

COVID-19 CONSPIRACIES AT WORK

By

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A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts in Industrial and Organizational Psychology

Middle Tennessee State University

June 2022

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For all the people who cheered me on, and especially for those that didn't

ACKNOWLEDGEMENTS

I first want to express my sheer gratitude and appreciation to Dr. Jackson for his patience, advice, guidance, and overall putting up with everything that this thesis rollercoaster has consisted of. You have prevented numerous rollercoaster derailings and, somehow, got all occupants off the ride safely. You have brought me from a state of apathy to a state of complete pride to the work that I created, and, for that, I cannot thank you enough for all that you've done in this crazy year.

I also want to thank Dr. Van Hein & Dr. Frame for their help and advice to improve my study. I would like to further recognize Dr. Van Hein for keeping us all sane in these last 6 months with all the help, advice, guidance, and venting space.

I want to thank the 2020 cohort for their support over the past two years. I don't think any of us could have made it without each other, and I am so glad to have experienced this with you all. I want to specifically thank Shelby for sharing her brain cell with me to get this finished, Madi for encouraging my eternal nonsense, and to Amanda for being my personal devil's advocate & psychic.

Finally, I want to shout out everyone who has been constantly cheering me on. Half of what follows this page might not make sense, but you have cheered me on, nonetheless. Mom, Liz, Brandon, Coconut, Tesla, Mouse... This was all for y'all.

ABSTRACT

Previous research has illustrated several links between workplace aggressive behaviors, such as ostracism, and paranoid thinking patterns such as conspiracy beliefs. Research has also indicated that there are unique differences in aggression and ostracism based on individuals of different status. The purpose of this study is to examine these effects in tandem to explore how individuals may treat others in the workplace with aggression or ostracism based upon coworker and supervisor beliefs in COVID-19 conspiracy theories. Participants were presented with a hypothetical scenario depicting either a coworker or supervisor as the source of information discussing their belief or disbelief in COVID-19 conspiracy theories before completing scales assessing their intentions to be aggressive or ostracizing toward the hypothetical individual. Results show an interesting interaction between belief similarity and information source on ostracism intention. While future research is needed to elucidate these findings, these results highlight a potential need for organizations to have caution regarding these discussions in the workplace.

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Chapter 1

Introduction

Belief in conspiracy theories has been called a “venom to a harmonious society” by social psychologists who note the alarming negative consequences that conspiracy beliefs may have (Poon et al., 2020, p. 1241). Research has also shown that misinformation continues to influence beliefs despite interventions to correct misinformation (Walter & Tukachinsky, 2020). Conspiracy belief occurs at an alarmingly high rate in the United States; across 25 nations, the United States had the largest number of conspiracy believers, larger than the next 24 nations combined (Hornsey et al., 2018). Beliefs drive behavior even if upheld beliefs are untrue, illustrating just how real the consequences of conspiracy beliefs can be (J. van Prooijen & Douglas, 2018). For example, the COVID-19 pandemic brought something new to the modern world, and with the uncertainty, vulnerability, and fear arose many conspiracies surrounding the coronavirus, its origin, and its treatments. Early studies have indicated that belief in COVID-19 conspiracies has led to decreased vaccination intentions, less adherence to protective behaviors, and increased support of xenophobic policies (Oleksy et al., 2021; Romer & Jamieson, 2020). I am interested in COVID-19 conspiracy beliefs in the workplace and understanding whether these beliefs lead to aggressive behaviors towards coworkers who may have matching or conflicting beliefs surrounding COVID-19.

Workplace Aggression

Workplace aggression is defined as “any form of behavior directed by one or more persons in a workplace toward the goal of harming one or more others in that workplace in ways the intended targets are motivated to avoid” (Neuman & Baron, 2006,

p.18). Aggression is often thought to lie on a continuum with behaviors ranging from minor (e.g., ostracism) to extreme (e.g., homicide; Anderson & Huesmann, 2003). As such, aggression is often studied based on the specific forms that aggressive behavior can take. For instance, some researchers have studied aggression in the form of discrimination in the workplace (Triana et al., 2015). Others have examined the role of ostracism on individual attitudes (Bedi, 2021). Further, while some workplace aggression research has focused on behaviors targeted at the organization, most research, including the present study, focuses on aggression targeted at individuals (Hershcovis et al., 2007). As will be discussed in detail below, one of the most commonly studied forms of aggression in the workplace is ostracism.

Researchers have been interested in understanding what causes workplace aggression for many years, both at the situation level and the individual level. LeBlanc & Kelloway (2002) found that the inherent risk of violence in the job itself led to increased aggression from coworkers. Organizations with less charismatic leaders, lower perceived distributive justice, and lower perceived procedural justice are at risk for increased aggression rates (Hepworth & Towler, 2004; Hershcovis et al., 2007). Looking at the individuals themselves, increased trait anger, hostile attribution styles, exposure to more aggressive cultures, negative affectivity and job dissatisfaction all predict aggressive acts in the workplace (Douglas & Martinko, 2001; Hershcovis et al., 2007). These relationships have been meta-analytically supported, which shows the pervasive relationships that exist between individual factors and workplace aggression (Hershcovis et al., 2007).

