3, and 4), exposure to the Researcher's Updated No Narrative Gap COVID-19 messages had the most desirable impact. This study demonstrates that even though beliefs tend to be pre-established and difficult to alter (Lewandowsky et al., 2012; Nyhan & Reifler, 2010), in this case, exposure to varying degrees of COVID-19 testing protocol messages did have significant effects on message reliability and effectiveness and perceived narrative gaps. This alludes to the potential role of clear, reliable, and coherent communication in mitigating the spread of conspiratorial ideations during times of crisis. In addition, perhaps these results have some relevance to Uscinski et al.'s (2022) findings that political views and identities were "less strongly correlated" with conspiracy beliefs on average (p. 7). Future studies might benefit from examining

other non-partisan ideologies such as populism, Manichaeism, and support for political violence vis-à-vis the effect of narrative gap messaging. Thus, Study 2 provides an interesting opportunity for researchers to further examine how crisis narratives may affect reported levels of conspiracy beliefs—despite individuals' existing ideologies.

Summary of Analyses

As the findings from both studies suggest, effective communication strategies should prioritize clear and consistent messaging to build public trust and promote adherence to recommended behaviors. These insights not only contribute to our understanding of public perception during health crises, but also highlight the importance of transparent and coherent messaging strategies for public figures, health agencies, policymakers, and communication practitioners. Ultimately, by addressing concerns related to message effectiveness and narrative coherence, authorities can bolster trust and enhance societal resilience in the face of future health challenges. In the next chapter, the researcher provides a guide to enhance communication efforts during a health crisis. The recommendations are based on a combination of insights gathered from this dissertation.

CHAPTER VII

CRISIS COMMUNICATION RECOMMENDATIONS

Based on the findings from this dissertation, the researcher urges policymakers, public health officials, and communication practitioners to prioritize the evaluation, development, and implementation of tailored communication strategies. As mentioned, these strategies should emphasize clarity, consistency, and transparency in messaging to enhance public trust and adherence to recommended behaviors. Additionally, efforts should be made to address misinformation and conspiracy beliefs through targeted interventions and community engagement initiatives. As previous works have demonstrated (e.g., van Prooijen et al., 2022), to promote narrative fidelity and limit adverse effects (especially during a crisis), leaders and institutions of power must work to regulate social relationships within society through two main functions: (1) provide citizens with a sense of safety, and (2) offer models for accepted norms and values. To enhance communication efforts and provide an index on how future crises can be better mitigated, the following recommendations are offered:

1. **Prioritize Consistency and Clarity:** The results from this research underscore the importance of clear and consistent messaging during a health-related crisis. Policymakers and communication practitioners should prioritize developing communication materials that are easy to understand and free from ambiguity. Consistent messaging across different channels and platforms can also help reinforce key public health messages and minimize confusion. As demonstrated through the Researcher's Updated No Narrative Gap Message in Study 2, when the narrative is consistent through the use of one central message and promotes

clarity by offering additional details, messages tend to be perceived as more reliable, effective, credible, trustworthy, and having less narrative gaps.

2. **Address Narrative Gaps:** As the results from Study 1 suggest, when narratives are incoherent or are perceived as unreliable, people may be prompted to consider other ideas to make better sense of why a crisis has occurred. By paying more attention to narratives surrounding a crisis and the perceptions about these narratives, gaps may be more easily identified. In addition, efforts should be made to minimize narrative gaps in official crisis communication messages. Communication materials should provide comprehensive information that addresses potential questions and concerns of the audience. By proactively addressing narrative gaps, communicators can prevent individuals from filling in the voids with their own inferences or speculative claims.
3. **Enhance Transparency and Accuracy:** Transparency and accuracy are essential for building public trust in health communication messages. Public health officials should provide transparent updates on the evolving situation, acknowledging uncertainties while emphasizing evidence-based information. Moreover, clear communication about the rationale behind public health recommendations can help mitigate skepticism and promote compliance with guidelines. Study 2, for instance, demonstrates that by addressing concerns related to message reliability and narrative coherence, communicators can not only bolster trust but also mitigate the spread of misinformation and conspiracy theories, ultimately fostering a more informed and resilient society. Furthermore, in the case of this research, more positive outcomes were achieved when

messages were crafted to promote consistency through one central idea, enhance clarity by offering additional details, and provide a rationale to accept the narrative.

4. **Combat Misinformation and Mistrust:** Targeted interventions and community engagement initiatives should be implemented to address misinformation and conspiracy beliefs. Public health officials should collaborate with trusted community leaders, influencers, and organizations to disseminate accurate information and counter false narratives. As mentioned, the results of Study 1 show that 90% of all #covidorigin videos publicly shared on TikTok in 2023 and nearly half of the videos overall follow FBI Director Wray's interview on *Fox News*. This suggests that crisis narratives disseminated by public figures may have an effect on how a crisis is perceived and further discussed. By proactively seeking influential partners to share accurate information and address misinformation and conspiracy theories surrounding a crisis event, members of the public may feel more empowered to critically evaluate crisis messages. Furthermore, collaboration with stakeholders across sectors, including government agencies, non-profit organizations, academia, and the private sector, can strengthen communication efforts. By pooling resources and expertise, stakeholders can develop coordinated messaging campaigns and reach a broader audience. Building partnerships can also facilitate the dissemination of accurate information through trusted channels and networks.
5. **Promote Two-Way Communication:** Promoting two-way communication is crucial for crisis communication because it fosters transparency, enhances

credibility, and builds trust between authorities and the public. As both studies indicate, conflicting or unclear messages from authoritative sources during a crisis can lead to the proliferation of speculative claims and undermine public trust. By actively engaging with the public, addressing concerns, and providing clear, consistent, and reliable information, authorities can mitigate the spread of misinformation and promote better understanding of a crisis event. Furthermore, actively soliciting input from the community allows for more immediate identification of information gaps, enabling prompter alterations of communication strategies to address specific needs and concerns.

6. **Monitor and Evaluate Communication Efforts:** Continuous monitoring and evaluation of communication efforts are essential to assess effectiveness and identify areas for improvement. Public health agencies should leverage data analytics and feedback mechanisms to track audience engagement, sentiment, and comprehension. Moreover, the results from Study 1 demonstrate how technological affordances and communication formats can affect how people chose to engage with information. As technology and society continue to change and evolve, regular evaluation into how to best engage the public can inform iterative adjustments to communication strategies and ensure responsiveness to evolving public needs.

CHAPTER VIII

CONCLUSION

Navigating the intricate landscape of crisis communications demands a nuanced understanding of the interplay between crisis narratives and narrative perceptions. Through two comprehensive studies, this dissertation has investigated these phenomena, shedding light on their implications for effective crisis communication and garnering public trust. Study 1 analyzed the dissemination of ideas about COVID-19's supposed origin on TikTok, revealing a complex relationship between crisis narratives and the spread of speculative claims. By exploring content types, communication formats, and public engagement levels, Study 1 underscores the critical importance of examining the impact of crisis narratives and the propagation of unverified or inaccurate information. Meanwhile, Study 2 provided an evaluation of the effects CDC messages about COVID-19 testing protocols have on public attitudes and perceptions. Through a rigorous four-condition experimental design, Study 2 offers valuable insights into the relationships between public trust, narrative gaps, and perceptions of reliability and effectiveness. Furthermore, the results emphasize how significant message reliability, credibility, fidelity, and coherence are for crisis communication efforts.

As Heller (2015) states, communication efforts are only successful when "people trust the sources of official information." This assertation is based on previous research that demonstrates "no [health crisis mitigation] program that requires action by the public—however valid or well-originated—can succeed when people distrust the program's sponsors or the sources of information" (Heller, 2015, p. 43). Furthermore, if history has shown us anything, it is that future crises are inevitable. The results from this

and continued research can help provide a rich overview of perceptions around crisis events and allow for improved communication measures to be identified and utilized moving forward. In addition, by paying more attention to the narratives surrounding a crisis and the perceptions about these narratives, messages can be tailored to strengthen information-sharing efforts and public understanding. Lastly, the findings from this type of research can be used to inform policymakers, public health officials, and communication practitioners on how to best prioritize the evaluation, development, and implementation of tailored communication strategies.

Overall, the results from both studies outlined in this dissertation underscore the crucial role of effective communication in managing public health crises. It is imperative that communication strategies are evidence-based, transparent, and responsive to the evolving needs of the community. Moving forward, concerted efforts are essential to ensure that communication practices are tailored to safeguard public health and well-being, particularly during times of crisis. By implementing insights from Study 1 and Study 2 and the research-supported recommendations, we can potentially manage public health crises more efficiently and further mitigate the spread of misinformation and speculative claims—ultimately protecting the health and safety of our communities. While the culmination of this work may not provide a perfect solution to communicate and maneuver through crisis narratives, this research may offer a step forward in the right direction.

APPENDIX A

CONTENT ANALYSIS CODING PROTOCOL

I. Introduction: This analysis is the first segment in a greater, two-part study titled *#Storytime: An Analysis of Health Crisis Narratives, Conspiracies & New Digital Media*. In this stage, I address the following: As intelligence agencies continue to determine the cause of the pandemic, how have speculative claims about COVID-19's origin manifested on TikTok? As recently as February 28, 2023, news outlets (e.g., *NPR, The Washington Post,* and *Associated Press*) reported on new and ongoing debates about COVID-19, including the source of the infectious disease. While FBI Director Christopher Wray conveyed that COVID-19 "most likely [arose from] a potential lab incident in Wuhan [China]," other U.S. intelligence agencies have yet to reach a consensus—further, prompting the public to *fill in the gaps* of COVID-19's origin for themselves.

Background: Speculative claims and the spread of collusive messaging through media channels have long plagued political landscapes across the globe. These elements of political dogmas are reflected and enhanced through developments in communication technology, progressively easing access to/the dissemination of conspiracy theories. As technological advancements and current events continue to redefine societal norms, digital culture remains as the cornerstone for contemporary social interactions. In early 2020, as social-distancing mandates began to surge in efforts to combat the spread of the COVID-19, people were left (*quite literally*) to their own devices to help manage the time spent in isolation. This resulted in a significant rise in the average time spent on social media—e.g., Americans consumed 65 minutes of content per day as opposed to 54 minutes in years prior. With billions of people around the globe stuck at home, all leading social media platforms witnessed an increase in monthly active usage as people strived to maintain social connections virtually. Short-form videos applications, such as TikTok, Instagram/Facebook Reels, and YouTube Shorts, have particularly increased in popularity in recent years because of their ability to promote creator-viewer participation, generally free access, the simplified production process via in-app features (e.g., music, filters, text), and the continuous flow of content tailored to a user's interests. The ease of viewing and creating content online has made such apps hotbeds for quick entertainment, sharing opinions, and disseminating messages. Given the similarities between TikTok, Instagram/Facebook Reels, and YouTube Shorts (e.g., video durations between 60 to 180 seconds, portrait orientation, in-app video captions, likes, comments, shares, comparable gender and age demographics, and availability in 100 or more countries), this research is analyzing data from TikTok as an example of a popular social media platform.

Method: A content analysis can be described as a logical, replicable method for condensing many words across observed texts into fewer content classifications through pre-determined, explicitly defined guidelines of coding. Content analyses are used to draw upon inferences to conditions or events and should be grounded solely on content without coder bias.

II. Procedure: Please see below for coding guidelines and operational descriptions of key variables pertinent to this study.

A. Coder Identification Number: Each coder will be assigned an identification number. The format will be as follows: 1 = [*Name of Coder*], 2 = [*Name of Coder*], 3 = [*Name of Coder*], etc.

B. Current Date: Coders should write the date each video is coded. The current date should be coded with a two-digit month, two-digit date, and four-digit year. For example, April 19, 2023 should be coded as 04/19/2023.

C. Video Identification Number: Each video will have an assigned number. Coders should write the number as it appears on the provided video spreadsheet. For example, a video listed as 184 should be written as 184.

D. Date Posted: Coders should write the date each video was posted on TikTok. The date should be coded with a two-digit month, two-digit date, and four-digit year. For example, March 15, 2020 should be coded as 03/15/2020.

E. Poster Identification Number: Each video poster will have an assigned identification number. Coders should write the number as it appears on the provided video spreadsheet. Some posters may appear more than once in the spreadsheet and will therefore use the same identification number.

F. Poster Account Type: Please indicate if the video was posted through a personal user account or through an organization/group account. Only one option should be selected.

> **Personal Account:** A personal TikTok account is operated by a single individual and is not officially managed on behalf of a group or organization. Examples of personal accounts include (but are not limited to) a content creator or an influencer and may comprise of individualized posts based on the user's own interests.
>
> **Organization/Group Account:** A group TikTok account is operated by more than one person and is officially managed on behalf of a coalition. Examples of group accounts include (but are not limited to) a news organization or business and may comprise of posts tailored towards the interests of the group.

G. Video Length: Coders should indicate the duration of each video in seconds. For example, a video that is 2 minutes and 3 seconds in length should be coded as 123 seconds.

H. Views: Coders should write the number of views each video receives. If the number of video views totals over 1,000 and is displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), record the unabbreviated number. For example,

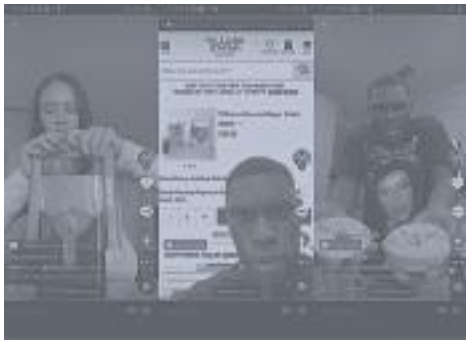
7.2K views should be written as 7200 (no commas) while 848 views should be written as is.

I. Likes: Coders should write the number of likes each video receives. If the number of video likes totals over 1,000 and is displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), record the unabbreviated number. For example, 7.2K likes should be written as 7200 (no commas) while 848 likes should be written as is.

J. Comments: Coders should write the number of comments each video receives. If the number of comments totals over 1,000 and is displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), record the unabbreviated number. For example, 7.2K comments should be written as 7200 (no commas) while 848 views should be written as is.

K. Shares: Coders should write the number of times each video has been shared. If the number of video shares totals over 1,000 and is displayed as an abbreviation ("K" for thousand, "M" for million, and "B" for billion), record the unabbreviated number. For example, 7.2K shares should be written as 7200 (no commas) while 848 views should be written as is.

L. Stitch: Coders should indicate if the video incorporates TikTok's "Stitch" feature. A Stitch is a creator tool that permits users to combine another video on TikTok with their own video.



M. Duet: Coders should indicate if the video incorporates TikTok's "Duet" feature. A Duet is a creator tool that permits users to post their videos side-by-side with another video from TikTok. A Duet is comprised of two videos via split screen that play simultaneously.

N. Text: Coders should indicate if any text appears on the individual user's video. The text must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. 1 = Present, 0 = Absent

O. Photos/Videos: Coders should indicate if additional photos and/or videos are embedded within an individual user's video. The embedded photos and/or videos must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. 1 = Present, 0 = Absent

P. Sound/Music: Coders should indicate if sound or music from TikTok is embedded within an individual user's video. If the sound icon shows the user's account name, then no additional TikTok sound was embedded. The embedded sound must appear on the individual user's video, not on external videos via TikTok's Stitch and/or Duet features. 1 = Present, 0 = Absent

Q. Content Category: Coders should specify which content categories (first-hand narrative, second-hand narrative, advice, informational report, and/or call to action) are applicable to each individual video. The relevant content category should be evident throughout the video and may also be indicated in the video caption. Please select all that apply.

> **First-hand Narrative:** A first-hand narrative is a personal account in which the individual user shares a story in the first-person. Typically, first-hand narratives detail the experiences of an individual user through verbal and/or non-verbal (i.e., text, sound, photos, or videos) communication. The narrative should be from the individual user's video, not from external videos via TikTok's Stitch and/or Duet features. 1 = Present, 0 = Absent
>
> **Second-hand Narrative:** A second-hand narrative is an account in which the individual user shares a story they heard from other people rather than from their own experience. Second-hand narratives can be shared through verbal and/or non-verbal (i.e., text, sound, photos, or videos) communication. 1 = Present, 0 = Absent
>
> **Advice:** Advice content entails explicitly stated recommendations regarding a decision or course of conduct. For example, a user may suggest strategies to avoid getting sick. Advice can be declared verbally or via text. 1 = Present, 0 = Absent
>
> **Informational Report:** Informational reports entail other narrative content (i.e., content that does not give an account of events from a first-hand or second-hand narrative perspective). Examples of informational reports include (but are not limited to) legislative documents, news reports, and book summaries. 1 = Present, 0 = Absent
>
> **Call to Action:** Call to action content entails a prompt that explicitly tells the audience to perform a desired action. For example, a user may urge followers to

vote in an upcoming election. A call to action can be declared verbally or via text. 1 = Present, 0 = Absent

R. Origin Statement: According to the video, coders should write any explicitly stated/suggested origins of COVID-19. Origins may be conveyed verbally by the user or other users (if the Stitch and/or Duet features were used) or non-verbally (e.g., through on-screen text or video caption).

S. Origin Sentiment: Coders should indicate if an individual user's explicitly stated sentiments about COVID-19's origins are Positive, Neutral, or Negative. Sentiments can be declared verbally or via text. Only one option should be selected. 1 = Positive, 2 = Neutral, 3 = Negative

Positive: Coders should select "Positive" if the user explicitly supports a stated origin of COVID-19. An example of support can be: "I firmly believe COVID-19 originated from..."

Neutral: Coders should select "Neutral" if statements do not explicitly lean towards positive or negative sentiments about stated COVID-19's origins.

Negative: Coders should select "Negative" if the user explicitly rejects a stated origin of COVID-19. An example of rejection can be: "I think it's ridiculous that people think COVID-19 originated from..."

T. Caption Sentiment: According to an individual user's video caption, coders should indicate if the caption is explicitly Positive, Neutral, Negative, or Not Applicable regarding COVID-19's supposed origin. Coders should categorize sentiments from the individual user's video, not from external videos via TikTok's Stitch and/or Duet features. Only one option should be selected. 1 = Positive, 2 = Neutral, 3 = Negative, 4 = N/A

Positive: Coders should select "Positive" if the caption explicitly supports a stated origin of COVID-19. An example of support can be: "I firmly believe COVID-19 originated from..."