Workplace aggression as a whole has long been studied, and the outcomes are well defined. The outcomes have spread across numerous domains, but one clear finding is the negative impact that aggression can have on organizations. Financial estimates indicate that the cost of aggression for organizations in the United States are around \$36.1 billion each year (Hassard et al., 2018). Organizations with higher workplace aggression are also less effective, stemming from decreased engagement from employees (Johnson et al., 2018). Aggression from coworkers can have individual negative outcomes as well, causing decreased emotional well-being, psychosomatic well-being, and affective commitment (LeBlanc & Kelloway, 2002). Further, Leblanc & Kelloway (2002) also found that aggression from coworkers can increase the perceived likelihood of experiencing future aggression and turnover. Deery et al. (2011) found that workplace aggression in the form of verbal harassment predicted an increase in burnout and intentions to leave the organization. Hershcovis & Barling (2010) meta-analytically examined the outcomes of aggression in the workplace. They found that perceived organizational aggression was related to lower job satisfaction, lower affective commitment, higher turnover intentions, reduced general health, increased emotional exhaustion, increased depression, decreased physical well-being, increased interpersonal deviance, increased organizational deviance, and decreased performance.

Hershcovis & Barling (2010) also examined the outcomes of aggression in the workplace in relation to the source of the aggression (coworkers, supervisors, or outsiders). Their research found that several organizational outcomes are more likely to be affected by organizational insiders (i.e., coworkers and supervisors). In the cases of job satisfaction, affective commitment, turnover intentions, general health, organizational

deviance, performance, and deviance targeted at the supervisor, aggression from supervisors was a stronger predictor than aggression from coworkers. On the other hand, aggression from coworkers was a stronger predictor than supervisor sources for physical well-being. Aside from the importance of the outcomes, the differences seen in the sources of aggression indicate that future research should be especially conscious of the source (Hershcovis & Barling, 2010). Without the power that supervisors typically hold, peer perpetrators may display aggression in more confrontational forms. Additionally, Deery et al. (2011) found that the strength of relationships between aggression and its outcomes differed depending on the source of the aggression. This social aspect of aggression is an important place for future research as this facet of aggression has unique distinctions that have not yet been explored (Hershcovis & Barling, 2010).

Ostracism

One specific form of aggression is ostracism, defined as “the extent to which an individual perceives that he or she is ignored or excluded by others” (Ferris et al., 2008, p.1348). Ostracism can range from extreme behaviors, such as exile and banishment, to more mild forms such as the silent treatment or avoiding eye contact with an individual. Ostracism often occurs with other behaviors, such as physical aggression and discrimination, but research has shown that ostracism represents its own theoretical concept (Ferris et al., 2008; Howard et al., 2020). Howard et al. (2020) found that over half of the variance explained in ostracism was unique and not attributable to related concepts such as mistreatment or incivility. Research on ostracism has expanded in recent years, turning more focus to its predictors, such as organization-based self-esteem (Wu et al., 2011), and its outcomes, such as conspiratorial thinking (Poon et al., 2020).

Although ostracism research started in the early 2000s, researchers have devoted more attention to ostracism in recent years (Howard et al., 2020; Bedi, 2021). Previously, Wu et al. (2011) found that ostracism behaviors could be predicted by decreased agreeableness and extraversion and increased neuroticism. Additionally, workplace ostracism behaviors were predicted by organization-based self-esteem, which refers to the degree that members of an organization feel that their needs can be met through roles in an organization. Multiple meta-analyses have been conducted to explore the predictors of ostracism. Researchers found that ostracism victimization was predicted by gender, with men reporting more experienced ostracism than women (Howard et al., 2020). Researchers also found that ostracism behaviors were positively predicted by employee status, neuroticism, negative affectivity, supervisor's ostracism, and incivility (Bedi, 2021; Howard et al., 2020). Ostracism behaviors were also negatively related to extraversion, conscientiousness, agreeableness, sense of in-group, perceived social support, feelings of belongingness, positive emotions, proactive personality, affectivity, political skill, and social skill. Howard et al. (2020) found that these effects were strongest for leadership related predictors followed by context and the Big Five personality characteristics. Of all the predictors, the strongest predictors of ostracism behaviors were abusive supervision and lack of social support (Howard et al., 2020).

Research has also shown a renewed focus on the outcomes of ostracism through several recent meta-analyses. Experiencing increased workplace ostracism negatively impacted several workplace behaviors, such as helping behaviors, organizational citizenship behaviors, overall job performance, and core performance, and organizational attitudes, such as affective commitment, organizational identification, organizational

commitment, safety climate perceptions, justice perceptions, perceived support, and organizational satisfaction (Bedi, 2021; Howard et al., 2020; Li et al., 2021). Individual psychological outcomes, including self-esteem, self-efficacy, psychological capital, and psychological well-being, and job attitudes, including job satisfaction and engagement, also decreased as a result of experiencing workplace ostracism (Bedi, 2021; Howard et al., 2020; Li et al., 2021). Additionally, experiencing workplace ostracism leads to increased negative attitudes, including negative emotions, work stress, organizational cynicism, depression, job tension, turnover intentions, and emotional exhaustion (Bedi, 2021; Howard et al., 2020; Li et al., 2021). Negative behaviors, such as abusive supervision, silence, mistreatment, incivility, social undermining, interpersonal deviance, workplace deviance, and turnover, are also predicted by increasing experienced workplace ostracism (Bedi, 2021; Howard et al., 2020; Li et al., 2021).

These analyses and results have several important implications. Of the outcomes, ostracism had a greater impact on psychological health outcomes and behaviors than the attitudes tested in the study – pointing to clear evidence that ostracism acts as an interpersonal stressor (Bedi, 2021). Bedi (2021) also found that individuals were more likely to engage in counterproductive work behaviors when they found themselves in situations where they felt out of control. Similar to other formed beliefs, the need for control may have a stronger role in the employee's response to ostracism (Bedi, 2021).

Although ostracism has many negative outcomes, ostracism can also promote unconventional thinking. Graeupner & Coman (2017) looked at the relationship between social exclusion and conspiratorial thinking, finding that those who were socially excluded held stronger conspiracy beliefs than those who were included. Poon et al.

(2020) found that individuals who had experienced ostracism had stronger conspiracy beliefs about political events, such as the severe acute respiratory syndrome (SARS) outbreaks and the September 11, 2001 attacks. Researchers further propose that there may be a cyclical relationship, whereby experiencing ostracism leads to increased conspiracy beliefs, which in turn may lead to increased aggression and antisocial behaviors toward others, such as ostracism (Poon et al., 2020).

Conspiracies

Conspiracy beliefs are not an uncommon phenomenon; previous research has indicated that as many as 55% of Americans believe in at least one conspiracy theory (Oliver & Wood, 2014). Conspiracy theories are “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,” and conspiracy belief is whether an individual believes these conspiracy theories (Douglas et al., 2019, pg. 4). A similar concept is that of conspiracist ideation, which refers to an underlying tendency of an individual to believe in conspiracies in general (Douglas et al., 2019). With the uncertainty of the COVID-19 pandemic and rapid rise of conspiracy coverage in the media (Mach et al., 2021), research has focused more heavily on conspiracy beliefs and ideation in recent years—examining both antecedents (e.g., the political environment, perceived control, and destructive leadership) and specific outcomes (e.g., decreased intentions to vaccinate and increased turnover intentions).

Researchers have yet to agree upon a unified conceptual framework that underlies belief in conspiracy theories as a scientific domain (van Prooijen & Douglas, 2018).

While the research overlaps in many areas, the different proposed models and

frameworks each focus on a different aspect of conspiracy beliefs. For example, the mental model framework describes a situation in which individuals will choose to believe a logical yet incorrect mental model rather than hold an incomplete mental model (Walter & Tukachinsky, 2020). Individuals will create the conspiracy belief by combining disconnected or unrelated information that seems to logically flow together despite the incorrect nature of the theory itself (Orosz et al., 2016). In the compensatory control theory, perceived control over an individual's life is a basic and ingrained motivation (Mao et al., 2020). When the sense of control is lost, individuals are motivated to seek out other explanations to satisfy the need for structure and control. Following this line of logic, individuals will often have increased conspiracy belief in times with less control to compensate and create their own sense of control (Mao et al., 2020). For example, an individual who perceives their social class to be lower than others, i.e., subjective social class, is often seen at a disadvantage with less control as compared to other social classes (Mao et al., 2020). Subjective social class was found to have a relationship with conspiracy beliefs first through perceived control and then through need for structure (Mao et al., 2020). Additionally, Oleksy et al. (2021) found that a lack of both individual and collective control led to an increase in general and government-related conspiracy beliefs. Poon et al. (2020) also found that vulnerability, defined as feelings of risk, worry, and uncertainty, mediated the relationship between ostracism and conspiracy beliefs, highlighting the impact that an insecure environment can have on conspiracy endorsement. While the theories underlying conspiracy beliefs are numerous, the key factors tying them together form a more concise list.

Despite the many theories and frameworks proposed, there are some general principles that tie conspiracy theory research together (van Prooijen & Douglas, 2018). First, belief in conspiracy theories impacts both the believer's life as well as those around the believer (van Prooijen & Douglas, 2018). For example, conspiracy beliefs have been linked to negative workplace outcomes, negative health outcomes, and prejudice toward others (all of which will be discussed in more detail later). Second, conspiracy theories are held as universal—not restricted to a single time or place (van Prooijen & Douglas, 2018). Conspiracy belief research has uncovered individual traits that impact conspiracy belief, but these traits exist across the globe and throughout history. Third, conspiracy beliefs are additionally rooted in emotion and intuition rather than logic and analytical thinking (van Prooijen & Douglas, 2018). Occasionally, a conspiracy belief can be defended with what sounds like reason and logic; however, conspiracy theorizing is based on processes that are spurred from intense emotions such as anxiety (Hart & Graether, 2018). Finally, conspiracy theories are also inherently social as they often focus on some larger group or collective that is in control (van Prooijen & Douglas, 2018).

The motivation for belief in conspiracies often begins with basic social psychological motives that are characterized as epistemic, existential, or social (Douglas et al., 2017). Epistemic motivation refers to the desire to acquire knowledge and develop a deeper understanding (Douglas et al., 2017). Many use conspiracy theories as a way to fulfill this desire by using the unique causal explanations that conspiracy theories offer to protect key beliefs (e.g., climate change is not real) from outside evidence (Douglas et al., 2017). Conspiracy theories also serve some existential motives—an individual's basic need of security and autonomy in their environment (Douglas et al., 2017). Although it

may not effectively satisfy the need itself, people often attempt to use conspiracy theories to offer some control for the believer (Douglas et al., 2017). They also often offer a sense of safety in recognizing powerful groups who may place the believer in danger (Douglas et al., 2017; Mao et al., 2020). Conspiracy believers often use these conspiracy theories as an easy explanation that makes the dangerous, uncontrollable world feel more manageable and understandable (Hart & Graether, 2018). In line with the inherently social nature of conspiracy theories, conspiracy beliefs may satisfy social motives, such as having a positive view of the believer's group and a sense of belonging. Conspiracy beliefs are often used to explain a group's position in society as well as to provide perspective of the group experience, especially when the group is disadvantaged (Douglas et al., 2017).

Looking at the predictors of conspiracist ideation, Brotherton and Eser (2015) found that individuals with mild paranoia ideation, such as "Someone has it out for me," had increased levels of conspiracist ideation. The concept of mild paranoia ideation is more broad in scope than the general fear that spurred as a result of COVID-19. Boredom proneness in individuals also predicted increased conspiracist ideation. However, the relationship between conspiracist ideation and boredom proneness was fully mediated by paranoia, showing the important role that paranoia plays in conspiracist ideation. Researchers believe this may be due to distrust and hostility in those with high conspiracist ideation (Brotherton & Eser, 2015). Situations may also introduce specific antecedents for conspiracist ideation as well. Increased rates of unemployment predicted increased conspiratorial ideation, possibly as a result of a loss sense of control (DiGrazia,

2017). Unsurprisingly, the trait of conspiracy ideation has been found to be repeatedly the strongest predictor of conspiracy beliefs (Dyrendal et al., 2021).