Neutral: Coders should select "Neutral" if the caption does not explicitly lean towards positive or negative sentiments about COVID-19's origins. Examples include captions primarily comprised of emojis and symbols or are otherwise unintelligible.

Negative: Coders should select "Negative" if the caption explicitly rejects a stated origin of COVID-19. An example of rejection can be: "I think it's ridiculous that people think COVID-19 originated from..."

N/A: Coders should select "N/A" (or not applicable) if the individual user's video does not have a caption.

U. Origin Explanation: Coders should indicate if an explanation is explicitly stated in the video and/or caption as to why COVID-19 was created. Explanations may be conveyed verbally by the user or other users (if the Stitch and/or Duet features were used) or non-verbally (e.g., through on-screen text or video caption).

APPENDIX B

CONTENT ANALYSIS CODESHEET

Coder identification number (e.g., Coder 2)

Today's date (month/day/year)

Video identification number (e.g., 184)

Date the video was posted (month/day/year)

Poster identification number (e.g., 46)

Poster account type

- Personal
- Organization/Group

Video length (in seconds)

Number of video views (e.g., 7200)

Number of video likes (e.g., 720)

Number of video comments (e.g., 7200)

Number of video shares (e.g., 72)

Does the individual user incorporate a "stitch" of another video?

- Yes
- No

Does the individual user post a "duet" with another video?

- Yes
- No

Does the individual user incorporate any text in their video? 1 = Present, 0 = Absent

1

0

Aside from the main video, does the individual user incorporate any other photos or videos? 1 = Present, 0 = Absent

1

0

Does the individual user embed any sounds or music from TikTok in their video? 1 = Present, 0 = Absent

1

0

First-hand narrative. 1 = Present, 0 = Absent

1

0

Second-hand Narrative. 1 = Present, 0 = Absent

1

0

Advice. 1 = Present, 0 = Absent

1

0

Informational Report. 1 = Present, 0 = Absent

1

0

Call to Action. 1 = Present, 0 = Absent

1

0

In reference to COVID-19's origins, the video's message is generally _____.
1 = Positive, 2 = Neutral, 3 = Negative

- 1
- 2
- 3

In reference to the user's video caption, the message is generally _____.
1 = Positive, 2 = Neutral, 3 = Negative, 4 = N/A

- 1
- 2
- 3
- 4

Does the user explicitly state a reason as to why COVID-19 was created?

- Yes
- No

APPENDIX C

FINAL INTERCODER RELIABILITY TEST RESULTS

ReCal 0.1 Alpha for 2 Coders
results for file "COVID TikTok Videos Round 3.csv"

File size: 1161 bytes
N columns: 32
N variables: 16
N coders per variable: 2

	Percent Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha (nominal)	N Agreements	N Disagreements	N Cases	N Decisions
Variable 1 (cols 1 & 2)	94.1%	0.938	0.938	0.939	16	1	17	34
Variable 2 (cols 3 & 4)	94.1%	0.937	0.938	0.939	16	1	17	34
Variable 3 (cols 5 & 6)	94.1%	0.724	0.726	0.732	16	1	17	34
Variable 4 (cols 7 & 8)	94.1%	0.724	0.726	0.732	16	1	17	34
Variable 5 (cols 9 & 10)	88.2%	0.727	0.728	0.735	15	2	17	34
Variable 6 (cols 11 & 12)	88.2%	0.741	0.742	0.749	15	2	17	34
Variable 7 (cols 13 & 14)	88.2%	0.708	0.712	0.717	15	2	17	34
Variable 8 (cols 15 & 16)	94.1%	0.803	0.805	0.809	16	1	17	34
Variable 9 (cols 17 & 18)	88.2%	-0.046	0	-0.015	15	2	17	34
Variable 10 (cols 19 & 20)	94.1%	0.724	0.726	0.732	16	1	17	34
Variable 11 (cols 21 & 22)	94.1%	-0.03	0	0	16	1	17	34
Variable 12 (cols 23 & 24)	94.1%	0.842	0.843	0.847	16	1	17	34
Variable 13 (cols 25 & 26)	94.1%	0.907	0.907	0.91	16	1	17	34
Variable 14 (cols 27 & 28)	94.1%	0.82	0.821	0.825	16	1	17	34
Variable 15 (cols 29 & 30)	94.1%	0.775	0.776	0.781	16	1	17	34
Variable 16 (cols 31 & 32)	94.1%	0.803	0.805	0.809	16	1	17	34

APPENDIX D

EXPERIMENTAL STIMULI

Condition 1: CDC Contradictory Narrative Gap Messages
Organization A, an American public health agency, posted a series of SARS-CoV-2 (COVID-19) recommendations online. The messages are listed in chronological order below.

First Message: Testing is recommended for all close contacts of persons with SARS-CoV-2infection. Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested.

Second Message: You do not necessarily need a test unless you are a vulnerable individual or your health care provider or State or local public health officials recommend you take one.

Third Message: If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test.

Condition 2: CDC Updated No Narrative Gap Message
Organization A, an American public health agency, posted the following SARS-CoV-2 (COVID-19) recommendation online:

If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test.

Condition 3: Researcher's Updated No Narrative Gap Message
Organization A, an American public health agency, posted the following SARS-CoV-2 (COVID-19) recommendation online:

If you have been in close contact with a person who has either tested positive for COVID-19 or is showing symptoms of infection, you need to get tested. Close contact may entail (but is not limited to) 6 feet or less of distance between you and the possibly infected person for any given amount of time (typically 15 minutes or more). Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested.

Condition 4: Control Group
[No message exposure]

APPENDIX E

EXPERIMENT CONDITION 1 TEST INSTRUMENT

Condition 1: CDC Contradictory Narrative Gap Messages

Covariates: Sociodemographics

Q1. In which year range were you born?

1) 1925-1945
2) 1946-1964
3) 1965-1979
4) 1980-1994
5) 1995-2005

Q2. Gender: How do you identify?

1) Male
2) Female
3) Non-binary
4) Other: _____

Q3. In which state do you currently reside?

[drop-down menu]

Q4. Please specify your ethnicity (check all that apply).

1) Caucasian
2) Black or African American
3) Latino or Hispanic
4) Asian
5) Native American
6) Native Hawaiian or Pacific Islander
7) Other/Unknown

Q5. What is the highest degree or level of education you have completed?

1) Elementary School
2) Middle School
3) High School
4) Trade or Vocational School
5) Associate's Degree
6) Bachelor's Degree
7) Master's Degree
8) Doctorate Degree

Q6. What is your current employment status?

1) Employed Full-Time
2) Employed Part-Time
3) Unemployed/Seeking Opportunities

4) Retired

Q7. What is your political party affiliation (if any)?
1) Republican
2) Democratic
3) Independent
4) None
5) Other: _____

Q8. How would you describe your political view?
1) Very Conservative
2) Conservative
3) Centrist
4) Liberal
5) Very Liberal

Q9. Which social media platforms do you use? Check all that apply.
1) Facebook
2) Instagram
3) TikTok
4) X (Twitter)
5) Threads
6) Snapchat
7) YouTube
8) Pinterest
9) LinkedIn
10) Reddit
11) WhatsApp
12) Other: _____
13) None of the above

Q10. Which sources do you get your news from? Check all that apply.
1) The New York Times
2) CNN
3) MSN
4) Fox News
5) Yahoo!
6) Google
7) USA Today
8) New York Post
9) People Magazine
10) BBC
11) The Washington Post
12) Daily Mail
13) CNBC
14) Associated Press

15) NBC
16) Forbes
17) The Guardian
18) The Wall Street Journal
19) BuzzFeed
20) NPR
21) Other: ____
22) None of the above

Q11. How do you receive your news? Check all that apply.
1) Digital Devices (e.g., smartphone, tablet, computer)
2) Television
3) Radio
4) Print Publications
5) None of the above

– PAGE BREAK –

Instructions: Please read the prompt below and then rate your level of agreement with the subsequent statements.

Condition 1: CDC Contradictory Narrative Gap Messages
Organization A, an American public health agency, posted a series of SARS-CoV-2 (COVID-19) recommendations online. The messages are listed in chronological order below.

First Message: "Testing is recommended for all close contacts of persons with SARS-CoV-2 infection. Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested."

Second Message: "You do not necessarily need a test unless you are a vulnerable individual or your health care provider or State or local public health officials recommend you take one."

Third Message: "If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test."

Perceived Reliability and Effectiveness
Q12. Organization A is a **reliable** source for COVID-19 testing recommendations.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q13. How much do you **agree** with the **first message**?

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q14. How much do you **agree** with the **second message**?

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q15. How much do you **agree** with the **third message**?

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q16. Organization A's recommendations are **new** to me.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q17. Organization A's recommendations are **convincing**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q18. Organization A's recommendations are **important** to me.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q19. Organization A's recommendations **helped me feel confident** about best COVID-19 testing practices.

1) Strongly Disagree
2) Disagree

3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q20. Organization A's recommendations would **help my friends feel confident** about best COVID-19 testing practices.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q21. Organization A's recommendations put **thoughts** in my mind **about wanting to get tested for COVID-19**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q22. Organization A's recommendations put **thoughts** in my mind **about telling others to get tested for COVID-19**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q23. Organization A's recommendations are **confusing**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q24. Organization A's recommendations are **contradictory/inconsistent**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q25. Organization A's recommendations are **clear/make sense**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree

4) Agree
5) Strongly Agree

Perceived Credibility

Q26. I think Organization A's message are ___.

1) very inaccurate
2) inaccurate
3) neither accurate nor inaccurate
4) accurate
5) very accurate

Q27. I think Organization A's messages are ___.

1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Q28. I think Organization A's messages are ___.

1) very biased
2) biased
3) neither unbiased nor biased
4) unbiased
5) very unbiased

Q29. Overall, Organization A is a _____ communicator.

1) very weak
2) weak
3) neither strong nor weak
4) strong
5) very strong

Q30. Overall, I think Organization A is a **____** source for COVID-19 information.

1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Perceived Trust in Government and Scientists

Q31. If Organization A was appointed **an official source for COVID-19 information**, their messages would have _____ on my trust in the government.

1) a strong negative impact
2) a negative impact
3) no impact
4) a positive impact

5) a strong positive impact

Q32. When it came to COVID-19 communication, the federal government carried out its duties very well.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q33. When it came to COVID-19 communication, the federal government acted in the best interests of citizens.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q34. If Organization A was appointed **an official source for COVID-19 information**, their messages would have _____ on my trust in scientists.

1) a strong negative impact
2) a negative impact
3) no impact
4) a positive impact
5) a strong positive impact

Q35. When it came to COVID-19 communication, scientists carried out their duties very well.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q36. When it came to COVID-19 communication, scientists acted in the best interests of citizens.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

– PAGE BREAK –

Attention Check

Q37. In the previous page, you were provided with correspondence from Organization A. What type of recommendation did Organization A share?

1) COVID-19 Vaccinations
2) COVID-19 Testing
3) COVID-19 Variants
4) Masks
5) I did not receive any recommendations.

Q38. In the previous page, you were provided with correspondence from Organization A. How many messages did you receive?

1) 0
2) 1
3) 2
4) 3
5) 4

– PAGE BREAK –

Organization A

First Message: "Testing is recommended for all close contacts of persons with SARS-CoV-2 infection. Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested."

Second Message: "You do not necessarily need a test unless you are a vulnerable individual or your health care provider or State or local public health officials recommend you take one."

Third Message: "If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test."

Manipulation Check: Narrative Gap Test

Q39. **According to Organization A**, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q40. **According to Organization A**, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree

4) Agree
5) Strongly Agree

Q41. **According to Organization A**, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q42. When reading Organization A's COVID-19 testing recommendations, which of the following statements do you agree with the **most**?

f) The recommendations tell a complete message with no gaps.
g) The recommendations have some gaps, but the overall message is clear.
h) The recommendations have several gaps, making it hard to follow.
i) The recommendations have significant gaps, making it difficult to understand.
j) The recommendations have so many gaps that it's hard to tell what the message is.

Q43. When reading Organization A's COVID-19 testing recommendations, which of the following statements do you agree with the **most**?

f) The recommendations tell a coherent message with no inconsistencies.
g) The recommendations have some inconsistencies, but the overall message still makes sense.
h) The recommendations have several inconsistencies, making it hard to follow.
i) The recommendations have significant inconsistencies, making it difficult to understand.
j) The recommendations have so many inconsistencies that it's hard to tell what the message is.

– PAGE BREAK –

Instructions: For each statement below, please rate how true you perceive the statement to be.

Covariate: Conspiracy Beliefs Scale

Q44. The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q45. Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q46. The COVID-19 virus escaped from a Chinese lab.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q47. COVID-19 was created as a biological weapon.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q48. The U.S. military imported COVID-19 into China.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q49. Pollution from genetically modified crops caused the spread of COVID-19.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q50. COVID-19 doesn't actually exist.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q51. The COVID-19 pandemic is/was manipulated by America's elite.

1) Definitely Not True
2) Probably Not True

3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q52. Big pharmaceutical companies are behind the spread of COVID-19.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q53. COVID-19 death rates are inflated.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

APPENDIX F

EXPERIMENT CONDITION 2 TEST INSTRUMENT

Condition 2: CDC Updated No Narrative Gap Message

Covariates: Sociodemographics

Q1. In which year range were you born?

1) 1925-1945
2) 1946-1964
3) 1965-1979
4) 1980-1994
5) 1995-2005

Q2. Gender: How do you identify?

1) Male
2) Female
3) Non-binary
4) Other: _____

Q3. In which state do you currently reside?

[drop-down menu]

Q4. Please specify your ethnicity (check all that apply).

1) Caucasian
2) Black or African American
3) Latino or Hispanic
4) Asian
5) Native American
6) Native Hawaiian or Pacific Islander
7) Other/Unknown

Q5. What is the highest degree or level of education you have completed?

1) Elementary School
2) Middle School
3) High School
4) Trade or Vocational School
5) Associate's Degree
6) Bachelor's Degree
7) Master's Degree
8) Doctorate Degree

Q6. What is your current employment status?

1) Employed Full-Time
2) Employed Part-Time
3) Unemployed/Seeking Opportunities

4) Retired

Q7. What is your political party affiliation (if any)?
1) Republican
2) Democratic
3) Independent
4) None
5) Other: _____

Q8. How would you describe your political view?
1) Very Conservative
2) Conservative
3) Centrist
4) Liberal
5) Very Liberal

Q9. Which social media platforms do you use? Check all that apply.
1) Facebook
2) Instagram
3) TikTok
4) X (Twitter)
5) Threads
6) Snapchat
7) YouTube
8) Pinterest
9) LinkedIn
10) Reddit
11) WhatsApp
12) Other: _____
13) None of the above

Q10. Which sources do you get your news from? Check all that apply.
1) The New York Times
2) CNN
3) MSN
4) Fox News
5) Yahoo!
6) Google
7) USA Today
8) New York Post
9) People Magazine
10) BBC
11) The Washington Post
12) Daily Mail
13) CNBC
14) Associated Press

15) NBC
16) Forbes
17) The Guardian
18) The Wall Street Journal
19) BuzzFeed
20) NPR
21) Other: ____
22) None of the above

Q11. How do you receive your news? Check all that apply.
1) Digital Devices (e.g., smartphone, tablet, computer)
2) Television
3) Radio
4) Print Publications
5) None of the above

– PAGE BREAK –

Instructions: Please read the prompt below and then rate your level of agreement with the subsequent statements.

Condition 2: CDC Updated No Narrative Gap Message
Organization A, an American public health agency, posted the following SARS-CoV-2 (COVID-19) recommendation online.

Message: "If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test."

Perceived Reliability and Effectiveness
Q12. Organization A is a **reliable** source for COVID-19 testing recommendations.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q13. How much do you **agree** with Organization A's message?
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q14. Organization A's recommendation is **new** to me.
1) Strongly Disagree

2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q15. Organization A's recommendation is **convincing**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q16. Organization A's recommendation is **important** to me.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q17. Organization A's recommendation **helped me feel confident** about best COVID-19 testing practices.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q18. Organization A's recommendation would **help my friends feel confident** about best COVID-19 testing practices.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q19. Organization A's recommendation put **thoughts** in my mind **about wanting to get tested for COVID-19**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q20. Organization A's recommendation put **thoughts** in my mind **about telling others to get tested for COVID-19**.
1) Strongly Disagree

2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q21. Organization A's recommendation is **confusing**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q22. Organization A's recommendation is **contradictory/inconsistent**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q23. Organization A's recommendation is **clear/makes sense**.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Perceived Credibility

Q24. I think Organization A's message is **___**.
1) very inaccurate
2) inaccurate
3) neither accurate nor inaccurate
4) accurate
5) very accurate

Q25. I think Organization A's message is ___.
1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Q26. I think Organization A's message is ___.
1) very biased
2) biased
3) neither unbiased nor biased
4) unbiased

5) very unbiased

Q27. Overall, Organization A is a _____ communicator.
1) very weak
2) weak
3) neither strong nor weak
4) strong
5) very strong

Q28. Overall, I think Organization A is a ____ source for COVID-19 information.
1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Perceived Trust in Government and Scientists

Q29. If Organization A was appointed **an official source for COVID-19 information**, their message would have _____ on my trust in the government.
1) a strong negative impact
2) a negative impact
3) no impact
4) a positive impact
5) a strong positive impact

Q30. When it came to COVID-19 communication, the federal government carried out its duties very well.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q31. When it came to COVID-19 communication, the federal government acted in the best interests of citizens.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q32. If Organization A was appointed **an official source for COVID-19 information**, their message would have _____ on my trust in scientists.
1) a strong negative impact
2) a negative impact
3) no impact

4) a positive impact
5) a strong positive impact

Q33. When it came to COVID-19 communication, scientists carried out their duties very well.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q34. When it came to COVID-19 communication, scientists acted in the best interests of citizens.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

– PAGE BREAK –

Attention Check

Q35. In the previous page, you were provided with correspondence from Organization A. What type of recommendation did Organization A share?