Looking at conspiracy belief itself, situational features can and do impact conspiracy beliefs. For example, current events in the environment impact conspiratorial beliefs as conservative states became more conspiratorial only after a liberal president assumes office, and researchers proposed a similar relationship likely exists in liberal states after a conservative president takes office (Digrazia, 2017). This illustrates the impact that the overall environment may play in conspiracy beliefs. The conspiracy theory itself or its delivery may also impact an individual's belief or strength of belief. For example, Orosz et al. (2016) found that increases in both perceived competency and intelligence of a speaker (i.e., source of conspiracy) led to increased conspiracy beliefs (Orosz et al., 2016). Additionally, Grzesiak-Feldman (2013) found that high-anxiety situations, such as taking an exam, can increase conspiratorial thinking. Societal crises have also been shown to spur increases in conspiracy beliefs among the population (J. W. van Prooijen & Douglas, 2017).

When examining conspiracy beliefs in an organization, other environmental features must be considered. Organizational conspiracy beliefs often center on groups in leadership purposefully targeting employees with malicious intent or hidden company motives (van Prooijen & de Vries, 2016). For example, destructive leadership is positively associated with organizational conspiracy beliefs, such as "My senior directors are working together to make sure I don't get promoted" (van Prooijen & de Vries, 2016). Leaders who are perceived as despotic or tyrannical lead to increased conspiracy beliefs in their subordinates. Both despotic leaders and laissez-faire leaders are indirectly

related to organizational conspiracy beliefs as well. Individuals who work under these destructive leadership styles are more likely to experience job insecurity which then increases organizational conspiracy beliefs (van Prooijen & de Vries, 2016).

Several individual difference variables have been identified as factors influencing whether someone is likely to believe in conspiracies. Socioeconomic status (both subjective and objective) predicts belief in conspiracies, where lower subjective and objective social classes lead to a decrease in perceived control, which causes an increase in conspiracy beliefs (Mao et al., 2020). Belief in conspiracy theories was also significantly affected by one's need for structure and need for uniqueness (Mao et al., 2020; Hart & Graether, 2018). Hart & Graether (2018) also found that age and increased "bullshit receptivity" (i.e., the inclination of an individual to find nonsensical but superficially meaningful information profound) led to increased conspiracy beliefs as well. Dyrendal et al. (2021) found that paranormal beliefs, right wing authoritarianism, and schizotypal odd beliefs were related to conspiracy beliefs. The belief that the world is a dangerous place may also increase conspiracy beliefs (Hart & Graether, 2018). Those with stronger religious beliefs, one of the most influential belief systems a person may have, have also led to increased conspiracy beliefs (Hart & Graether, 2018).

Social media and the internet provide a new avenue for conspiracy theories to spread to new individuals. The site Reddit is known for being the forefront for conspiracy theory spread, evidenced recently by the Wayfair sex trafficking conspiracy theory that soared via Reddit (Robinson, 2020). Reddit is a website where users can create message boards and form communities dedicated to certain topics, including the subreddit 'r/conspiracy' that, as of December 6, 2021, had over 1.6 million members (r/conspiracy,

2021). 4chan is another fringe, image-based platform where conspiracy theories have been incited, including the QAnon conspiracies (LeTourneau, 2019). Increased participation in these conspiracy communities may lead to increasingly devoted conspiracy beliefs (Samory & Mitra, 2018). The impact of social media on conspiracy belief was also demonstrated by Romer & Jamieson (2020), who found that increased social media use led to increased conspiracy beliefs.

With conspiracy beliefs becoming increasingly widespread, research has turned to how conspiracy beliefs can create impact as well (Hornsey et al., 2018). One well known conspiracy theory that has proliferated is the perception that vaccines are linked to autism as a result of the now-discredited paper published by Andrew Wakefield who has also since had his medical license revoked (Meikle & Boseley, 2010). Individuals exposed to anti-vaccine (anti-vax) conspiracy theories had significantly lower intentions to vaccinate a child than those not exposed to or those exposed to an anti-vax counterargument (D. Jolley & Douglas, 2017). Perceptions that vaccines are dangerous also increased when exposed to conspiracy theories (Jolley & Douglas, 2017). Conspiracy beliefs have also been found within the workplace, leading to important workplace outcomes. For example, belief in organizational conspiracies can lead to decreased commitment to the organization, which can lead to increased turnover intentions (van Prooijen & de Vries, 2015). Turnover costs over \$1 trillion to organizations per year illustrating the financial impact that conspiracy beliefs may also have on organizations (McFeely & Wigert, 2019).

Additionally, COVID-19 conspiracies, such as those centered around COVID-19's origin, have been spurring their own consequences. As COVID-19 vaccine mandates

become more prevalent, employees who hold COVID-19 conspiracy beliefs are pushing back (Zadrozny & Collins, 2021). Several hundred protestors, many who are healthcare workers and nurses, have recently protested the vaccine mandate outside a children's hospital in San Diego, CA (Zadrozny & Collins, 2021). Southwest pilots recently sought out a restraining order against the COVID-19 vaccine mandate implemented by the company (Nagele-Piazza, 2021). In Greenville, NC, over 200 General Electric plant employees held a walk-out to protest the vaccine mandate, citing anti-vax conspiracy beliefs (Singleton, 2021). With COVID-19 conspiracy beliefs so clearly impacting businesses and organizations, it raises the question of how else COVID-19 conspiracy beliefs may impact the workplace.

Present Study

The purpose of the present study will be to examine the effect of conspiracy beliefs on workplace aggression. To reduce the possibility of creating conspiracy theorists by exposing people to a variety of conspiracies, this study will examine the specific conspiracy beliefs surrounding the COVID-19 pandemic (discussed below). Given the widespread discussion in various news outlets and social media about information and misinformation (Cillizza, 2021; Gallagher, 2021; Hsu & Tracy, 2021; Leach & Probyn, 2021), it is unlikely that this study will present any *new* information to people that would lead to the development of new conspiracy beliefs.

The COVID-19 pandemic been a popular new subject for conspiracy theories regarding its origin, its spread, its danger, and its vaccine. These conspiracy theories generate their own outcomes as well. Romer & Jamieson (2020) examined these conspiracy beliefs, specifically those around COVID-19's origin and its potential use in

political advancement (example: “The coronavirus was created by the Chinese government as a biological weapon”). They found that these specific conspiracy beliefs predicted protective behaviors used later in the pandemic, perceptions of vaccines, and intentions to vaccinate if a vaccine were to become available. Early held beliefs led to decreased preventative behaviors, such as mask-wearing, later in the pandemic. Early held conspiracy beliefs also led to decreases in perceived safety of vaccines and intentions to vaccinate if available (Romer & Jamieson, 2020). Conspiracy beliefs were also negatively related with participating in group gatherings throughout the pandemic (Jovančević & Milićević, 2020). However, COVID-19 conspiracy beliefs were positively related with curfew behaviors (i.e., restricting travel outside of home unless necessary). Researchers argued that these contradictory results may highlight the different motivations that drive conspiracy belief (Jovančević & Milićević, 2020). The positive correlation between increased conspiracy beliefs and increased curfew behaviors demonstrates the general paranoia that conspiracy beliefs are associated with, leading individuals to fear any travel. However, conspiracy beliefs are often a way to satisfy existential motivations, and those who hold stronger conspiracy beliefs may ignore social isolation rules as another way to have autonomy (Jovančević & Milićević, 2020). General COVID-19 conspiracy beliefs were also negatively related to other general protective behaviors (Oleksy et al., 2021). Masks in the COVID-19 pandemic were and are key in preventing the spread of the virus (Centers for Disease Control and Prevention, 2022). Vaccines were and are also instrumental in the recovery and continued fight against COVID-19 (Centers for Disease Control and Prevention, 2022). The disregard of these

important behaviors demonstrates the impact that holding conspiracy beliefs may have for people.

In addition to the impact that COVID-19 conspiracy theories had on preventative behaviors, COVID-19 conspiracy theories have also had a large impact on xenophobic and racist actions. Since March of 2020, racial acts of violence committed against those of Chinese descent or heritage—a major COVID-19 hotspot—have increased, likely due to COVID-19 conspiracy beliefs (Ruiz et al., 2021). Both general and government conspiracy theories regarding COVID-19 were linked with support of xenophobic government policies, such as those policies suggesting that individuals of certain ethnic backgrounds should be quarantined from others. General COVID-19 conspiracy belief predicted a negative general feeling towards Chinese and Italian individuals (Oleksy et al., 2021). This could be explained as people's attempt to make sense of a threatening situation through the conspiracy beliefs and the subsequent projection of their feelings onto the antagonist of the specific conspiracy theory (Poon et al., 2020).

The increase in xenophobic support and negative feelings towards the subject of conspiracies raises more questions about the links between aggression and conspiracy beliefs. Jolley et al. (2020) sought to explore this further, looking specifically at prejudice and conspiracy theories. They found that both prejudiced beliefs and discrimination were higher for those exposed to conspiracy information. Exposure to conspiracies about Jews and Muslims changed the way individuals felt (i.e., more prejudiced attitudes) and the potential for discrimination toward other Jewish and Muslim peoples (Daniel Jolley et al., 2020).

While Jolley et al. (2020) found that belief in conspiracies did lead to increased aggression through discrimination, it appears that no other research has examined this important relationship further. With as many as half of Americans endorsing at least one conspiracy theory, such as those related to John F. Kennedy's assassination (Oliver & Wood, 2014), it is vital that more work is done to understand this relationship and how belief in conspiracy theories could contribute to aggressive behaviors toward others, particularly with the COVID-19 pandemic (Oliver & Wood, 2014). With the need for control leading to ostracism and the uniquely social environment that aggression exists in overlapping strongly with conspiracy theory fundamentals, there is a clear need to further examine the relationship between these two. As the COVID-19 pandemic has progressed, it is apparent that it will continue to impact all aspects of life—including the workplace. Organizations are forced to pass new rules, request more information from employees, and coach conversations related to the pandemic at an increasing rate with each passing week. Understanding how COVID-19 conspiracy beliefs may impact coworker and supervisor behaviors will be vital for organization leaders to understand the best next steps for moving forward in the future.

Therefore, the purpose of this study was to investigate how employees treat others in the workplace based on coworker and supervisor beliefs in COVID-19 conspiracy theories. Poon et al. (2020) proposed that a relationship may exist where those that believe in conspiracy theories may exhibit increased aggressive and ostracizing behaviors, and Rudert et al. (2021) has shown that aggressive/ostracizing behaviors are often different for individuals of different status (i.e., coworker, supervisor, customer). Hershcovis & Barling (2010) found that the source of aggression can be an important

factor in various outcomes, with coworkers often being the recipient of increased aggressive behaviors. Therefore, I hypothesized the following:

Hypothesis 1a: There will be a main effect of belief similarity on aggression; such that incongruent beliefs between the participant and the source will lead to increased aggressive behaviors.