1) COVID-19 Vaccinations
2) COVID-19 Testing
3) COVID-19 Variants
4) Masks
5) I did not receive any recommendations.

Q36. In the previous page, you were provided with correspondence from Organization A. How many messages did you receive?

1) 0
2) 1
3) 2
4) 3
5) 4

– PAGE BREAK –

Organization A: "If you have been in close contact, such as within 6 feet of a person with documented SARS-CoV-2 infection for at least 15 minutes and do not have symptoms, you need to test."

Manipulation Check: Narrative Gap Test

Q37. **According to Organization A**, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q38. **According to Organization A**, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q39. **According to Organization A**, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q40. When reading Organization A's COVID-19 testing recommendation, which of the following statements do you agree with the **most**?

1) The recommendation tells a complete message with no gaps.
2) The recommendation has some gaps, but the overall message is clear.
3) The recommendation has several gaps, making it hard to follow.
4) The recommendation has significant gaps, making it difficult to understand.
5) The recommendation has so many gaps that it's hard to tell what the message is.

Q41. When reading Organization A's COVID-19 testing recommendation, which of the following statements do you agree with the **most**?

1) The recommendation tells a coherent message with no inconsistencies.
2) The recommendation has some inconsistencies, but the overall message still makes sense.
3) The recommendation has several inconsistencies, making it hard to follow.
4) The recommendation has significant inconsistencies, making it difficult to understand.

5) The recommendation has so many inconsistencies that it's hard to tell what the message is.

– PAGE BREAK –

Instructions: For each statement below, please rate how true you perceive the statement to be.

Covariate: Conspiracy Beliefs Scale

Q42. The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q43. Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q44. The COVID-19 virus escaped from a Chinese lab.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q45. COVID-19 was created as a biological weapon.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q46. The U.S. military imported COVID-19 into China.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q47. Pollution from genetically modified crops caused the spread of COVID-19.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q48. COVID-19 doesn't actually exist.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q49. The COVID-19 pandemic is/was manipulated by America's elite.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q50. Big pharmaceutical companies are behind the spread of COVID-19.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q51. COVID-19 death rates are inflated.

1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

APPENDIX G

EXPERIMENT CONDITION 3 TEST INSTRUMENT

Condition 3: Researcher's Updated No Narrative Gap Message

Covariates: Sociodemographics

Q1. In which year range were you born?

1) 1925-1945
2) 1946-1964
3) 1965-1979
4) 1980-1994
5) 1995-2005

Q2. Gender: How do you identify?

1) Male
2) Female
3) Non-binary
4) Other: _____

Q3. In which state do you currently reside?

[drop-down menu]

Q4. Please specify your ethnicity (check all that apply).

1) Caucasian
2) Black or African American
3) Latino or Hispanic
4) Asian
5) Native American
6) Native Hawaiian or Pacific Islander
7) Other/Unknown

Q5. What is the highest degree or level of education you have completed?

1) Elementary School
2) Middle School
3) High School
4) Trade or Vocational School
5) Associate's Degree
6) Bachelor's Degree
7) Master's Degree
8) Doctorate Degree

Q6. What is your current employment status?

1) Employed Full-Time
2) Employed Part-Time
3) Unemployed/Seeking Opportunities

4) Retired

Q7. What is your political party affiliation (if any)?
1) Republican
2) Democratic
3) Independent
4) None
5) Other: _____

Q8. How would you describe your political view?
1) Very Conservative
2) Conservative
3) Centrist
4) Liberal
5) Very Liberal

Q9. Which social media platforms do you use? Check all that apply.
1) Facebook
2) Instagram
3) TikTok
4) X (Twitter)
5) Threads
6) Snapchat
7) YouTube
8) Pinterest
9) LinkedIn
10) Reddit
11) WhatsApp
12) Other: _____
13) None of the above

Q10. Which sources do you get your news from? Check all that apply.
1) The New York Times
2) CNN
3) MSN
4) Fox News
5) Yahoo!
6) Google
7) USA Today
8) New York Post
9) People Magazine
10) BBC
11) The Washington Post
12) Daily Mail
13) CNBC
14) Associated Press

15) NBC
16) Forbes
17) The Guardian
18) The Wall Street Journal
19) BuzzFeed
20) NPR
21) Other: ____
22) None of the above

Q11. How do you receive your news? Check all that apply.
1) Digital Devices (e.g., smartphone, tablet, computer)
2) Television
3) Radio
4) Print Publications
5) None of the above

– PAGE BREAK –

Instructions: Please read the prompt below and then rate your level of agreement with the subsequent statements.

Condition 3: Researcher's Updated No Narrative Gap Message
Organization A, an American public health agency, posted the following SARS-CoV-2 (COVID-19) recommendation online.

Message: "If you have been in close contact with a person who has either tested positive for COVID-19 or is showing symptoms of infection, you need to get tested. Close contact may entail (but is not limited to) 6 feet or less of distance between you and the possibly infected person for any given amount of time (typically 15 minutes or more). Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested."

Perceived Reliability and Effectiveness
Q12. Organization A is a **reliable** source for COVID-19 testing recommendations.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q13. How much do you **agree** with Organization A's message?
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q14. Organization A's recommendation is **new** to me.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q15. Organization A's recommendation is **convincing**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q16. Organization A's recommendation is **important** to me.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q17. Organization A's recommendation **helped me feel confident** about best COVID-19 testing practices.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q18. Organization A's recommendation would **help my friends feel confident** about best COVID-19 testing practices.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q19. Organization A's recommendation put **thoughts** in my mind **about wanting to get tested for COVID-19**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q20. Organization A's recommendation put **thoughts** in my mind **about telling others to get tested for COVID-19**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q21. Organization A's recommendation is **confusing**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q22. Organization A's recommendation is **contradictory/inconsistent**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q23. Organization A's recommendation is **clear/makes sense**.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Perceived Credibility

Q24. I think Organization A's message is ___.

1) very inaccurate
2) inaccurate
3) neither accurate nor inaccurate
4) accurate
5) very accurate

Q25. I think Organization A's message is **___**.

1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Q26. I think Organization A's message is ___.

1) very biased

2) biased
3) neither unbiased nor biased
4) unbiased
5) very unbiased

Q27. Overall, Organization A is a _____ communicator.
1) very weak
2) weak
3) neither strong nor weak
4) strong
5) very strong

Q28. Overall, I think Organization A is a **____** source for COVID-19 information.
1) very untrustworthy
2) untrustworthy
3) neither trustworthy nor untrustworthy
4) trustworthy
5) very trustworthy

Perceived Trust in Government and Scientists
Q29. If Organization A was appointed **an official source for COVID-19 information**, their messages would have _____ on my trust in the government.
1) a strong negative impact
2) a negative impact
3) no impact
4) a positive impact
5) a strong positive impact

Q30. When it came to COVID-19 communication, the federal government carried out its duties very well.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q31. When it came to COVID-19 communication, the federal government acted in the best interests of citizens.
1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q32. If Organization A was appointed **an official source for COVID-19 information**, their messages would have _____ on my trust in scientists.

1) a strong negative impact
2) a negative impact
3) no impact
4) a positive impact
5) a strong positive impact

Q33. When it came to COVID-19 communication, scientists carried out their duties very well.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q34. When it came to COVID-19 communication, scientists acted in the best interests of citizens.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

– PAGE BREAK –

Attention Check

Q35. In the previous page, you were provided with correspondence from Organization A. What type of recommendation did Organization A share?

1) COVID-19 Vaccinations
2) COVID-19 Testing
3) COVID-19 Variants
4) Masks
5) I did not receive any recommendations.

Q36. In the previous page, you were provided with correspondence from Organization A. How many messages did you receive?

1) 0
2) 1
3) 2
4) 3
5) 4

– PAGE BREAK –

Organization A: "If you have been in close contact with a person who has either tested positive for COVID-19 or is showing symptoms of infection, you need to get tested. Close contact may entail (but is not limited to) 6 feet or less of distance between you and the possibly infected person for any given amount of time (typically 15 minutes or more). Because of the potential for asymptomatic and pre-symptomatic transmission, it is important that contacts of individuals with SARS-CoV-2 infection be quickly identified and tested."

Manipulation Check: Narrative Gap Test

Q37. **According to Organization A**, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q38. **According to Organization A**, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q39. **According to Organization A**, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test.

1) Strongly Disagree
2) Disagree
3) Neither Agree nor Disagree
4) Agree
5) Strongly Agree

Q40. When reading Organization A's COVID-19 testing recommendation, which of the following statements do you agree with the **most**?

1) The recommendation tells a complete message with no gaps.
2) The recommendation has some gaps, but the overall message is clear.
3) The recommendation has several gaps, making it hard to follow.
4) The recommendation has significant gaps, making it difficult to understand.
5) The recommendation has so many gaps that it's hard to tell what the message is.

Q41. When reading Organization A's COVID-19 testing recommendation, which of the following statements do you agree with the **most**?

1) The recommendation tells a coherent message with no inconsistencies.

2) The recommendation has some inconsistencies, but the overall message still makes sense.
3) The recommendation has several inconsistencies, making it hard to follow.
4) The recommendation has significant inconsistencies, making it difficult to understand.
5) The recommendation has so many inconsistencies that it's hard to tell what the message is.

– PAGE BREAK –

Instructions: For each statement below, please rate how true you perceive the statement to be.

Covariate: Conspiracy Beliefs Scale

Q42. The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q43. Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q44. The COVID-19 virus escaped from a Chinese lab.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q45. COVID-19 was created as a biological weapon.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q46. The U.S. military imported COVID-19 into China.
1) Definitely Not True

2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q47. Pollution from genetically modified crops caused the spread of COVID-19.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q48. COVID-19 doesn't actually exist.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q49. The COVID-19 pandemic is/was manipulated by America's elite.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q50. Big pharmaceutical companies are behind the spread of COVID-19.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q51. COVID-19 death rates are inflated.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

APPENDIX H

EXPERIMENT CONDITION 4 TEST INSTRUMENT

Condition 4: Control Group

Covariates: Sociodemographics

Q1. In which year range were you born?

1) 1925-1945
2) 1946-1964
3) 1965-1979
4) 1980-1994
5) 1995-2005

Q2. Gender: How do you identify?

1) Male
2) Female
3) Non-binary
4) Other: _____

Q3. In which state do you currently reside?

[drop-down menu]

Q4. Please specify your ethnicity (check all that apply).

1) Caucasian
2) Black or African American
3) Latino or Hispanic
4) Asian
5) Native American
6) Native Hawaiian or Pacific Islander
7) Other/Unknown

Q5. What is the highest degree or level of education you have completed?

1) Elementary School
2) Middle School
3) High School
4) Trade or Vocational School
5) Associate's Degree
6) Bachelor's Degree
7) Master's Degree
8) Doctorate Degree

Q6. What is your current employment status?

1) Employed Full-Time
2) Employed Part-Time
3) Unemployed/Seeking Opportunities

4) Retired

Q7. What is your political party affiliation (if any)?
1) Republican
2) Democratic
3) Independent
4) None
5) Other: _____

Q8. How would you describe your political view?
1) Very Conservative
2) Conservative
3) Centrist
4) Liberal
5) Very Liberal

Q9. Which social media platforms do you use? Check all that apply.
1) Facebook
2) Instagram
3) TikTok
4) X (Twitter)
5) Threads
6) Snapchat
7) YouTube
8) Pinterest
9) LinkedIn
10) Reddit
11) WhatsApp
12) Other: _____
13) None of the above

Q10. Which sources do you get your news from? Check all that apply.
1) The New York Times
2) CNN
3) MSN
4) Fox News
5) Yahoo!
6) Google
7) USA Today
8) New York Post
9) People Magazine
10) BBC
11) The Washington Post
12) Daily Mail
13) CNBC
14) Associated Press

15) NBC
16) Forbes
17) The Guardian
18) The Wall Street Journal
19) BuzzFeed
20) NPR
21) Other: ____
22) None of the above

Q11. How do you receive your news? Check all that apply.
1) Digital Devices (e.g., smartphone, tablet, computer)
2) Television
3) Radio
4) Print Publications
5) None of the above

– PAGE BREAK –

Instructions: For each statement below, please rate how true you perceive the statement to be.

Covariate: Conspiracy Beliefs Scale
Q12. The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q13. Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q14. The COVID-19 virus escaped from a Chinese lab.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q15. COVID-19 was created as a biological weapon.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q16. The U.S. military imported COVID-19 into China.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q17. Pollution from genetically modified crops caused the spread of COVID-19.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q18. COVID-19 doesn't actually exist.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q19. The COVID-19 pandemic is/was manipulated by America's elite.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q20. Big pharmaceutical companies are behind the spread of COVID-19.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide
4) Probably True
5) Definitely True

Q21. COVID-19 death rates are inflated.
1) Definitely Not True
2) Probably Not True
3) Not Sure/Cannot Decide

4) Probably True
5) Definitely True

APPENDIX I

INTERNAL CONSISTENCY RESULTS: RELIABILITY AND EFFECTIVENESS SCALE

Scale: Reliability and Effectiveness

Case Processing Summary

		N	%
Cases	Valid	1224	95.4
	Excluded[a]	59	4.6
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.776	.781	9

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.932	2.124	3.486	1.362	1.641	.197	9
Item Variances	1.445	1.182	1.706	.525	1.444	.036	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Organization A is a reliable source for COVID-19 testing recommendations. [Strongly Disagree (1) - Strongly Agree (5)]	22.90	32.377	.643	.661	.729
Organization A's recommendation(s) are new to me. [Strongly Disagree (1) - Strongly Agree (5)]	24.26	41.485	-.053	.090	.817
Organization A's recommendation(s) are convincing. [Strongly Disagree (1) - Strongly Agree (5)]	23.13	31.478	.699	.699	.719
Organization A's recommendation(s) are important to me. [Strongly Disagree (1) - Strongly Agree (5)]	23.06	29.909	.779	.680	.704
Organization A's recommendation(s) helped me feel confident about best COVID-19 testing practices.	23.30	30.009	.777	.778	.704

[Strongly Disagree (1) - Strongly Agree (5)]					
Organization A's recommendation(s) would help my friends feel confident about best COVID-19 testing practices. [Strongly Disagree (1) - Strongly Agree (5)]	23.30	32.126	.680	.643	.724
Organization A's recommendation(s) put thoughts in my mind about wanting to get tested for COVID-19. [Strongly Disagree (1) - Strongly Agree (5)]	23.53	30.550	.691	.647	.717
Organization A's recommendation(s) put thoughts in my mind about telling others to get tested for COVID-19. [Strongly Disagree (1) - Strongly Agree (5)]	23.62	30.179	.725	.680	.711
Organization A's recommendation(s) are confusing. [Strongly Disagree (1) - Strongly Agree (5)]	23.98	48.367	-.448	.419	.876

Note. Nine of the 11 items in the entire scale were tested for internal consistency. The following items were not included:
1. Organization A's recommendation(s) are contradictory/inconsistent. [Strongly Disagree (1) - Strongly Agree (5)]
2. Organization A's recommendation(s) are clear/make sense. [Strongly Disagree (1) - Strongly Agree (5)]

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
26.38	41.925	6.475	9

APPENDIX J

INTERNAL CONSISTENCY RESULTS: CREDIBILITY SCALE

Scale: Credibility

Case Processing Summary

		N	%
Cases	Valid	1224	95.4
	Excluded[a]	59	4.6
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.941	.941	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.345	3.223	3.431	.208	1.065	.008	5
Item Variances	1.220	1.146	1.249	.103	1.090	.002	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I think Organization A's message(s) are ___. [very inaccurate (1) - accurate (5)]	13.29	15.629	.895	.821	.918
I think Organization A's message(s) are ___. [very untrustworthy (1) - trustworthy (5)]	13.30	15.398	.918	.872	.913
I think Organization A's message(s) are ___. [very biased (1) - very unbiased (5)]	13.44	16.528	.761	.604	.942
Overall, Organization A is a _____ communicator. [very weak (1) - very strong (5)]	13.50	17.047	.736	.564	.946
Overall, I think Organization A is a ____ source for COVID-19 information. [very untrustworthy (1) - very trustworthy (5)]	13.36	15.589	.901	.839	.917

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.73	24.698	4.970	5

APPENDIX K

INTERNAL CONSISTENCY RESULTS: TRUST IN THE GOVERNMENT AND SCIENTISTS SCALE

Scale: Trust in the Government and Scientists

Case Processing Summary

		N	%
Cases	Valid	1224	95.4
	Excluded[a]	59	4.6
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.906	.907	6

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.110	2.631	3.458	.827	1.314	.092	6
Item Variances	1.392	1.071	1.609	.539	1.503	.057	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
If Organization A was appointed an official source for COVID-19 information, their message(s) would have _____ on my trust in the government. [a strong negative impact (1) - a strong positive impact (5)]	15.51	25.509	.695	.699	.896
When it came to COVID-19 communication, the federal government carried out its duties very well. [Strongly Disagree (1) - Strongly Agree (5)]	16.03	24.334	.711	.660	.894
When it came to COVID-19 communication, the federal government acted in the best interests of citizens. [Strongly Disagree (1) - Strongly Agree (5)]	15.77	23.336	.747	.700	.889
If Organization A was appointed an official source for COVID-19	15.48	25.406	.730	.718	.892

information, their message(s) would have _____ on my trust in scientists. [a strong negative impact (1) - a strong positive impact (5)]					
When it came to COVID-19 communication, scientists carried out their duties very well. [Strongly Disagree (1) - Strongly Agree (5)]	15.32	23.267	.783	.785	.883
When it came to COVID-19 communication, scientists acted in the best interests of citizens. [Strongly Disagree (1) - Strongly Agree (5)]	15.20	22.884	.792	.804	.882

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.66	34.096	5.839	6

APPENDIX L

INTERNAL CONSISTENCY RESULTS: NARRATIVE GAP SUPPOSITION SCALE

Scale: Narrative Gap Suppositions

Case Processing Summary

		N	%
Cases	Valid	1204	93.8
	Excluded[a]	79	6.2
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.688	.688	3