Hypothesis 1b: There will be a main effect of information source on aggression; such that aggressive behaviors will increase when the source is a coworker.

Hypothesis 2a: There will be a main effect of belief similarity on ostracism; such that incongruent beliefs between the participant and the source will lead to increased ostracizing behaviors.

Hypothesis 2b: There will be a main effect of information source on ostracism; such that ostracizing behaviors will increase when the source is a supervisor.

Hypothesis 3a: There will be an interaction between belief similarity and information source on aggression; such that when there are incongruent beliefs and the source is a coworker, they will be targeted more aggressive behaviors than when the source is a supervisor and beliefs are congruent.

Hypothesis 3b: There will be an interaction between belief similarity and information source on ostracism; such that when there are incongruent beliefs and the source is a supervisor, they will be targeted for more ostracizing behaviors than when the source is a coworker and beliefs are congruent.

Chapter 2

Method

Participants

A recommended sample size of 150 participants to detect a medium to large effect size of .34 was identified by conducting a priori power analysis using G*Power software. Data was collected from 157 participants. However, 13 participants were removed for not completing large portions of the survey, not meeting inclusion criteria, or based upon answers to the data integrity questions, leaving a sample of $n = 144$. Participants were recruited using Prolific Academic which has been shown to produce higher quality data and more diverse participants than similar sites (Peer et al., 2017). Participants provided informed consent to participate and be compensated \$3.25 for successful completion of the study. Participants ranged from 18 to 54 years of age with a median age of 27 and were 56.3% men, 40.3% women, 2.8% non-binary, and 0.7% chose not to answer. Participants were 3.5% Asian, 15.3% Black or African American, 17.4% Hispanic or Latino, 57.6% Caucasian, 1.4% Multiethnic, and 4.9% did not identify. The education status of participants were as follows: 0.7% with no diploma, 8.3% with high school degree, 14.6% with some college, 3.5% with trade school, 3.5% with associate's degree, 44.4% with bachelor's degree, 23.6% with master's degree, and 0.7% with doctoral degree. Regarding the COVID-19 vaccine, 9.7% were not vaccinated, 3.5% were had received a single dose of a double-dose vaccine, 11.1% were fully vaccinated with a single dose, 29.9% were fully vaccinated with a double dose, 44.4% were fully vaccinated and boosted, and 1.4% did not answer. Participants were required to work at

least 20 hours per week with participants working on average 29.75 hours and a median of 27 hours.

Materials

To examine the effect of workplace discussions about conspiracies on workplace aggression and ostracism, scenarios were used in the study to simulate a working environment for participants. Scenarios will be identical except for the level of COVID-19 conspiracy belief (belief or non-belief) and the source of the information (coworker or supervisor). Therefore, this study will use a 2 x 2 between-subject design with belief match and source of information as independent variables (see Appendix A for full scenarios).

Aggression Intentions. To assess aggression using a future-oriented target-centered approach in the workplace, I modified the Workplace Aggression Scale developed by (Arnold et al., 2011) to measure intentions of being aggressive. The scale consists of 8 items that ask participants to “Consider the recent scenario you read when answering the following questions. Over the next 3 months, how likely would you do the following things to that coworker [supervisor].” Responses were rated on a 7-point Likert scale ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*). Some examples of the items on the Workplace Aggression Scale are yell/shout at them, publicly embarrass or put them down, and judge or criticize them to their face (see Appendix B for modified scale). Overall scores were calculated by summing all items. A high score indicates greater intentions to be aggressive toward the coworker or supervisor. The internal consistency reliability of the scale was $\alpha = .91$.

Ostracism Intentions. To assess ostracism using a future-oriented target-centered approach in the workplace, I modified the ostracism measure developed by (Ferris et al., 2008). The scale consists of 10 items related to ostracism behaviors. Modifications include instructions stating, “Suppose that coworker [supervisor] is working on your shift. How likely is it that you would find yourself exhibiting the following behaviors?” Example behaviors include ignoring and refusing to acknowledge the source. Responses were rated on a 7-point Likert scale ranging from 1 (*Extremely unlikely*) to 7 (*Extremely likely*) (see Appendix C for modified scale). Overall scores were calculated by summing the score for all items. A high score indicates greater intentions to ostracize the coworker or supervisor. The internal consistency reliability of the scale was $\alpha = .95$.

COVID-19 Conspiracy Beliefs. To evaluate participants’ belief in COVID-19 conspiracies, participants were asked to rate their agreement on 9 items related to various COVID-19 conspiracies. This scale was modified from Sallam et al. (2021) and Miller (2020) to include more relevant and current COVID-19 conspiracies. Example items from this scale include: “The COVID-19 vaccine is a way of implanting the population with microchips” and “COVID-19 was developed by the Chinese government as part of a biological weapon program.” Responses were rated on a on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*) (see Appendix D for modified scale). I elected to use a neutral option rather than “I don’t know” to elicit opinions on COVID-19 conspiracy belief. Overall scores were calculated by summing all items. A high score indicates greater COVID-19 conspiracy beliefs. The internal consistency reliability of the scale was $\alpha = .91$.

Conspiracist Ideation. To evaluate participants' conspiracist ideation, participants were asked to complete the Conspiracy Mentality Questionnaire (Bruder et al., 2013; Appendix E). Participants were asked to rate the percent likelihood they believe 5 items to be true on a 11-point scale ranging from 0% (*Certainly Not*) to 100% (*Certain*). Example items from the Conspiracy Mentality Questionnaire include: "I think that many very important things happen in the world, which the public is never informed about" and "I think that government agencies closely monitor all citizens." Overall scores were calculated by summing all items. A high score indicates greater conspiracist ideation. The internal consistency reliability of the scale was $\alpha = .80$.

Interpersonal Trust. To evaluate interpersonal trust of participants, participants were asked to complete the General Trust Scale (Yamagishi & Yamagishi, 1994; Appendix F). Participants were asked to rate their agreement with 6 items on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Example items from the General Trust Scale include "Most people are basically honest" and "Most people are trustworthy". Overall scores were calculated by summing all items. A high score indicates higher general trust. The internal consistency reliability of the scale was $\alpha = .83$.

Political Ideology. To evaluate political ideology, participants were asked to complete a 7-item scale (Kidwell et al., 2013; Appendix G). This scale was slightly modified to ensure consistency of items (i.e., '*Democrats*' to '*Cancel student debt*'). Participants were asked to rate their agreement with the items on a 7-point Likert scale ranging from 1 (*Strongly oppose*) to 7 (*Strongly support*). Example items from the scale include capital punishment and gun control. Overall scores were calculated by summing the score (or reverse score) of all items. A high score indicates more conservative political views while

a low score indicates more liberal political views. Additional items (i.e., '*The Government*' and '*Politicians*') were included as a check and will only be used for exploratory purposes if needed. The internal consistency reliability of the scale was rather low at $\alpha = .56$.

Trait Aggression. To evaluate aggression as a trait, participants were asked to complete the Brief Aggression Questionnaire (BAQ; Webster et al., 2014; Appendix H).

Participants were asked to rate their agreement with 12 items on a 5-point Likert scale ranging from 1 (*Extremely uncharacteristic*) to 5 (*Extremely characteristic*). Example items from the BAQ include "I have trouble controlling my temper" and "Other people always seem to get the breaks". Item 7, which states "I'm an even tempered person", was reverse scored. Overall scores were calculated by summing the score (or reverse score) for all items. A high score indicates a greater tendency to aggression. The internal consistency reliability was at $\alpha = .74$.

Procedure

This study was approved by the Middle Tennessee State University Institutional Review Board under protocol 22-1121 2q. The approval letter can be seen in Appendix I.

After signing up for the study through Prolific Academic, participants were provided with an informed consent. Upon providing consent, participants completed the scales measuring their beliefs in COVID-19 conspiracy theories, conspiracist ideation, interpersonal trust, political ideology, and trait aggression. These scales were presented randomly in order to avoid priming effects before the manipulation. Participants were then randomly assigned to view one of the short workplace scenarios about COVID-19 conspiracies. Following the scenario, participants completed the scales measuring

aggression intentions and ostracism. Participants were then asked to provide demographic information including gender identity, age, ethnicity, educational level, and employment status. Participants were also asked their current vaccination status. Participants were also asked if they or any immediate family members have been diagnosed with COVID-19 and, if so, how severe the presenting symptoms were. Participants were then debriefed on the study and receive appropriate compensation. As part of the debriefing, participants were presented information about the myths vs. facts about COVID-19 and vaccines in an attempt to reduce the likelihood of creating new conspiracy theory believers.

Chapter 3

Results

Prior to conducting the analyses, scale scores were created by summing the score or reverse score for each scale as appropriate. Next, the match in conspiracy beliefs variable was calculated to create groups of high and low COVID-19 conspiracy belief. The range for the COVID-19 conspiracy belief scale ranged from 9 to 63, with results showing an average of 23.95 ($SD = 11.78$) and a median of 21.5 for this sample. However, the skew value for this sample of 0.83 and kurtosis value for this sample of .27 were within acceptable ranges and indicate a relatively normal distribution. To create this variable, a product term was calculated between the effects coded condition for level of conspiracy belief in the scenario (no belief = -1, belief = 1) and the mean centered scores on the COVID-19 conspiracy beliefs measure. By using this approach, match in beliefs with the individual in the scenario was represented by positive scores, and mismatch in beliefs was represented by negative scores. Scores were then converted to create the match and mismatch groups for ANCOVA with positive and negative scores converted to 1 and -1, respectively.

Aggression

Recall that hypothesis 1a stated that there will be a main effect of belief similarity on aggression, such that incongruent beliefs between the participant and the source will lead to increased aggressive behaviors. Hypothesis 1b stated that there will be a main effect of information source on aggression; such that aggressive behaviors will increase when the source is a coworker. Hypothesis 3a stated that there will be an interaction between belief similarity and information source on aggression, such that when there are

incongruent beliefs and the source is a coworker, they will report more aggressive behavioral intentions than when the source is a supervisor. A two-way ANCOVA was used to test both Hypothesis 1a, 1b, and 3a while controlling for conspiracist ideation, interpersonal trust, political ideology, trait aggression, gender identity, age, education level, and vaccination status.