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.758	2.282	3.119	.837	1.367	.185	3
Item Variances	1.409	1.112	1.609	.497	1.447	.069	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
According to Organization A, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test. [Strongly Disagree (1) - Strongly Agree (5)]	5.16	3.751	.498	.260	.604
According to Organization A, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test. [Strongly Disagree (1) - Strongly Agree (5)]	5.40	3.655	.564	.318	.511
According to Organization A, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test.	5.99	4.631	.455	.216	.654

[Strongly Disagree (1) - Strongly Agree (5)]					

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
8.27	7.808	2.794	3

APPENDIX M

INTERNAL CONSISTENCY RESULTS: NARRATIVE GAP ASSESSMENT SCALE

Scale: Narrative Gap (No Suppositions)

Case Processing Summary

		N	%
Cases	Valid	1204	93.8
	Excluded[a]	79	6.2
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.919	.919	2

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.805	3.733	3.876	.143	1.038	.010	2
Item Variances	1.089	1.065	1.113	.048	1.045	.001	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the most? [Perceived Narrative Gaps]	3.88	1.113	.850	.723	.
When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the most? [Perceived Narrative Inconsistencies]	3.73	1.065	.850	.723	.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
7.61	4.029	2.007	2

APPENDIX N

INTERNAL CONSISTENCY RESULTS: CONSPIRACY BELIEFS SCALE

Scale: Conspiracy Beliefs

Case Processing Summary

		N	%
Cases	Valid	1202	93.7
	Excluded[a]	81	6.3
	Total	1283	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.886	.890	10

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	1.975	1.293	3.201	1.908	2.476	.394	10
Item Variances	1.193	.572	2.201	1.629	3.848	.336	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected. [Definitely Not True (1) - Definitely True (5)]	18.35	51.902	.564	.472	.879
Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people. [Definitely Not True (1) - Definitely True (5)]	18.23	48.718	.686	.591	.871
The COVID-19 virus escaped from a Chinese lab. [Definitely Not True (1) - Definitely True (5)]	16.55	48.521	.515	.472	.883
COVID-19 was created as a biological weapon. [Definitely Not True (1) - Definitely True (5)]	17.16	45.187	.731	.634	.866
The U.S. military imported COVID-19 into China. [Definitely Not	18.07	49.571	.651	.492	.873

True (1) - Definitely True (5)]					
Pollution from genetically modified crops caused the spread of COVID-19. [Definitely Not True (1) - Definitely True (5)]	18.27	53.219	.454	.298	.885
COVID-19 doesn't actually exist. [Definitely Not True (1) - Definitely True (5)]	18.46	52.712	.503	.320	.883
The COVID-19 pandemic is/was manipulated by America's elite. [Definitely Not True (1) - Definitely True (5)]	17.61	43.693	.732	.600	.866
Big pharmaceutical companies are behind the spread of COVID-19. [Definitely Not True (1) - Definitely True (5)]	17.84	45.032	.800	.685	.860
COVID-19 death rates are inflated. [Definitely Not True (1) - Definitely True (5)]	17.22	43.837	.650	.484	.875

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.75	58.807	7.669	10

APPENDIX O

STUDY 2 FREQUENCY DISTRIBUTIONS

Perceived Reliability and Effectiveness

Organization A is a **reliable** source for COVID-19 testing recommendations.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 43; **Percentage** = 10.59%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 26; **Percentage** = 6.36%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 14; **Percentage** = 3.42%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 91; **Percentage** = 22.41%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 56; **Percentage** = 13.39%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 26; **Percentage** = 6.36%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 76; **Percentage** = 18.72%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 97; **Percentage** = 23.72%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 68; **Percentage** = 16.63%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 147; **Percentage** = 36.21%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 165; **Percentage** = 40.34%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 208; **Percentage** = 50.86%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 49; **Percentage** = 12.07%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 65; **Percentage** = 15.89%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 93; **Percentage** = 22.74%

How much do you **agree** with the **first message**?

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 32; **Percentage** = 7.88%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 48; **Percentage** = 11.82%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 33; **Percentage** = 8.13%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 184; **Percentage** = 45.32%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 109; **Percentage** = 26.85%

How much do you **agree** with the **second message**?

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 36; **Percentage** = 8.87%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 125; **Percentage** = 30.79%
3) Neither Agree nor Disagree

    a. **Condition 1** – **N (count)** = 406; **Answered** = 72; **Percentage** = 17.73%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 150; **Percentage** = 36.95%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 23; **Percentage** = 5.67%

How much do you **agree** with the **third message**?

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 51; **Percentage** = 12.56%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 77; **Percentage** = 18.97%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 65; **Percentage** = 16.01%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 158; **Percentage** = 38.92%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 55; **Percentage** = 13.55%

How much do you **agree** with Organization A's message?

1) Strongly Disagree
    a. **Condition 2** – **N (count)** = 409; **Answered** = 30; **Percentage** = 7.33%
    b. **Condition 3** – **N (count)** = 409; **Answered** = 19; **Percentage** = 4.65%
2) Disagree
    a. **Condition 2** – **N (count)** = 409; **Answered** = 95; **Percentage** = 23.23%
    b. **Condition 3** – **N (count)** = 409; **Answered** = 36; **Percentage** = 8.80%
3) Neither Agree nor Disagree
    a. **Condition 2** – **N (count)** = 409; **Answered** = 54; **Percentage** = 13.20%
    b. **Condition 3** – **N (count)** = 409; **Answered** = 48; **Percentage** = 11.74%
4) Agree
    a. **Condition 2** – **N (count)** = 409; **Answered** = 157; **Percentage** = 38.39%
    b. **Condition 3** – **N (count)** = 409; **Answered** = 188; **Percentage** = 45.97%
5) Strongly Agree
    a. **Condition 2** – **N (count)** = 409; **Answered** = 73; **Percentage** = 17.85%
    b. **Condition 3** – **N (count)** = 409; **Answered** = 118; **Percentage** = 28.85%

Organization A's recommendation(s) are **new** to me.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 104; **Percentage** = 25.63%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 105; **Percentage** = 25.67%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 174; **Percentage** = 42.54%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 219; **Percentage** = 53.94%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 146; **Percentage** = 35.70%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 175; **Percentage** = 42.79%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 33; **Percentage** = 8.13%

b. **Condition 2** – **N (count)** = 409; **Answered** = 46; **Percentage** = 11.25%
c. **Condition 3** – **N (count)** = 409; **Answered** = 27; **Percentage** = 6.60%

4) Agree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 44; **Percentage** = 10.84%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 84; **Percentage** = 20.54%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 28; **Percentage** = 8.85%
5) Strongly Agree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 6; **Percentage** = 1.48%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 28; **Percentage** = 6.85%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 5; **Percentage** = 1.22%

Organization A's recommendation(s) are **convincing**.

1) Strongly Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 39; **Percentage** = 9.61%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 45; **Percentage** = 11%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 26; **Percentage** = 6.36%
2) Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 94; **Percentage** = 23.15%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 95; **Percentage** = 23.23%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 48; **Percentage** = 11.74%
3) Neither Agree nor Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 93; **Percentage** = 22.91%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 102; **Percentage** = 24.94%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 60; **Percentage** = 14.67%
4) Agree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 146; **Percentage** = 35.96%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 132; **Percentage** = 32.27%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 202; **Percentage** = 49.39%
5) Strongly Agree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 34; **Percentage** = 8.37%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 35; **Percentage** = 8.56%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 73; **Percentage** = 17.85%

Organization A's recommendation(s) are **important** to me.

1) Strongly Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 53; **Percentage** = 13.05%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 47; **Percentage** = 11.49%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 35; **Percentage** = 8.56%
2) Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 62; **Percentage** = 15.27%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 83; **Percentage** = 20.29%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 53; **Percentage** = 12.96%
3) Neither Agree nor Disagree
   a. **Condition 1** – **N (count)** = 406; **Answered** = 76; **Percentage** = 18.72%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 74; **Percentage** = 18.09%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 66; **Percentage** = 16.14%

4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 179; **Percentage** = 44.09%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 142; **Percentage** = 34.72%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 163; **Percentage** = 39.85%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 36; **Percentage** = 8.87%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 63; **Percentage** = 15.40%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 92; **Percentage** = 22.49%

Organization A's recommendation(s) **helped me feel confident** about best COVID-19 testing practices.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 65; **Percentage** = 16.01%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 60; **Percentage** = 14.67%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 33; **Percentage** = 8.07%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 102; **Percentage** = 25.12%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 93; **Percentage** = 22.74%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 64; **Percentage** = 15.65%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 87; **Percentage** = 21.43%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 97; **Percentage** = 23.72%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 80; **Percentage** = 19.56%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 126; **Percentage** = 31.03%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 111; **Percentage** = 27.14%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 171; **Percentage** = 41.81%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 26; **Percentage** = 6.30%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 48; **Percentage** = 11.74%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 61; **Percentage** = 14.91%

Organization A's recommendation(s) would **help my friends feel confident** about best COVID-19 testing practices.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 52; **Percentage** = 12.81%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 38; **Percentage** = 9.29%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 26; **Percentage** = 6.36%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 99; **Percentage** = 24.38%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 103; **Percentage** = 25.18%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 52; **Percentage** = 12.71%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 126; **Percentage** = 31.03%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 120; **Percentage** = 29.34%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 121; **Percentage** = 29.58%

4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 105; **Percentage** = 25.86%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 116; **Percentage** = 28.36%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 161; **Percentage** = 39.36%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 24; **Percentage** = 5.91%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 32; **Percentage** = 7.82%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 49; **Percentage** = 11.49%

Organization A's recommendation(s) put **thoughts** in my mind **about wanting to get tested for COVID-19**.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 75; **Percentage** = 18.47%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 86; **Percentage** = 21.03%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 63; **Percentage** = 15.40%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 101; **Percentage** = 24.88%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 102; **Percentage** = 24.94%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 109; **Percentage** = 26.65%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 77; **Percentage** = 18.97%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 54; **Percentage** = 13.20%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 79; **Percentage** = 19.32%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 126; **Percentage** = 31.03%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 127; **Percentage** = 31.05%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 115; **Percentage** = 28.12%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 27; **Percentage** = 6.65%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 40; **Percentage** = 9.78%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 43; **Percentage** = 10.51%

Organization A's recommendation(s) put **thoughts** in my mind **about telling others to get tested for COVID-19**.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 80; **Percentage** = 19.70%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 95; **Percentage** = 23.23%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 74; **Percentage** = 18.09%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 107; **Percentage** = 26.35%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 109; **Percentage** = 26.65%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 108; **Percentage** = 26.41%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 80; **Percentage** = 19.70%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 59; **Percentage** = 14.43%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 73; **Percentage** = 17.85%

4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 118; **Percentage** = 29.06%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 111; **Percentage** = 27.14%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 115; **Percentage** = 28.12%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 21; **Percentage** = 5.17%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 35; **Percentage** = 8.56%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 39; **Percentage** = 9.54%

Organization A's recommendation(s) are **confusing**.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 58; **Percentage** = 14.29%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 129; **Percentage** = 31.54%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 183; **Percentage** = 44.74%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 102; **Percentage** = 25.12%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 144; **Percentage** = 35.21%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 169; **Percentage** = 41.32%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 48; **Percentage** = 11.82%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 44; **Percentage** = 10.67%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 23; **Percentage** = 5.62%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 123; **Percentage** = 30.30%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 72; **Percentage** = 17.60%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 28; **Percentage** = 6.85%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 75; **Percentage** = 18.47%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 20; **Percentage** = 4.89%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 6; **Percentage** = 1.47%

Organization A's recommendation(s) are **contradictory/inconsistent**.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 39; **Percentage** = 9.61%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 113; **Percentage** = 27.63%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 168; **Percentage** = 41.08%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 92; **Percentage** = 22.66%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 151; **Percentage** = 36.92%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 175; **Percentage** = 42.79%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 53; **Percentage** = 13.05%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 64; **Percentage** = 15.56%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 42; **Percentage** = 10.27%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 135; **Percentage** = 33.25%

b. **Condition 2** – **N (count)** = 409; **Answered** = 59; **Percentage** = 14.43%
c. **Condition 3** – **N (count)** = 409; **Answered** = 16; **Percentage** = 3.91%

5) Strongly Agree
a. **Condition 1** – **N (count)** = 406; **Answered** = 87; **Percentage** = 21.43%
b. **Condition 2** – **N (count)** = 409; **Answered** = 22; **Percentage** = 5.38%
c. **Condition 3** – **N (count)** = 409; **Answered** = 8; **Percentage** = 1.96%

Organization A's recommendation(s) are **clear/make sense**.

1) Strongly Disagree
a. **Condition 1** – **N (count)** = 406; **Answered** = 46; **Percentage** = 11.33%
b. **Condition 2** – **N (count)** = 409; **Answered** = 27; **Percentage** = 6.60%
c. **Condition 3** – **N (count)** = 409; **Answered** = 9; **Percentage** = 2.20%

2) Disagree
a. **Condition 1** – **N (count)** = 406; **Answered** = 128; **Percentage** = 31.53%
b. **Condition 2** – **N (count)** = 409; **Answered** = 73; **Percentage** = 17.85%
c. **Condition 3** – **N (count)** = 409; **Answered** = 27; **Percentage** = 6.60%

3) Neither Agree nor Disagree
a. **Condition 1** – **N (count)** = 406; **Answered** = 62; **Percentage** = 15.27%
b. **Condition 2** – **N (count)** = 409; **Answered** = 52; **Percentage** = 12.71%
c. **Condition 3** – **N (count)** = 409; **Answered** = 30; **Percentage** = 7.33%

4) Agree
a. **Condition 1** – **N (count)** = 406; **Answered** = 125; **Percentage** = 30.79%
b. **Condition 2** – **N (count)** = 409; **Answered** = 158; **Percentage** = 38.63%
c. **Condition 3** – **N (count)** = 409; **Answered** = 200; **Percentage** = 48.90%

5) Strongly Agree
a. **Condition 1** – **N (count)** = 406; **Answered** = 45; **Percentage** = 11.08%
b. **Condition 2** – **N (count)** = 409; **Answered** = 99; **Percentage** = 24.21%
c. **Condition 3** – **N (count)** = 409; **Answered** = 143; **Percentage** = 34.96%

Perceived Credibility

I think Organization A's message(s) are ___.

1) very inaccurate
a. **Condition 1** – **N (count)** = 406; **Answered** = 30; **Percentage** = 7.39%
b. **Condition 2** – **N (count)** = 409; **Answered** = 26; **Percentage** = 6.36%
c. **Condition 3** – **N (count)** = 409; **Answered** = 12; **Percentage** = 2.93%

2) inaccurate
a. **Condition 1** – **N (count)** = 406; **Answered** = 95; **Percentage** = 23.40%
b. **Condition 2** – **N (count)** = 409; **Answered** = 86; **Percentage** = 21.03%
c. **Condition 3** – **N (count)** = 409; **Answered** = 33; **Percentage** = 8.07%

3) neither accurate nor inaccurate
a. **Condition 1** – **N (count)** = 406; **Answered** = 107; **Percentage** = 26.35%
b. **Condition 2** – **N (count)** = 409; **Answered** = 82; **Percentage** = 20.05%
c. **Condition 3** – **N (count)** = 409; **Answered** = 57; **Percentage** = 13.94%

4) accurate
a. **Condition 1** – **N (count)** = 406; **Answered** = 143; **Percentage** = 35.22%
b. **Condition 2** – **N (count)** = 409; **Answered** = 159; **Percentage** = 38.88%

c. **Condition 3** – **N (count)** = 409; **Answered** = 212; **Percentage** = 51.83%

5) very accurate
   a. **Condition 1** – **N (count)** = 406; **Answered** = 31; **Percentage** = 7.64%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 56; **Percentage** = 13.69%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 95; **Percentage** = 23.23%

I think Organization A's message(s) are ___.

1) very untrustworthy
   a. **Condition 1** – **N (count)** = 406; **Answered** = 35; **Percentage** = 8.62%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 29; **Percentage** = 7.09%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 15; **Percentage** = 3.67%
2) untrustworthy
   a. **Condition 1** – **N (count)** = 406; **Answered** = 93; **Percentage** = 22.91%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 69; **Percentage** = 16.87%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 37; **Percentage** = 9.05%
3) neither trustworthy nor untrustworthy
   a. **Condition 1** – **N (count)** = 406; **Answered** = 102; **Percentage** = 25.12%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 96; **Percentage** = 23.47%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 53; **Percentage** = 12.96%
4) trustworthy
   a. **Condition 1** – **N (count)** = 406; **Answered** = 144; **Percentage** = 35.47%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 156; **Percentage** = 38.14%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 217; **Percentage** = 53.06%
5) very trustworthy
   a. **Condition 1** – **N (count)** = 406; **Answered** = 32; **Percentage** = 7.88%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 59; **Percentage** = 14.43%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 87; **Percentage** = 21.27%

I think Organization A's message(s) are ___.

1) very biased
   a. **Condition 1** – **N (count)** = 406; **Answered** = 35; **Percentage** = 8.62%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 35; **Percentage** = 8.56%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 20; **Percentage** = 4.89%
2) biased
   a. **Condition 1** – **N (count)** = 406; **Answered** = 72; **Percentage** = 17.73%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 79; **Percentage** = 19.32%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 50; **Percentage** = 12.22%
3) neither unbiased nor biased
   a. **Condition 1** – **N (count)** = 406; **Answered** = 146; **Percentage** = 35.96%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 119; **Percentage** = 29.10%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 111; **Percentage** = 27.14%
4) unbiased
   a. **Condition 1** – **N (count)** = 406; **Answered** = 121; **Percentage** = 29.80%
   b. **Condition 2** – **N (count)** = 409; **Answered** = 119; **Percentage** = 29.10%
   c. **Condition 3** – **N (count)** = 409; **Answered** = 148; **Percentage** = 36.19%
5) very unbiased

a. **Condition 1** – **N (count)** = 406; **Answered** = 32; **Percentage** = 7.88%
b. **Condition 2** – **N (count)** = 409; **Answered** = 57; **Percentage** = 13.94%
c. **Condition 3** – **N (count)** = 409; **Answered** = 80; **Percentage** = 19.56%

Overall, Organization A is a _____ communicator.

1) very weak
    a. **Condition 1** – **N (count)** = 406; **Answered** = 40; **Percentage** = 9.85%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 34; **Percentage** = 8.31%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 7; **Percentage** = 1.71%
2) weak
    a. **Condition 1** – **N (count)** = 406; **Answered** = 133; **Percentage** = 32.76%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 77; **Percentage** = 18.83%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 36; **Percentage** = 8.80%
3) neither strong nor weak
    a. **Condition 1** – **N (count)** = 406; **Answered** = 106; **Percentage** = 26.11%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 121; **Percentage** = 29.58%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 95; **Percentage** = 23.23%
4) strong
    a. **Condition 1** – **N (count)** = 406; **Answered** = 101; **Percentage** = 24.88%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 149; **Percentage** = 36.43%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 219; **Percentage** = 53.55%
5) very strong
    a. **Condition 1** – **N (count)** = 406; **Answered** = 26; **Percentage** = 6.40%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 28; **Percentage** = 6.85%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 52; **Percentage** = 12.71%

Overall, I think Organization A is a ____ source for COVID-19 information.

1) very untrustworthy
    a. **Condition 1** – **N (count)** = 406; **Answered** = 39; **Percentage** = 9.61%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 33; **Percentage** = 8.07%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 14; **Percentage** = 3.42%
2) untrustworthy
    a. **Condition 1** – **N (count)** = 406; **Answered** = 94; **Percentage** = 23.15%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 68; **Percentage** = 16.63%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 37; **Percentage** = 9.05%
3) neither trustworthy nor untrustworthy
    a. **Condition 1** – **N (count)** = 406; **Answered** = 95; **Percentage** = 23.40%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 106; **Percentage** = 25.92%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 67; **Percentage** = 16.38%
4) trustworthy
    a. **Condition 1** – **N (count)** = 406; **Answered** = 147; **Percentage** = 36.21%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 156; **Percentage** = 38.14%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 217; **Percentage** = 53.06%
5) very trustworthy
    a. **Condition 1** – **N (count)** = 406; **Answered** = 31; **Percentage** = 7.64%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 46; **Percentage** = 11.25%

c. **Condition 3** – **N (count)** = 409; **Answered** = 74; **Percentage** = 18.09%

Perceived Trust in Government and Scientists

If Organization A was appointed an official source for COVID-19 information, their message(s) would have ____ on my trust in the government

1) a strong negative impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 45; **Percentage** = 11.08%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 31; **Percentage** = 7.58%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 19; **Percentage** = 4.65%
2) a negative impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 119; **Percentage** = 29.31%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 68; **Percentage** = 16.63%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 37; **Percentage** = 9.05%
3) no impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 124; **Percentage** = 30.54%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 142; **Percentage** = 34.72%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 144; **Percentage** = 35.21%
4) a positive impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 97; **Percentage** = 23.89%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 138; **Percentage** = 33.74%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 157; **Percentage** = 38.39%
5) a strong positive impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 21; **Percentage** = 5.17%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 30; **Percentage** = 7.33%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 52; **Percentage** = 12.71%

When it came to COVID-19 communication, the federal government carried out its duties very well.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 92; **Percentage** = 22.66%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 99; **Percentage** = 24.21%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 58; **Percentage** = 14.18%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 138; **Percentage** = 33.99%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 114; **Percentage** = 27.87%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 119; **Percentage** = 29.10%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 79; **Percentage** = 19.46%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 61; **Percentage** = 14.91%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 104; **Percentage** = 25.43%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 81; **Percentage** = 19.95%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 117; **Percentage** = 28.61%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 105; **Percentage** = 25.67%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 16; **Percentage** = 3.94%

b. **Condition 2** – **N (count)** = 409; **Answered** = 18; **Percentage** = 4.40%
c. **Condition 3** – **N (count)** = 409; **Answered** = 23; **Percentage** = 5.62%

When it came to COVID-19 communication, the federal government acted in the best interests of citizens.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 82; **Percentage** = 20.20%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 87; **Percentage** = 21.27%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 60; **Percentage** = 83%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 87; **Percentage** = 21.43%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 92; **Percentage** = 22.49%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 83; **Percentage** = 20.29%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 78; **Percentage** = 19.21%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 80; **Percentage** = 19.56%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 92; **Percentage** = 22.49%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 127; **Percentage** = 31.28%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 113; **Percentage** = 27.63%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 136; **Percentage** = 33.25%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 32; **Percentage** = 7.88%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 37; **Percentage** = 9.05%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 38; **Percentage** = 9.29%

If Organization A was appointed an official source for COVID-19 information, their message(s) would have ____ on my trust in scientists.

1) a strong negative impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 45; **Percentage** = 11.08%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 27; **Percentage** = 6.60%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 18; **Percentage** = 4.40%
2) a negative impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 89; **Percentage** = 21.92%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 64; **Percentage** = 15.65%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 33; **Percentage** = 8.07%
3) no impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 145; **Percentage** = 35.71%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 167; **Percentage** = 40.83%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 148; **Percentage** = 36.19%
4) a positive impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 102; **Percentage** = 25.12%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 120; **Percentage** = 29.34%
    c. **Condition 3** – **N (count)** = 4009 **Answered** = 160; **Percentage** = 39.12%
5) a strong positive impact
    a. **Condition 1** – **N (count)** = 406; **Answered** = 25; **Percentage** = 6.16%

b. **Condition 2** – **N (count)** = 409; **Answered** = 31; **Percentage** = 7.58%
c. **Condition 3** – **N (count)** = 409; **Answered** = 50; **Percentage** = 12.22%

When it came to COVID-19 communication, scientists carried out their duties very well.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 43; **Percentage** = 10.59%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 52; **Percentage** = 12.71%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 39; **Percentage** = 9.54%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 60; **Percentage** = 14.78%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 59; **Percentage** = 14.43%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 70; **Percentage** = 17.11%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 83; **Percentage** = 20.44%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 66; **Percentage** = 16.14%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 75; **Percentage** = 18.34%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 153; **Percentage** = 37.68%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 161; **Percentage** = 39.36%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 163; **Percentage** = 39.85%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 67; **Percentage** = 16.50%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 71; **Percentage** = 71.36%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 163; **Percentage** = 39.85%

When it came to COVID-19 communication, scientists acted in the best interests of citizens.

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 44; **Percentage** = 10.84%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 55; **Percentage** = 13.45%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 45; **Percentage** = 11%
2) Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 58; **Percentage** = 14.29%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 39; **Percentage** = 9.54%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 48; **Percentage** = 11.74%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 66; **Percentage** = 16.26%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 69; **Percentage** = 16.87%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 61; **Percentage** = 14.91%
4) Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 153; **Percentage** = 37.68%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 161; **Percentage** = 39.36%
    c. **Condition 3** – **N (count)** = 409; **Answered** = 171; **Percentage** = 41.81%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 406; **Answered** = 85; **Percentage** = 20.94%
    b. **Condition 2** – **N (count)** = 409; **Answered** = 85; **Percentage** = 20.78%

c. **Condition 3** – **N (count)** = 409; **Answered** = 84; **Percentage** = 20.54%

Attention Check

In the previous page, you were provided with correspondence from Organization A. What type of recommendation(s) did Organization A share?

1) COVID-19 Vaccinations
    a. **Condition 1** – **N (count)** = 406; **Answered** = 9; **Percentage** = 2.22%
    b. **Condition 2** – **N (count)** = 406; **Answered** = 13; **Percentage** = 3.20%
    c. **Condition 3** – **N (count)** = 404; **Answered** = 19; **Percentage** = 4.70%
2) COVID-19 Testing
    a. **Condition 1** – **N (count)** = 406; **Answered** = 394; **Percentage** = 97.04%
    b. **Condition 2** – **N (count)** = 406; **Answered** = 379; **Percentage** = 93.35%
    c. **Condition 3** – **N (count)** = 404; **Answered** = 377; **Percentage** = 93.32%
3) COVID-19 Variants
    a. **Condition 1** – **N (count)** = 406; **Answered** = 2; **Percentage** = 0.49%
    b. **Condition 2** – **N (count)** = 406; **Answered** = 7; **Percentage** = 1.72%
    c. **Condition 3** – **N (count)** = 404; **Answered** = 5; **Percentage** = 1.24%
4) Masks
    a. **Condition 1** – **N (count)** = 406; **Answered** = 0; **Percentage** = 0%
    b. **Condition 2** – **N (count)** = 406; **Answered** = 2; **Percentage** = 0.49%
    c. **Condition 3** – **N (count)** = 404; **Answered** = 1; **Percentage** = 0.25%
5) I did not receive any recommendations.
    a. **Condition 1** – **N (count)** = 406; **Answered** = 1; **Percentage** = 0.29%
    b. **Condition 2** – **N (count)** = 406; **Answered** = 5; **Percentage** = 1.23%
    c. **Condition 3** – **N (count)** = 404; **Answered** = 2; **Percentage** = 0.50%

In the previous page, you were provided with correspondence from Organization A. How many messages did you receive?

1) 0
    a. **Condition 1** – **N (count)** = 406; **Answered** = 1; **Percentage** = 0.25%
2) 1
    a. **Condition 1** – **N (count)** = 406; **Answered** = 17; **Percentage** = 4.19%
3) 2
    a. **Condition 1** – **N (count)** = 406; **Answered** = 5; **Percentage** = 1.23%
4) 3
    a. **Condition 1** – **N (count)** = 406; **Answered** = 381; **Percentage** = 93.84%
5) 4
    a. **Condition 1** – **N (count)** = 406; **Answered** = 2; **Percentage** = 0.49%

In the previous page, you were provided with correspondence from Organization A. How many messages did you receive?

1) 0
    a. **Condition 2** – **N (count)** = 406; **Answered** = 7; **Percentage** = 1.72%
    b. **Condition 3** – **N (count)** = 404; **Answered** = 11; **Percentage** = 2.72%
2) 1
    a. **Condition 2** – **N (count)** = 406; **Answered** = 378; **Percentage** = 93.10%

b. **Condition 3** – **N (count)** = 404; **Answered** = 369; **Percentage** = 91.34%

3) 2
   a. **Condition 2** – **N (count)** = 406; **Answered** = 11; **Percentage** = 2.71%
   b. **Condition 3** – **N (count)** = 404; **Answered** = 16; **Percentage** = 3.96%
4) 3
   a. **Condition 2** – **N (count)** = 406; **Answered** = 6; **Percentage** = 1.48%
   b. **Condition 3** – **N (count)** = 404; **Answered** = 5; **Percentage** = 1.24%
5) 4
   a. **Condition 2** – **N (count)** = 406; **Answered** = 4; **Percentage** = 0.99%
   b. **Condition 3** – **N (count)** = 404; **Answered** = 3; **Percentage** = 0.74%

Narrative Gap Test

Supposition: "According to Organization A, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test."

1) Strongly Disagree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 50; **Percentage** = 12.50%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 70; **Percentage** = 17.37%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 47; **Percentage** = 11.72%
2) Disagree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 67; **Percentage** = 16.75%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 53; **Percentage** = 13.15%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 152; **Percentage** = 37.91%
3) Neither Agree nor Disagree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 37; **Percentage** = 9.25%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 61; **Percentage** = 15.14%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 50; **Percentage** = 12.47%
4) Agree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 191; **Percentage** = 47.75%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 165; **Percentage** = 40.94%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 129; **Percentage** = 32.17%
5) Strongly Agree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 55; **Percentage** = 13.75%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 54; **Percentage** = 13.40%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 23; **Percentage** = 5.74%

Supposition: "According to Organization A, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test."

1) Strongly Disagree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 72; **Percentage** =18 %
   b. **Condition 2** – **N (count)** = 403; **Answered** = 60; **Percentage** = 14.89%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 53; **Percentage** = 13.22%
2) Disagree
   a. **Condition 1** – **N (count)** = 400; **Answered** = 88; **Percentage** = 22%
   b. **Condition 2** – **N (count)** = 403; **Answered** = 90; **Percentage** = 22.33%
   c. **Condition 3** – **N (count)** = 401; **Answered** = 174; **Percentage** = 43.39%

3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 53; **Percentage** = 13.25%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 66; **Percentage** = 16.38%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 63; **Percentage** = 15.71%
4) Agree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 158; **Percentage** = 39.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 146; **Percentage** = 36.23%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 96; **Percentage** = 23.94%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 29; **Percentage** = 7.25%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 41; **Percentage** = 10.17%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 15; **Percentage** = 3.74%

Supposition: "According to Organization A, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if they are positive, you do not need to test."

1) Strongly Disagree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 74; **Percentage** = 18.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 86; **Percentage** = 21.34%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 126; **Percentage** = 31.42%
2) Disagree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 166; **Percentage** = 41.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 128; **Percentage** = 31.76%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 226; **Percentage** = 56.36%
3) Neither Agree nor Disagree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 79; **Percentage** = 19.75%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 93; **Percentage** = 23.08%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 33; **Percentage** = 8.23%
4) Agree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 69; **Percentage** = 17.25%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 76; **Percentage** = 18.86%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 14; **Percentage** = 3.49%
5) Strongly Agree
    a. **Condition 1** – **N (count)** = 400; **Answered** = 12; **Percentage** = 3%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 20; **Percentage** = 4.96%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 2; **Percentage** = 0.50%

When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?

1) The recommendation(s) tell a complete message with no gaps.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 34; **Percentage** = 8.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 86; **Percentage** = 21.34%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 131; **Percentage** = 32.67%
2) The recommendation(s) have some gaps, but the overall message is clear.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 161; **Percentage** = 40.25%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 219; **Percentage** = 54.34%

    c. **Condition 3** – **N (count)** = 401; **Answered** = 223; **Percentage** = 55.61%
3) The recommendation(s) have several gaps, making it hard to follow.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 104; **Percentage** = 26%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 48; **Percentage** = 11.91%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 26; **Percentage** = 6.48%
4) The recommendation(s) have significant gaps, making it difficult to understand.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 70; **Percentage** = 17.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 37; **Percentage** = 9.18%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 15; **Percentage** = 3.74%
5) The recommendation(s) have so many gaps that it's hard to tell what the message is.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 31; **Percentage** = 7.75%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 13; **Percentage** = 3.23%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 6; **Percentage** = 1.50%

When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?

1) The recommendation(s) tell a coherent message with no inconsistencies.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 46; **Percentage** = 11.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 132; **Percentage** = 32.75%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 189; **Percentage** = 47.13%
2) The recommendation(s) have some inconsistencies, but the overall message still makes sense.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 158; **Percentage** = 39.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 184; **Percentage** = 45.66%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 166; **Percentage** = 41.40%
3) The recommendation(s) have several inconsistencies, making it hard to follow.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 106; **Percentage** = 26.50%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 53; **Percentage** = 13.15%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 33; **Percentage** = 8.23%
4) The recommendation(s) have significant inconsistencies, making it difficult to understand.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 59; **Percentage** = 14.75%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 20; **Percentage** = 4.96%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 8; **Percentage** = 2%
5) The recommendation(s) have so many inconsistencies that it's hard to tell what the message is.
    a. **Condition 1** – **N (count)** = 400; **Answered** = 31; **Percentage** = 7.75%
    b. **Condition 2** – **N (count)** = 403; **Answered** = 14; **Percentage** = 3.47%
    c. **Condition 3** – **N (count)** = 401; **Answered** = 5; **Percentage** = 1.25%

Conspiracy Beliefs Scale

The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 299; **Percentage** = 74.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 294; **Percentage** = 73.13%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 291; **Percentage** = 72.75%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 297; **Percentage** = 72.79%
    e. **Total** – **N (count)** = 1,610; **Answered** = 1,181; **Percentage** = 73.35%
2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 56; **Percentage** = 14%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 64; **Percentage** = 15.92%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 69; **Percentage** = 17.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 72; **Percentage** = 17.65%
    e. **Total** – **N (count)** = 1,610; **Answered** = 261; **Percentage** = 16.21%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 31; **Percentage** = 7.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 32; **Percentage** = 7.96%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 30; **Percentage** = 7.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 22; **Percentage** = 5.39%
    e. **Total** – **N (count)** = 1,610; **Answered** = 115; **Percentage** = 7.14%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 13; **Percentage** = 3.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 12; **Percentage** = 2.99%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 6; **Percentage** = 1.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 14; **Percentage** = 3.43%
    e. **Total** – **N (count)** = 1,610; **Answered** = 45; **Percentage** = 2.80%
5) Definitely True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 1; **Percentage** = 0.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 0; **Percentage** = 0%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 4; **Percentage** = 1%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 3; **Percentage** = 0.74%
    e. **Total** – **N (count)** = 1,610; **Answered** = 8; **Percentage** = 0.50%

Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 285; **Percentage** = 71.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 278; **Percentage** = 69.15%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 292; **Percentage** = 73%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 290; **Percentage** = 71.08%
    e. **Total** – **N (count)** = 1,610; **Answered** = 1,145; **Percentage** = 71.12%
2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 51; **Percentage** = 12.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 66; **Percentage** = 16.41%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 53; **Percentage** = 13.25%

    d. **Condition 4** – **N (count)** = 408; **Answered** = 65; **Percentage** = 15.93%
    e. **Total** – **N (count)** = 1,610; **Answered** = 235; **Percentage** = 14.60%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 33; **Percentage** = 8.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 36; **Percentage** = 8.96%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 26; **Percentage** = 6.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 28; **Percentage** = 6.86%
    e. **Total** – **N (count)** = 1,610; **Answered** = 123; **Percentage** = 7.64%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 24; **Percentage** = 6%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 13; **Percentage** = 3.23%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 25; **Percentage** = 6.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 16; **Percentage** = 3.92%
    e. **Total** – **N (count)** = 1,610; **Answered** = 78; **Percentage** = 4.84%
5) Definitely True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 7; **Percentage** = 1.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 9; **Percentage** = 2.24%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 4; **Percentage** = 1%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 9; **Percentage** = 2.21%
    e. **Total** – **N (count)** = 1,610; **Answered** = 29; **Percentage** = 1.80%

The COVID-19 virus escaped from a Chinese lab.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 57; **Percentage** = 14.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 40; **Percentage** = 9.95%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 42; **Percentage** = 10.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 43; **Percentage** = 10.54%
    e. **Total** – **N (count)** = 1,610; **Answered** = 182; **Percentage** = 11.30%
2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 68; **Percentage** = 17%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 52; **Percentage** = 12.94%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 80; **Percentage** = 20%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 59; **Percentage** = 14.46%
    e. **Total** – **N (count)** = 1,610; **Answered** = 259; **Percentage** = 16.09%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 99; **Percentage** = 24.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 125; **Percentage** = 31.09%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 105; **Percentage** = 26.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 99; **Percentage** = 24.26%
    e. **Total** – **N (count)** = 1,610; **Answered** = 428; **Percentage** = 26.58%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 113; **Percentage** = 28.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 126; **Percentage** = 31.34%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 109; **Percentage** = 27.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 135; **Percentage** = 33.09%
    e. **Total** – **N (count)** = 1,610; **Answered** = 483; **Percentage** = 30%

5) Definitely True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 63; **Percentage** = 15.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 59; **Percentage** = 14.68%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 64; **Percentage** = 16%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 72; **Percentage** = 17.65%
    e. **Total** – **N (count)** = 1,610; **Answered** = 258; **Percentage** = 16.02%

COVID-19 was created as a biological weapon.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 108; **Percentage** = 27%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 89; **Percentage** = 21.64%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 93; **Percentage** = 23.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 101; **Percentage** = 24.75%
    e. **Total** – **N (count)** = 1,610; **Answered** = 391; **Percentage** = 24.29%
2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 89; **Percentage** = 22.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 111; **Percentage** = 27.61%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 107; **Percentage** = 26.75%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 100; **Percentage** = 24.51%
    e. **Total** – **N (count)** = 1,610; **Answered** = 407; **Percentage** = 25.28%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 89; **Percentage** = 22.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 112; **Percentage** = 27.86%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 90; **Percentage** = 22.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 96; **Percentage** = 23.53%
    e. **Total** – **N (count)** = 1,610; **Answered** = 387; **Percentage** = 24.04%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 80; **Percentage** = 20%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 65; **Percentage** = 16.17%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 88; **Percentage** = 22%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 81; **Percentage** = 19.85%
    e. **Total** – **N (count)** = 1,610; **Answered** = 314; **Percentage** = 19.50%
5) Definitely True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 34; **Percentage** = 8.50%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 25; **Percentage** = 6.22%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 22; **Percentage** = 5.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 30; **Percentage** = 7.35%
    e. **Total** – **N (count)** = 1,610; **Answered** = 111; **Percentage** = 6.89%

The U.S. military imported COVID-19 into China.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 240; **Percentage** = 60%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 211; **Percentage** = 52.49%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 222; **Percentage** = 55.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 232; **Percentage** = 56.86%
    e. **Total** – **N (count)** = 1,610; **Answered** = 905; **Percentage** = 56.21%

2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 87; **Percentage** = 21.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 114; **Percentage** = 28.36%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 113; **Percentage** = 28.25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 103; **Percentage** = 25.25%
    e. **Total** – **N (count)** = 1,610; **Answered** = 417; **Percentage** = 25.90%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 54; **Percentage** = 13.50%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 55; **Percentage** = 13.68%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 48; **Percentage** = 12%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 56; **Percentage** = 13.73%
    e. **Total** – **N (count)** = 1,610; **Answered** = 213; **Percentage** = 13.25%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 13; **Percentage** = 3.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 16; **Percentage** = 3.98%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 15; **Percentage** = 3.75%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 13; **Percentage** = 3.19%
    e. **Total** – **N (count)** = 1,610; **Answered** = 57; **Percentage** = 3.54%
5) Definitely True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 6; **Percentage** = 1.50%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 6; **Percentage** = 1.49%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 2; **Percentage** = 0.50%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 4; **Percentage** = 0.98%
    e. **Total** – **N (count)** = 1,610; **Answered** = 18; **Percentage** = 1.12%

Pollution from genetically modified crops caused the spread of COVID-19.

1) Definitely Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 275; **Percentage** = 68.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 263; **Percentage** = 65.42%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 251; **Percentage** = 62.75%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 266; **Percentage** = 65.20%
    e. **Total** – **N (count)** = 1,610; **Answered** = 1,055; **Percentage** = 65.53%
2) Probably Not True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 81; **Percentage** = 20.25%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 92; **Percentage** = 22.89%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 100; **Percentage** = 25%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 102; **Percentage** = 25%
    e. **Total** – **N (count)** = 1,610; **Answered** = 375; **Percentage** = 23.29%
3) Not Sure/Cannot Decide
    a. **Condition 1** – **N (count)** = 400; **Answered** = 35; **Percentage** = 8.75%
    b. **Condition 2** – **N (count)** = 402; **Answered** = 38; **Percentage** = 9.45%
    c. **Condition 3** – **N (count)** = 400; **Answered** = 43; **Percentage** = 10.75%
    d. **Condition 4** – **N (count)** = 408; **Answered** = 29; **Percentage** = 7.11%
    e. **Total** – **N (count)** = 1,610; **Answered** = 145; **Percentage** = 9.01%
4) Probably True
    a. **Condition 1** – **N (count)** = 400; **Answered** = 9; **Percentage** = 2.25%

b. **Condition 2** – **N (count)** = 402; **Answered** = 8; **Percentage** = 1.10%
c. **Condition 3** – **N (count)** = 400; **Answered** = 5; **Percentage** = 1.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 9; **Percentage** = 2.21%
e. **Total** – **N (count)** = 1,610; **Answered** = 31; **Percentage** = 1.93%

5) Definitely True
a. **Condition 1** – **N (count)** = 400; **Answered** = 0; **Percentage** = 0%
b. **Condition 2** – **N (count)** = 402; **Answered** = 1; **Percentage** = 0.25%
c. **Condition 3** – **N (count)** = 400; **Answered** = 1; **Percentage** = 0.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 2; **Percentage** = 0.49%
e. **Total** – **N (count)** = 1,610; **Answered** = 4; **Percentage** = 0.25%

COVID-19 doesn't actually exist.

1) Definitely Not True
a. **Condition 1** – **N (count)** = 400; **Answered** = 334; **Percentage** = 83.50%
b. **Condition 2** – **N (count)** = 402; **Answered** = 332; **Percentage** = 82.59%
c. **Condition 3** – **N (count)** = 400; **Answered** = 330; **Percentage** = 82.50%
d. **Condition 4** – **N (count)** = 408; **Answered** = 349; **Percentage** = 85.54%
e. **Total** – **N (count)** = 1,610; **Answered** = 1,345; **Percentage** = 83.54%

2) Probably Not True
a. **Condition 1** – **N (count)** = 400; **Answered** = 31; **Percentage** = 7.75%
b. **Condition 2** – **N (count)** = 402; **Answered** = 42; **Percentage** = 10.45%
c. **Condition 3** – **N (count)** = 400; **Answered** = 43; **Percentage** = 10.75%
d. **Condition 4** – **N (count)** = 408; **Answered** = 35; **Percentage** = 8.58%
e. **Total** – **N (count)** = 1,610; **Answered** = 151; **Percentage** = 9.38%

3) Not Sure/Cannot Decide
a. **Condition 1** – **N (count)** = 400; **Answered** = 22; **Percentage** = 5.50%
b. **Condition 2** – **N (count)** = 402; **Answered** = 16; **Percentage** = 3.98%
c. **Condition 3** – **N (count)** = 400; **Answered** = 13; **Percentage** = 3.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 15; **Percentage** = 3.68%
e. **Total** – **N (count)** = 1,610; **Answered** = 66; **Percentage** = 4.10%

4) Probably True
a. **Condition 1** – **N (count)** = 400; **Answered** = 8; **Percentage** = 2%
b. **Condition 2** – **N (count)** = 402; **Answered** = 9; **Percentage** = 2.24%
c. **Condition 3** – **N (count)** = 400; **Answered** = 5; **Percentage** = 1.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 6; **Percentage** = 1.47%
e. **Total** – **N (count)** = 1,610; **Answered** = 28; **Percentage** = 1.74%

5) Definitely True
a. **Condition 1** – **N (count)** = 400; **Answered** = 5; **Percentage** = 1.25%
b. **Condition 2** – **N (count)** = 402; **Answered** = 3; **Percentage** = 0.75%
c. **Condition 3** – **N (count)** = 400; **Answered** = 9; **Percentage** = 2.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 3; **Percentage** = 0.74%
e. **Total** – **N (count)** = 1,610; **Answered** = 20; **Percentage** = 1.24%

The COVID-19 pandemic is/was manipulated by America's elite.

1) Definitely Not True
a. **Condition 1** – **N (count)** = 400; **Answered** = 209; **Percentage** = 52.25%

b. **Condition 2** – **N (count)** = 402; **Answered** = 193; **Percentage** = 48.01%
c. **Condition 3** – **N (count)** = 400; **Answered** = 201; **Percentage** = 50.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 200; **Percentage** = 49.02%
e. **Total** – **N (count)** = 1,610; **Answered** = 803; **Percentage** = 49.88%

2) Probably Not True
   a. **Condition 1** – **N (count)** = 400; **Answered** = 60; **Percentage** = 15%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 65; **Percentage** = 16.17%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 62; **Percentage** = 15.50%
   d. **Condition 4** – **N (count)** = 408; **Answered** = 78; **Percentage** = 19.12%
   e. **Total** – **N (count)** = 1,610; **Answered** = 265; **Percentage** = 16.46%

3) Not Sure/Cannot Decide
   a. **Condition 1** – **N (count)** = 400; **Answered** = 46; **Percentage** = 11.50%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 52; **Percentage** = 129.35%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 43; **Percentage** = %
   d. **Condition 4** – **N (count)** = 408; **Answered** = 51; **Percentage** = %
   e. **Total** – **N (count)** = 1,610; **Answered** = 192; **Percentage** = 11.93%

4) Probably True
   a. **Condition 1** – **N (count)** = 400; **Answered** = 54; **Percentage** = 13.50%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 64; **Percentage** = 15.92%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 64; **Percentage** = 16%
   d. **Condition 4** – **N (count)** = 408; **Answered** = 48; **Percentage** = 11.76%
   e. **Total** – **N (count)** = 1,610; **Answered** = 230; **Percentage** = 14.29%

5) Definitely True
   a. **Condition 1** – **N (count)** = 400; **Answered** = 31; **Percentage** = 7.75%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 28; **Percentage** = 6.97%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 30; **Percentage** = 7.50%
   d. **Condition 4** – **N (count)** = 408; **Answered** = 31; **Percentage** = 7.60%
   e. **Total** – **N (count)** = 1,610; **Answered** = 120; **Percentage** = 7.45%

Big pharmaceutical companies are behind the spread of COVID-19.

1) Definitely Not True
   a. **Condition 1** – **N (count)** = 400; **Answered** = 216; **Percentage** = 54%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 195; **Percentage** = 48.51%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 216; **Percentage** = 54%
   d. **Condition 4** – **N (count)** = 408; **Answered** = 215; **Percentage** = 52.70%
   e. **Total** – **N (count)** = 1,610; **Answered** = 842; **Percentage** = 52.30%

2) Probably Not True
   a. **Condition 1** – **N (count)** = 400; **Answered** = 77; **Percentage** = 19.25%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 99; **Percentage** = 24.63%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 78; **Percentage** = 19.50%
   d. **Condition 4** – **N (count)** = 408; **Answered** = 85; **Percentage** = 20.83%
   e. **Total** – **N (count)** = 1,610; **Answered** = 339; **Percentage** = 21.06%

3) Not Sure/Cannot Decide
   a. **Condition 1** – **N (count)** = 400; **Answered** = 48; **Percentage** = 12%
   b. **Condition 2** – **N (count)** = 402; **Answered** = 55; **Percentage** = 13.68%
   c. **Condition 3** – **N (count)** = 400; **Answered** = 56; **Percentage** = 14%

d. **Condition 4** – **N (count)** = 408; **Answered** = 52; **Percentage** = 12.75%
e. **Total** – **N (count)** = 1,610; **Answered** = 211; **Percentage** = 13.11%

4) Probably True
a. **Condition 1** – **N (count)** = 400; **Answered** = 42; **Percentage** = 10.50%
b. **Condition 2** – **N (count)** = 402; **Answered** = 39; **Percentage** = 9.70%
c. **Condition 3** – **N (count)** = 400; **Answered** = 44; **Percentage** = 11%
d. **Condition 4** – **N (count)** = 408; **Answered** = 44; **Percentage** = 10.78%
e. **Total** – **N (count)** = 1,610; **Answered** = 169; **Percentage** = 10.50%

5) Definitely True
a. **Condition 1** – **N (count)** = 400; **Answered** = 17; **Percentage** = 4.25%
b. **Condition 2** – **N (count)** = 402; **Answered** = 14; **Percentage** = 3.48%
c. **Condition 3** – **N (count)** = 400; **Answered** = 6; **Percentage** = 1.50%
d. **Condition 4** – **N (count)** = 408; **Answered** = 12; **Percentage** = 2.94%
e. **Total** – **N (count)** = 1,610; **Answered** = 49; **Percentage** = 3.04%

COVID-19 death rates are inflated.

1) Definitely Not True
a. **Condition 1** – **N (count)** = 400; **Answered** = 164; **Percentage** = 41%
b. **Condition 2** – **N (count)** = 402; **Answered** = 140; **Percentage** = 34.83%
c. **Condition 3** – **N (count)** = 400; **Answered** = 145; **Percentage** = 36.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 140; **Percentage** = 34.31%
e. **Total** – **N (count)** = 1,610; **Answered** = 589; **Percentage** = 36.58%

2) Probably Not True
a. **Condition 1** – **N (count)** = 400; **Answered** = 66; **Percentage** = 16.50%
b. **Condition 2** – **N (count)** = 402; **Answered** = 74; **Percentage** = 18.41%
c. **Condition 3** – **N (count)** = 400; **Answered** = 82; **Percentage** = 20.50%
d. **Condition 4** – **N (count)** = 408; **Answered** = 89; **Percentage** = 21.81%
e. **Total** – **N (count)** = 1,610; **Answered** = 311; **Percentage** = 19.32%

3) Not Sure/Cannot Decide
a. **Condition 1** – **N (count)** = 400; **Answered** = 45; **Percentage** = 11.25%
b. **Condition 2** – **N (count)** = 402; **Answered** = 56; **Percentage** = 13.93%
c. **Condition 3** – **N (count)** = 400; **Answered** = 45; **Percentage** = 11.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 42; **Percentage** = 10.29%
e. **Total** – **N (count)** = 1,610; **Answered** = 188; **Percentage** = 11.68%

4) Probably True
a. **Condition 1** – **N (count)** = 400; **Answered** = 68; **Percentage** = 17%
b. **Condition 2** – **N (count)** = 402; **Answered** = 71; **Percentage** = 17.66%
c. **Condition 3** – **N (count)** = 400; **Answered** = 77; **Percentage** = 19.25%
d. **Condition 4** – **N (count)** = 408; **Answered** = 81; **Percentage** = 19.85%
e. **Total** – **N (count)** = 1,610; **Answered** = 297; **Percentage** = 18.45%

5) Definitely True
a. **Condition 1** – **N (count)** = 400; **Answered** = 57; **Percentage** = 14.25%
b. **Condition 2** – **N (count)** = 402; **Answered** = 61; **Percentage** = 15.17%
c. **Condition 3** – **N (count)** = 400; **Answered** = 51; **Percentage** = 12.75%
d. **Condition 4** – **N (count)** = 408; **Answered** = 56; **Percentage** = 13.73%
e. **Total** – **N (count)** = 1,610; **Answered** = 225; **Percentage** = 13.98%

APPENDIX P

STUDY 2 STATISTICAL TESTS

One-Way ANOVA and Tukey HSD Test Results

Desired confidence level for post-hoc intervals = 95

Perceived Reliability and Effectiveness

- "Organization A is a **reliable** source for COVID-19 testing recommendations." *[strongly disagree (1)-strongly agree (5)]*
    - **Condition 1** – **N (count)** = 406; **Mean** = 3.17; **Std. Dev.** = 1.21
    - **Condition 2** – **N (count)** = 409; **Mean** = 3.46; **Std. Dev.** = 1.11
    - **Condition 3** – **N (count)** = 409; **Mean** = 3.83; **Std. Dev.** = 0.96
        - **Sum of Squares Between Groups** = 89.2149; **df** = 2; **Variance** = 44.6074; **F** = 37.0094; **p** < 0.0000
        - **Sum of Squares Within Groups** = 1471.6701; **df** = 1221; **Variance** = 1.2053
        - **Sum of Squares Total** = 1560.8850; **df** = 1223

      Tukey HSD Post-hoc Test...
      Group 1 vs Group 2: Diff=0.2900, 95%CI=0.1096 to 0.4704, p=0.0005
      Group 1 vs Group 3: Diff=0.6600, 95%CI=0.4796 to 0.8404, p=0.0000
      Group 2 vs Group 3: Diff=0.3700, 95%CI=0.1899 to 0.5501, p=0.0000

- "Organization A's recommendation(s) are **convincing**." *[strongly disagree (1)-strongly agree(5)]*
    - **Condition 1** – **N (count)** = 406; **Mean** = 3.10; **Std. Dev.** = 1.14
    - **Condition 2** – **N (count)** = 409; **Mean** = 3.04; **Std. Dev.** = 1.16
    - **Condition 3** – **N (count)** = 409; **Mean** = 3.61; **Std. Dev.** = 1.10
        - **Sum of Squares Between Groups** = 80.1781; **df** = 2; **Variance** = 40.0891; **F** = 31.1970; **p** < 0.0000
        - **Sum of Squares Within Groups** = 1569.0228; **df** = 1221; **Variance** = 1.2850
        - **Sum of Squares Total** = 1649.2009; **df** = 1223

      Tukey HSD Post-hoc Test...
      Group 1 vs Group 2: Diff=-0.0600, 95%CI=-0.2463 to 0.1263, p=0.7303
      Group 1 vs Group 3: Diff=0.5100, 95%CI=0.3237 to 0.6963, p=0.0000
      Group 2 vs Group 3: Diff=0.5700, 95%CI=0.3840 to 0.7560, p=0.0000

- "Organization A's recommendation(s) are **important** to me." *[strongly disagree (1)-strongly agree(5)]*
    - **Condition 1** – **N (count)** = 406; **Mean** = 3.20; **Std. Dev.** = 1.20
    - **Condition 2** – **N (count)** = 409; **Mean** = 3.22; **Std. Dev.** = 1.26
    - **Condition 3** – **N (count)** = 409; **Mean** = 3.55; **Std. Dev.** = 1.21
        - **Sum of Squares Between Groups** = 31.5563; **df** = 2; **Variance** = 15.7782; **F** = 10.5372; **p** < 0.0000

- **Sum of Squares Within Groups** = 1828.2936; **df** = 1221; **Variance** = 1.4974
- **Sum of Squares Total** = 1859.8499; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.0200, 95%CI=-0.1811 to 0.2211, p=0.9704
Group 1 vs Group 3: Diff=0.3500, 95%CI=0.1489 to 0.5511, p=0.0001
Group 2 vs Group 3: Diff=0.3300, 95%CI=0.1293 to 0.5307, p=0.0003

- "Organization A's recommendation(s) **helped me feel confident** about best COVID-19 testing practices." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.87; **Std. Dev.** = 1.20
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.99; **Std. Dev.** = 1.25
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.40; **Std. Dev.** = 1.16
    - **Sum of Squares Between Groups** = 63.0357; **df** = 2; **Variance** = 31.5178; **F** = 21.7456; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1769.7048; **df** = 1221; **Variance** = 1.4494
    - **Sum of Squares Total** = 1832.7405; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.1200, 95%CI=-0.0778 to 0.3178, p=0.3294
  Group 1 vs Group 3: Diff=0.5300, 95%CI=0.3322 to 0.7278, p=0.0000
  Group 2 vs Group 3: Diff=0.4100, 95%CI=0.2125 to 0.6075, p=0.0000

- "Organization A's recommendation(s) would **help my friends feel confident** about best COVID-19 testing practices." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.88; **Std. Dev.** = 1.11
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.00; **Std. Dev.** = 1.10
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.38; **Std. Dev.** = 1.05
    - **Sum of Squares Between Groups** = 55.6046; **df** = 2; **Variance** = 27.8023; **F** = 23.5332; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1442.5005; **df** = 1221; **Variance** = 1.1814
    - **Sum of Squares Total** = 1498.1051; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.1200, 95%CI=-0.0586 to 0.2986, p=0.2564
  Group 1 vs Group 3: Diff=0.5000, 95%CI=0.3214 to 0.6786, p=0.0000
  Group 2 vs Group 3: Diff=0.3800, 95%CI=0.2017 to 0.5583, p=0.0000

- "Organization A's recommendation(s) put **thoughts** in my mind **about wanting to get tested for COVID-19**." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.83; **Std. Dev.** = 1.24
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.84; **Std. Dev.** = 1.33
  - **Condition 3** – **N (count)** = 409; **Mean** = 2.92; **Std. Dev.** = 1.26
    - **Sum of Squares Between Groups** = 1.9871; **df** = 2; **Variance** = 0.9936; **F** = 0.6090; **p** = 0.5441

- **Sum of Squares Within Groups** = 1992.1800; **df** = 1221; **Variance** = 1.6316
- **Sum of Squares Total** = 1994.1671; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.0100, 95%CI=-0.1999 to 0.2199, p=0.9925
Group 1 vs Group 3: Diff=0.0900, 95%CI=-0.1199 to 0.2999, p=0.5734
Group 2 vs Group 3: Diff=0.0800, 95%CI=-0.1295 to 0.2895, p=0.6432

- "Organization A's recommendation(s) put **thoughts** in my mind **about telling others to get tested for COVID-19**." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.74; **Std. Dev.** = 1.22
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.71; **Std. Dev.** = 1.31
  - **Condition 3** – **N (count)** = 409; **Mean** = 2.85; **Std. Dev.** = 1.28
    - **Sum of Squares Between Groups** = 4.4423; **df** = 2; **Variance** = 2.2212; **F** = 1.3757; **p** = 0.2531
    - **Sum of Squares Within Groups** = 1971.4380; **df** = 1221; **Variance** = 1.6146
    - **Sum of Squares Total** = 1975.8803; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=-0.0300, 95%CI=-0.2388 to 0.1788, p=0.9393
  Group 1 vs Group 3: Diff=0.1100, 95%CI=-0.0988 to 0.3188, p=0.4323
  Group 2 vs Group 3: Diff=0.1400, 95%CI=-0.0684 to 0.3484, p=0.2566

- "Organization A's recommendation(s) are **confusing**." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.14; **Std. Dev.** = 1.36
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.29; **Std. Dev.** = 1.22
  - **Condition 3** – **N (count)** = 409; **Mean** = 1.79; **Std. Dev.** = 0.93
    - **Sum of Squares Between Groups** = 379.4344; **df** = 2; **Variance** = 189.7172; **F** = 135.5254; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1709.2344; **df** = 1221; **Variance** = 1.3999
    - **Sum of Squares Total** = 2088.6688; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=-0.8500, 95%CI=-1.0444 to -0.6556, p=0.0000
  Group 1 vs Group 3: Diff=-1.3500, 95%CI=-1.5444 to -1.1556, p=0.0000
  Group 2 vs Group 3: Diff=-0.5000, 95%CI=-0.6941 to -0.3059, p=0.0000

- "Organization A's recommendation(s) are **contradictory/inconsistent**." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.34; **Std. Dev.** = 1.30
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.33; **Std. Dev.** = 1.18
  - **Condition 3** – **N (count)** = 409; **Mean** = 1.83; **Std. Dev.** = 0.90
    - **Sum of Squares Between Groups** = 481.8886; **df** = 2; **Variance** = 240.9443; **F** = 185.8418; **p** < 0.0000

- **Sum of Squares Within Groups** = 1583.0292; **df** = 1221; **Variance** = 1.2965
- **Sum of Squares Total** = 2064.9178; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=-1.0100, 95%CI=-1.1971 to -0.8229, p=0.0000
Group 1 vs Group 3: Diff=-1.5100, 95%CI=-1.6971 to -1.3229, p=0.0000
Group 2 vs Group 3: Diff=-0.5000, 95%CI=-0.6868 to -0.3132, p=0.0000

- "Organization A's recommendation(s) are **clear/make sense**." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.99; **Std. Dev.** = 1.23
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.56; **Std. Dev.** = 1.22
  - **Condition 3** – **N (count)** = 409; **Mean** = 4.08; **Std. Dev.** = 0.94
    - **Sum of Squares Between Groups** = 242.2161; **df** = 2; **Variance** = 121.1080; **F** = 93.5608; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1580.5005; **df** = 1221; **Variance** = 1.2944
    - **Sum of Squares Total** = 1822.7166; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.5700, 95%CI=0.3830 to 0.7570, p=0.0000
  Group 1 vs Group 3: Diff=1.0900, 95%CI=0.9030 to 1.2770, p=0.0000
  Group 2 vs Group 3: Diff=0.5200, 95%CI=0.3334 to 0.7066, p=0.0000

Perceived Credibility

- "I think Organization A's message(s) are ___." *[very inaccurate (1)-accurate (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.12; **Std. Dev.** = 1.08
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.33; **Std. Dev.** = 1.14
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.84; **Std. Dev.** = 0.97
    - **Sum of Squares Between Groups** = 111.8588; **df** = 2; **Variance** = 55.9294; **F** = 49.2528; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1386.5160; **df** = 1221; **Variance** = 1.1356
    - **Sum of Squares Total** = 1498.3748; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.2100, 95%CI=0.0349 to 0.3851, p=0.0137
  Group 1 vs Group 3: Diff=0.7200, 95%CI=0.5449 to 0.8951, p=0.0000
  Group 2 vs Group 3: Diff=0.5100, 95%CI=0.3352 to 0.6848, p=0.0000

- "I think Organization A's message(s) are ___." *[very untrustworthy (1)-trustworthy (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.11; **Std. Dev.** = 1.11
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.36; **Std. Dev.** = 1.13
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.79; **Std. Dev.** = 1.00
    - **Sum of Squares Between Groups** = 96.4804; **df** = 2; **Variance** = 48.2402; **F** = 41.2481; **p** < 0.0000

- **Sum of Squares Within Groups** = 1427.9757; **df** = 1221; **Variance** = 1.1695
- **Sum of Squares Total** = 1524.4561; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.2500, 95%CI=0.0723 to 0.4277, p=0.0028
Group 1 vs Group 3: Diff=0.6800, 95%CI=0.5023 to 0.8577, p=0.0000
Group 2 vs Group 3: Diff=0.4300, 95%CI=0.2526 to 0.6074, p=0.0000

- "I think Organization A's message(s) are ___." *[very biased (1)-very unbiased (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.11; **Std. Dev.** = 1.06
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.21; **Std. Dev.** = 1.16
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.54; **Std. Dev.** = 1.09
    - **Sum of Squares Between Groups** = 41.3242; **df** = 2; **Variance** = 20.6621; **F** = 16.9454; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1488.8076; **df** = 1221; **Variance** = 1.2193
    - **Sum of Squares Total** = 1530.1318; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.1000, 95%CI=-0.0815 to 0.2815, p=0.3995
  Group 1 vs Group 3: Diff=0.4300, 95%CI=0.2485 to 0.6115, p=0.0000
  Group 2 vs Group 3: Diff=0.3300, 95%CI=0.1489 to 0.5111, p=0.0001

- "Overall, Organization A is a _____ communicator." *[very weak (1)-very strong (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.85; **Std. Dev.** = 1.10
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.15; **Std. Dev.** = 1.07
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.67; **Std. Dev.** = 0.87
    - **Sum of Squares Between Groups** = 140.3859; **df** = 2; **Variance** = 70.1930; **F** = 67.6988; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1265.9844; **df** = 1221; **Variance** = 1.0368
    - **Sum of Squares Total** = 1406.3703; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.3000, 95%CI=0.1327 to 0.4673, p=0.0001
  Group 1 vs Group 3: Diff=0.8200, 95%CI=0.6527 to 0.9873, p=0.0000
  Group 2 vs Group 3: Diff=0.5200, 95%CI=0.3530 to 0.6870, p=0.0000

- "Overall, I think Organization A is a ____ source for COVID-19 information." *[very untrustworthy (1)-very trustworthy (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.09; **Std. Dev.** = 1.13
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.28; **Std. Dev.** = 1.11
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.73; **Std. Dev.** = 0.97
    - **Sum of Squares Between Groups** = 88.1411; **df** = 2; **Variance** = 44.0705; **F** = 38.3337; **p** < 0.0000

- **Sum of Squares Within Groups** = 1403.7285; **df** = 1221; **Variance** = 1.1497
- **Sum of Squares Total** = 1491.8696; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.1900, 95%CI=0.0138 to 0.3662, p=0.0309
Group 1 vs Group 3: Diff=0.6400, 95%CI=0.4638 to 0.8162, p=0.0000
Group 2 vs Group 3: Diff=0.4500, 95%CI=0.2741 to 0.6259, p=0.0000

Perceived Trust in Government and Scientists

- "If Organization A was appointed an official source for COVID-19 information, their message(s) would have ____ on my trust in the government" *[a strong negative impact (1)-a strong positive impact (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.83; **Std. Dev.** = 1.07
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.17; **Std. Dev.** = 1.04
  - **Condition 3** – **N (count)** = 409; **Mean** =3.45 ; **Std. Dev.** = 0.98
    - **Sum of Squares Between Groups** = 78.5472; **df** = 2; **Variance** = 39.2736; **F** = 36.9774; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1296.8205; **df** = 1221; **Variance** = 1.0621
    - **Sum of Squares Total** = 1375.3677; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.3400, 95%CI=0.1706 to 0.5094, p=0.0000
  Group 1 vs Group 3: Diff=0.6200, 95%CI=0.4506 to 0.7894, p=0.0000
  Group 2 vs Group 3: Diff=0.2800, 95%CI=0.1109 to 0.4491, p=0.0003

- "When it came to COVID-19 communication, the federal government carried out its duties very well." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.49; **Std. Dev.** = 1.16
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.61; **Std. Dev.** = 1.25
  - **Condition 3** – **N (count)** = 409; **Mean** = 2.79; **Std. Dev.** = 1.30
    - **Sum of Squares Between Groups** = 18.5915; **df** = 2; **Variance** = 9.2957; **F** = 6.0631; **p** = 0.0024
    - **Sum of Squares Within Groups** = 1871.9880; **df** = 1221; **Variance** = 1.5332
    - **Sum of Squares Total** = 1890.5795; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.1200, 95%CI=-0.0835 to 0.3235, p=0.3499
  Group 1 vs Group 3: Diff=0.3000, 95%CI=0.0965 to 0.5035, p=0.0016
  Group 2 vs Group 3: Diff=0.1800, 95%CI=-0.0231 to 0.3831, p=0.0946

- "When it came to COVID-19 communication, the federal government acted in the best interests of citizens." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.85; **Std. Dev.** = 1.28
  - **Condition 2** – **N (count)** = 409; **Mean** = 2.81; **Std. Dev.** = 1.29
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.02; **Std. Dev.** = 1.22

- **Sum of Squares Between Groups** = 10.1648; **df** = 2; **Variance** = 5.0824; **F** = 3.1827; **p** = 0.0418
- **Sum of Squares Within Groups** = 1949.7720; **df** = 1221; **Variance** = 1.5969
- **Sum of Squares Total** = 1959.9368; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=-0.0400, 95%CI=-0.2477 to 0.1677, p=0.8936
Group 1 vs Group 3: Diff=0.1700, 95%CI=-0.0377 to 0.3777, p=0.1333
Group 2 vs Group 3: Diff=0.2100, 95%CI=0.0027 to 0.4173, p=0.0462

- "If Organization A was appointed an official source for COVID-19 information, their message(s) would have ____ on my trust in scientists" *[a strong negative impact (1)-a strong positive impact (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 2.93; **Std. Dev.** = 1.08
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.16; **Std. Dev.** = 1.00
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.47; **Std. Dev.** = 0.96
    - **Sum of Squares Between Groups** = 59.8703; **df** = 2; **Variance** = 29.9352; **F** = 29.0916; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1256.4048; **df** = 1221; **Variance** = 1.0290
    - **Sum of Squares Total** = 1316.2751; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.2300, 95%CI=0.0633 to 0.3967, p=0.0035
  Group 1 vs Group 3: Diff=0.5400, 95%CI=0.3733 to 0.7067, p=0.0000
  Group 2 vs Group 3: Diff=0.3100, 95%CI=0.1436 to 0.4764, p=0.0000

- "When it came to COVID-19 communication, scientists carried out their duties very well." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.35; **Std. Dev.** = 1.22
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.34; **Std. Dev.** = 1.27
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.34; **Std. Dev.** = 1.20
    - **Sum of Squares Between Groups** = 0.0271; **df** = 2; **Variance** = 0.0136; **F** = 0.0090; **p** = 0.9911
    - **Sum of Squares Within Groups** = 1848.3852; **df** = 1221 ; **Variance** = 1.5138
    - **Sum of Squares Total** = 1848.4123; **df** = 1223

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=-0.0100, 95%CI=-0.2122 to 0.1922, p=0.9922
  Group 1 vs Group 3: Diff=-0.0100, 95%CI=-0.2122 to 0.1922, p=0.9922
  Group 2 vs Group 3: Diff=0.0000, 95%CI=-0.2018 to 0.2018, p=0.9948

- "When it came to COVID-19 communication, scientists acted in the best interests of citizens." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 406; **Mean** = 3.44; **Std. Dev.** = 1.27
  - **Condition 2** – **N (count)** = 409; **Mean** = 3.44; **Std. Dev.** = 1.29
  - **Condition 3** – **N (count)** = 409; **Mean** = 3.49; **Std. Dev.** = 1.25

- **Sum of Squares Between Groups** = 0.6808; **df** = 2; **Variance** = 0.3404; **F** = 0.2110; **p** = 0.8098
- **Sum of Squares Within Groups** = 1969.6773; **df** = 1221; **Variance** = 1.6132
- **Sum of Squares Total** = 1970.3581; **df** = 1223

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.0000, 95%CI=-0.2087 to 0.2087, p=0.9948
Group 1 vs Group 3: Diff=0.0500, 95%CI=-0.1587 to 0.2587, p=0.8403
Group 2 vs Group 3: Diff=0.0500, 95%CI=-0.1583 to 0.2583, p=0.8398

Narrative Gap Test

- Supposition: "According to Organization A, if you are more than 6 feet away from a person who is infected with COVID-19, you do not need to test." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 400; **Mean** = 3.33; **Std. Dev.** = 1.26
  - **Condition 2** – **N (count)** = 403; **Mean** = 3.20; **Std. Dev.** = 1.32
  - **Condition 3** – **N (count)** = 401; **Mean** = 2.82; **Std. Dev.** = 1.17
    - **Sum of Squares Between Groups** = 56.2955; **df** = 2; **Variance** = 28.1478; **F** = 17.9677; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1881.4572; **df** = 1201; **Variance** = 1.5666
    - **Sum of Squares Total** = 1937.7527; **df** = 1203

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=-0.1300, 95%CI=-0.3372 to 0.0772, p=0.3049
  Group 1 vs Group 3: Diff=-0.5100, 95%CI=-0.7175 to -0.3025, p=0.0000
  Group 2 vs Group 3: Diff=-0.3800, 95%CI=-0.5871 to -0.1729, p=0.0001

- Supposition: "According to Organization A, if you are in close contact with someone who is infected with COVID-19 for less than 15 minutes, you do not need to test." *[strongly disagree (1)-strongly agree (5)]*
  - **Condition 1** – **N (count)** = 400; **Mean** = 2.96; **Std. Dev.** = 1.27
  - **Condition 2** – **N (count)** = 403; **Mean** = 3.04; **Std. Dev.** = 1.26
  - **Condition 3** – **N (count)** = 401; **Mean** = 2.62; **Std. Dev.** = 1.10
    - **Sum of Squares Between Groups** = 39.9341; **df** = 2; **Variance** = 19.9671; **F** = 13.5808; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1765.7623; **df** = 1201; **Variance** = 1.4702
    - **Sum of Squares Total** = 1805.6964; **df** = 1203

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.0800, 95%CI=-0.1208 to 0.2808, p=0.6183
  Group 1 vs Group 3: Diff=-0.3400, 95%CI=-0.5410 to -0.1390, p=0.0002
  Group 2 vs Group 3: Diff=-0.4200, 95%CI=-0.6206 to -0.2194, p=0.0000

- Supposition: "According to Organization A, if you are in close contact with someone who is showing symptoms of COVID-19 but has not yet confirmed if

they are positive, you do not need to test." *[strongly disagree (1)-strongly agree (5)]*

- **Condition 1** – **N (count)** = 400; **Mean** = 2.45; **Std. Dev.** = 1.07
- **Condition 2** – **N (count)** = 403; **Mean** = 2.54; **Std. Dev.** = 1.16
- **Condition 3** – **N (count)** = 401; **Mean** = 1.85; **Std. Dev.** = 0.75
  - **Sum of Squares Between Groups** = 112.9476; **df** = 2; **Variance** = 112.9476; **F** = 55.4694; **p** < 0.0000
  - **Sum of Squares Within Groups** = 1222.7463; **df** = 1201; **Variance** = 1.0181
  - **Sum of Squares Total** = 1335.6939; **df** = 1203

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.0900, 95%CI=-0.0771 to 0.2571, p=0.4160
  Group 1 vs Group 3: Diff=-0.6000, 95%CI=-0.7673 to -0.4327, p=0.0000
  Group 2 vs Group 3: Diff=-0.6900, 95%CI=-0.8570 to -0.5230, p=0.0000

- "When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?" *[The recommendation has so many gaps that it's hard to tell what the message is (1)- The recommendation tells a complete message with no gaps (5)]*
  - **Condition 1** – **N (count)** = 400; **Mean** = 3.24; **Std. Dev.** = 1.08
  - **Condition 2** – **N (count)** = 403; **Mean** = 3.81; **Std. Dev.** = 0.98
  - **Condition 3** – **N (count)** = 401; **Mean** = 4.14; **Std. Dev.** = 0.81
    - **Sum of Squares Between Groups** = 166.0269; **df** = 2; **Variance** = 83.0135; **F** = 89.5035; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1113.9144; **df** = 1201; **Variance** = 0.9275
    - **Sum of Squares Total** = 1279.9413; **df** = 1203

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=0.5700, 95%CI=0.4105 to 0.7295, p=0.0000
    Group 1 vs Group 3: Diff=0.9000, 95%CI=0.7404 to 1.0596, p=0.0000
    Group 2 vs Group 3: Diff=0.3300, 95%CI=0.1706 to 0.4894, p=0.0000

- "When reading Organization A's COVID-19 testing recommendation(s), which of the following statements do you agree with the **most**?" *[The recommendation has so many inconsistencies that it's hard to tell what the message is (1)- The recommendation tells a coherent message with no inconsistencies (5)]*
  - **Condition 1** – **N (count)** = 400; **Mean** = 3.32; **Std. Dev.** = 1.10
  - **Condition 2** – **N (count)** = 403; **Mean** = 3.99; **Std. Dev.** = 0.98
  - **Condition 3** – **N (count)** = 401; **Mean** = 4.31; **Std. Dev.** = 0.81
    - **Sum of Squares Between Groups** = 204.4177; **df** = 2; **Variance** = 102.2088; **F** = 108.5049; **p** < 0.0000
    - **Sum of Squares Within Groups** = 1131.3108; **df** = 1201; **Variance** = 0.9420
    - **Sum of Squares Total** = 1335.7285; **df** = 1203

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=0.6700, 95%CI=0.5093 to 0.8307, p=0.0000

Group 1 vs Group 3: Diff=0.9900, 95%CI=0.8291 to 1.1509, p=0.0000
Group 2 vs Group 3: Diff=0.3200, 95%CI=0.1594 to 0.4806, p=0.0000

Conspiracy Beliefs Scale

- The launch of 5G networks coincided with the outbreak of the COVID-19 pandemic. The two events are connected. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.40; **Std. Dev.** = 0.79
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.41; **Std. Dev.** = 0.76
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.41; **Std. Dev.** = 0.78
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.42; **Std. Dev.** = 0.80
        - **Sum of Squares Between Groups** = 0.0808; **df** = 3; **Variance** = 0.0269; **F** = 0.0440; **p** = 0.9877
        - **Sum of Squares Within Groups** = 983.8651; **df** = 1606; **Variance** = 0.6126
        - **Sum of Squares Total** = 983.9459; **df** = 1609

      Tukey HSD Post-hoc Test...
      Group 1 vs Group 2: Diff=0.0100, 95%CI=-0.1321 to 0.1521, p=0.9977
      Group 1 vs Group 3: Diff=0.0100, 95%CI=-0.1323 to 0.1523, p=0.9977
      Group 1 vs Group 4: Diff=0.0200, 95%CI=-0.1216 to 0.1616, p=0.9836
      Group 2 vs Group 3: Diff=0.0000, 95%CI=-0.1421 to 0.1421, p=1.0000
      Group 2 vs Group 4: Diff=0.0100, 95%CI=-0.1314 to 0.1514, p=0.9977
      Group 3 vs Group 4: Diff=0.0100, 95%CI=-0.1316 to 0.1516, p=0.9977

- Bill Gates played a role in the creation and distribution of COVID-19 for the purpose of microchipping people. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.54; **Std. Dev.** = 0.99
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.53; **Std. Dev.** = 0.95
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.49; **Std. Dev.** = 0.94
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.50; **Std. Dev.** = 0.94
        - **Sum of Squares Between Groups** = 0.6822; **df** = 3; **Variance** = 0.2274; **F** = 0.2493; **p** = 0.8619
        - **Sum of Squares Within Groups** = 1465.1440; **df** = 1606; **Variance** = 0.9123
        - **Sum of Squares Total** = 1465.8262; **df** = 1609

      Tukey HSD Post-hoc Test...
      Group 1 vs Group 2: Diff=-0.0100, 95%CI=-0.1834 to 0.1634, p=0.9988
      Group 1 vs Group 3: Diff=-0.0500, 95%CI=-0.2236 to 0.1236, p=0.8808
      Group 1 vs Group 4: Diff=-0.0400, 95%CI=-0.2128 to 0.1328, p=0.9335
      Group 2 vs Group 3: Diff=-0.0400, 95%CI=-0.2134 to 0.1334, p=0.9342
      Group 2 vs Group 4: Diff=-0.0300, 95%CI=-0.2026 to 0.1426, p=0.9702
      Group 3 vs Group 4: Diff=0.0100, 95%CI=-0.1628 to 0.1828, p=0.9987

- The COVID-19 virus escaped from a Chinese lab. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 3.14; **Std. Dev.** = 1.28

- **Condition 2** – **N (count)** = 402; **Mean** = 3.28; **Std. Dev.** = 1.16
- **Condition 3** – **N (count)** = 400; **Mean** = 3.18; **Std. Dev.** = 1.23
- **Condition 4** – **N (count)** = 408; **Mean** = 3.33; **Std. Dev.** = 1.22
    - **Sum of Squares Between Groups** = 9.3101; **df** = 3; **Variance** = 3.1034; **F** = 2.0743; **p** = 0.1017
    - **Sum of Squares Within Groups** = 2402.7331; **df** = 1606 ; **Variance** = 1.4961
    - **Sum of Squares Total** = 2412.0432; **df** = 1609

  Tukey HSD Post-hoc Test...
  Group 1 vs Group 2: Diff=0.1400, 95%CI=-0.0821 to 0.3621, p=0.3671
  Group 1 vs Group 3: Diff=0.0400, 95%CI=-0.1823 to 0.2623, p=0.9672
  Group 1 vs Group 4: Diff=0.1900, 95%CI=-0.0312 to 0.4112, p=0.1214
  Group 2 vs Group 3: Diff=-0.1000, 95%CI=-0.3221 to 0.1221, p=0.6537
  Group 2 vs Group 4: Diff=0.0500, 95%CI=-0.1710 to 0.2710, p=0.9376
  Group 3 vs Group 4: Diff=0.1500, 95%CI=-0.0712 to 0.3712, p=0.3018

- COVID-19 was created as a biological weapon. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 2.61; **Std. Dev.** = 1.30
    - **Condition 2** – **N (count)** = 402; **Mean** = 2.57; **Std. Dev.** = 1.18
    - **Condition 3** – **N (count)** = 400; **Mean** = 2.60; **Std. Dev.** = 1.22
    - **Condition 4** – **N (count)** = 408; **Mean** = 2.61; **Std. Dev.** = 1.26
        - **Sum of Squares Between Groups** = 0.4328; **df** = 3; **Variance** = 0.1443; **F** = 0.0937; **p** = 0.9635
        - **Sum of Squares Within Groups** = 2472.6872; **df** = 1606; **Variance** = 1.5397
        - **Sum of Squares Total** = 2473.1200; **df** = 1609

      Tukey HSD Post-hoc Test...
      Group 1 vs Group 2: Diff=-0.0400, 95%CI=-0.2653 to 0.1853, p=0.9684
      Group 1 vs Group 3: Diff=-0.0100, 95%CI=-0.2356 to 0.2156, p=0.9992
      Group 1 vs Group 4: Diff=0.0000, 95%CI=-0.2244 to 0.2244, p=1.0000
      Group 2 vs Group 3: Diff=0.0300, 95%CI=-0.1953 to 0.2553, p=0.9862
      Group 2 vs Group 4: Diff=0.0400, 95%CI=-0.1842 to 0.2642, p=0.9679
      Group 3 vs Group 4: Diff=0.0100, 95%CI=-0.2144 to 0.2344, p=0.9992

- The U.S. military imported COVID-19 into China. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.65; **Std. Dev.** = 0.94
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.74; **Std. Dev.** = 0.94
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.66; **Std. Dev.** = 0.87
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.66; **Std. Dev.** = 0.90
        - **Sum of Squares Between Groups** = 2.1203; **df** = 3; **Variance** = 0.7068; **F** = 0.8480; **p** = 0.4676
        - **Sum of Squares Within Groups** = 1338.5531; **df** = 1606; **Variance** = 0.8335
        - **Sum of Squares Total** = 1340.6734; **df** = 1609

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.0900, 95%CI=-0.0757 to 0.2557, p=0.5021
Group 1 vs Group 3: Diff=0.0100, 95%CI=-0.1560 to 0.1760, p=0.9985
Group 1 vs Group 4: Diff=0.0100, 95%CI=-0.1551 to 0.1751, p=0.9985
Group 2 vs Group 3: Diff=-0.0800, 95%CI=-0.2457 to 0.0857, p=0.6009
Group 2 vs Group 4: Diff=-0.0800, 95%CI=-0.2449 to 0.0849, p=0.5970
Group 3 vs Group 4: Diff=0.0000, 95%CI=-0.1651 to 0.1651, p=1.0000

- Pollution from genetically modified crops caused the spread of COVID-19. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.45; **Std. Dev.** = 0.75
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.49; **Std. Dev.** = 0.77
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.51; **Std. Dev.** = 0.76
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.48; **Std. Dev.** = 0.76
        - **Sum of Squares Between Groups** = 0.7502; **df** = 3; **Variance** = 0.2501; **F** = 0.4329; **p** = 0.7295
        - **Sum of Squares Within Groups** = 927.7360; **df** = 1606; **Variance** = 0.5777
        - **Sum of Squares Total** = 928.4862; **df** = 1609

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=0.0400, 95%CI=-0.0980 to 0.1780, p=0.8787
    Group 1 vs Group 3: Diff=0.0600, 95%CI=-0.0782 to 0.1982, p=0.6794
    Group 1 vs Group 4: Diff=0.0300, 95%CI=-0.1075 to 0.1675, p=0.9436
    Group 2 vs Group 3: Diff=0.0200, 95%CI=-0.1180 to 0.1580, p=0.9824
    Group 2 vs Group 4: Diff=-0.0100, 95%CI=-0.1473 to 0.1273, p=0.9975
    Group 3 vs Group 4: Diff=-0.0300, 95%CI=-0.1675 to 0.1075, p=0.9436

- COVID-19 doesn't actually exist. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.30; **Std. Dev.** = 0.77
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.28; **Std. Dev.** = 0.71
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.30; **Std. Dev.** = 0.79
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.23; **Std. Dev.** = 0.66
        - **Sum of Squares Between Groups** = 1.3280; **df** = 3; **Variance** = 0.4427; **F** = 0.8218; **p** = 0.4818
        - **Sum of Squares Within Groups** = 865.0163; **df** = 1606; **Variance** = 0.5386
        - **Sum of Squares Total** = 866.3443; **df** = 1609

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=-0.0200, 95%CI=-0.1532 to 0.1132, p=0.9805
    Group 1 vs Group 3: Diff=0.0000, 95%CI=-0.1334 to 0.1334, p=1.0000
    Group 1 vs Group 4: Diff=-0.0700, 95%CI=-0.2028 to 0.0628, p=0.5276
    Group 2 vs Group 3: Diff=0.0200, 95%CI=-0.1132 to 0.1532, p=0.9805
    Group 2 vs Group 4: Diff=-0.0500, 95%CI=-0.1826 to 0.0826, p=0.7669
    Group 3 vs Group 4: Diff=-0.0700, 95%CI=-0.2028 to 0.0628, p=0.5276

- The COVID-19 pandemic is/was manipulated by America's elite. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 2.10; **Std. Dev.** = 1.37
    - **Condition 2** – **N (count)** = 402; **Mean** = 2.18; **Std. Dev.** = 1.36
    - **Condition 3** – **N (count)** = 400; **Mean** = 2.15; **Std. Dev.** = 1.38
    - **Condition 4** – **N (count)** = 408; **Mean** = 2.10; **Std. Dev.** = 1.33
        - **Sum of Squares Between Groups** = 1.8829; **df** = 3; **Variance** = 0.6276; **F** = 0.3394; **p** = 0.7969
        - **Sum of Squares Within Groups** = 2970.3706; **df** = 1606; **Variance** = 1.8495
        - **Sum of Squares Total** = 2972.2535; **df** = 1609

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=0.0800, 95%CI=-0.1669 to 0.3269, p=0.8388
    Group 1 vs Group 3: Diff=0.0500, 95%CI=-0.1972 to 0.2972, p=0.9543
    Group 1 vs Group 4: Diff=0.0000, 95%CI=-0.2460 to 0.2460, p=1.0000
    Group 2 vs Group 3: Diff=-0.0300, 95%CI=-0.2769 to 0.2169, p=0.9894
    Group 2 vs Group 4: Diff=-0.0800, 95%CI=-0.3257 to 0.1657, p=0.8368
    Group 3 vs Group 4: Diff=-0.0500, 95%CI=-0.2960 to 0.1960, p=0.9537

- Big pharmaceutical companies are behind the spread of COVID-19. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 1.92; **Std. Dev.** = 1.21
    - **Condition 2** – **N (count)** = 402; **Mean** = 1.95; **Std. Dev.** = 1.15
    - **Condition 3** – **N (count)** = 400; **Mean** = 1.87; **Std. Dev.** = 1.11
    - **Condition 4** – **N (count)** = 408; **Mean** = 1.90; **Std. Dev.** = 1.16
        - **Sum of Squares Between Groups** = 1.3640; **df** = 3; **Variance** = 0.4547; **F** = 0.3390; **p** = 0.7971
        - **Sum of Squares Within Groups** = 2153.7655; **df** = 1606; **Variance** = 1.3411
        - **Sum of Squares Total** = 2155.1295; **df** = 1609

    Tukey HSD Post-hoc Test...
    Group 1 vs Group 2: Diff=0.0300, 95%CI=-0.1802 to 0.2402, p=0.9831
    Group 1 vs Group 3: Diff=-0.0500, 95%CI=-0.2605 to 0.1605, p=0.9287
    Group 1 vs Group 4: Diff=-0.0200, 95%CI=-0.2295 to 0.1895, p=0.9948
    Group 2 vs Group 3: Diff=-0.0800, 95%CI=-0.2902 to 0.1302, p=0.7619
    Group 2 vs Group 4: Diff=-0.0500, 95%CI=-0.2592 to 0.1592, p=0.9275
    Group 3 vs Group 4: Diff=0.0300, 95%CI=-0.1795 to 0.2395, p=0.9830

- COVID-19 death rates are inflated. *[definitely not true (1)-definitely true (5)]*
    - **Condition 1** – **N (count)** = 400; **Mean** = 2.47; **Std. Dev.** = 1.51
    - **Condition 2** – **N (count)** = 402; **Mean** = 2.60; **Std. Dev.** = 1.49
    - **Condition 3** – **N (count)** = 400; **Mean** = 2.52; **Std. Dev.** = 1.46
    - **Condition 4** – **N (count)** = 408; **Mean** = 2.57; **Std. Dev.** = 1.47
        - **Sum of Squares Between Groups** = 3.9343; **df** = 3; **Variance** = 1.3114; **F** = 0.5966; **p** = 0.6172

- **Sum of Squares Within Groups** = 3530.0147; **df** = 1606; **Variance** = 2.1980
- **Sum of Squares Total** = 3533.9490; **df** = 1609

Tukey HSD Post-hoc Test...
Group 1 vs Group 2: Diff=0.1300, 95%CI=-0.1392 to 0.3992, p=0.6004
Group 1 vs Group 3: Diff=0.0500, 95%CI=-0.2195 to 0.3195, p=0.9642
Group 1 vs Group 4: Diff=0.1000, 95%CI=-0.1682 to 0.3682, p=0.7730
Group 2 vs Group 3: Diff=-0.0800, 95%CI=-0.3492 to 0.1892, p=0.8706
Group 2 vs Group 4: Diff=-0.0300, 95%CI=-0.2978 to 0.2378, p=0.9917
Group 3 vs Group 4: Diff=0.0500, 95%CI=-0.2182 to 0.3182, p=0.9637

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