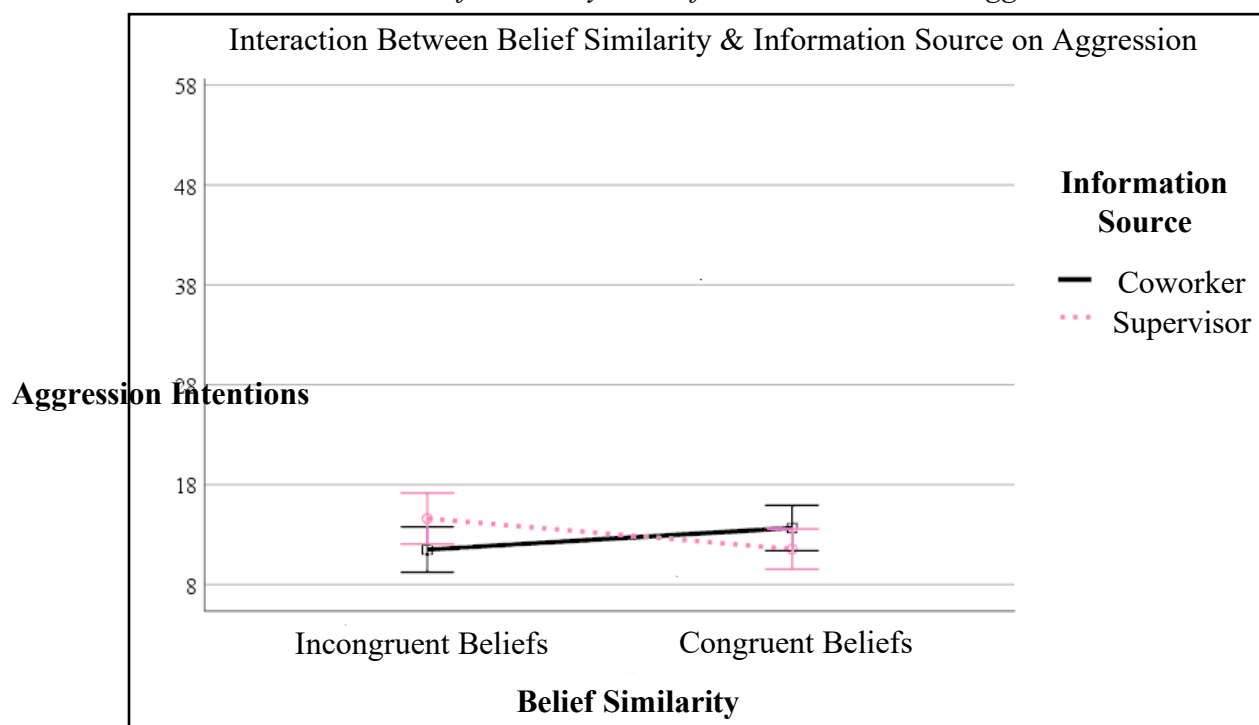
In testing the assumptions for hypotheses 1a, 1b, and 3a, Levene's test was found to be significant ($F = 2.80, p = .043$). However, this was likely due to unequal sample sizes. Additionally, all other assumptions were met. Therefore, the analysis *should* be robust against the violation of equal variances between groups. The ANCOVA revealed that there was no significant difference in aggression intentions between those who had incongruent ($M = 13.05, SD = 7.70$) and congruent beliefs ($M = 12.61, SD = 7.04$) with the source. Thus, Hypothesis 1a was not supported. There was no significant difference in aggression intentions between the source coworker ($M = 12.58, SD = 6.99$) or source supervisor ($M = 13.08, SD = 7.69$) conditions. Thus, Hypothesis 1b was not supported. However, there was a statistically significant interaction between belief similarity and information source on aggression intentions. Figure 1 depicts this interaction, but aggression scores are overall low. Despite this significant finding, post-hoc comparisons indicated no significant differences in aggressive behavioral intentions toward supervisors ($M = 11.55, SD = 6.21$) or coworkers ($M = 13.66, SD = 7.91$) when beliefs were congruent with the source of information. Further, no significant differences in aggressive behavioral intentions were found when there were incongruent beliefs either for coworkers as the source of information ($M = 11.50, SD = 5.88$) or supervisors as the source of information ($M = 14.60, SD = 9.33$). This difference in results is likely due to

the conservative Bonferroni correction used. Therefore, Hypothesis 3a was not supported.

Details of the ANCOVA analysis completed are presented in Table 1.

Figure 1

Interaction Between Belief Similarity and Information Source on Aggression



Note. Possible values of aggression intentions range from 8 to 56.

Table 1

ANCOVA results for belief similarity and information source on aggression.

Source	<i>df</i>	<i>SS</i>	<i>F</i>	<i>p</i>
Belief Similarity	1	6.49	0.15	.70
Information Source	1	8.26	0.19	.67
Interpersonal Trust	1	0.08	0.00	.97
Conspiracist Ideation	1	73.24	1.67	.20
Political Ideology	1	115.83	2.64	.12
Trait Aggression	1	992.83	22.63	.000
Age	1	21.38	0.49	.49
Gender Identity	1	120.61	2.75	.10
Education	1	162.91	3.71	.06
Vaccination Status	1	22.02	0.50	.48
Belief Similarity x Information Source	1	225.64	5.14	.03

Ostracism

Recall that hypothesis 2a stated that there will be a main effect of belief similarity on ostracism, such that incongruent beliefs between the participant and the source will lead to increased ostracizing behaviors. Hypothesis 2b stated that there will be a main effect of information source on ostracism; such that ostracizing behaviors will increase when the source is a supervisor. Lastly, hypothesis 3b stated that there will be an interaction between belief similarity and information source on ostracism, such that when there are incongruent beliefs and the source is a supervisor, they will be targeted for more ostracizing behaviors than when the source is a coworker. A two-way ANCOVA was used to test both Hypothesis 2a, 2b, and 3b while controlling for conspiracist ideation,

interpersonal trust, political ideology, trait aggression, gender identity, age, education level, and vaccination status.

In testing the assumptions for hypotheses 2a, 2b, and 3b, Levene's test was found to be significant ($F = 6.47, p < .001$). However, this was likely due to unequal sample sizes. Further, all other assumptions were met. Therefore, the analysis *should* be robust against the violation of equal variances between groups. The ANCOVA revealed that there was no significant difference in ostracism intentions between those who had incongruent ($M = 19.57, SD = 12.90$) and congruent beliefs ($M = 17.94, SD = 11.61$) with the source. Thus, Hypothesis 2a was not supported. There was no significant difference in ostracism intentions between the source coworker ($M = 18.63, SD = 12.31$) and source supervisor ($M = 18.87, SD = 12.06$) conditions. Thus, Hypothesis 2b was not supported. However, there was a statistically significant interaction between belief similarity and information source on ostracism intentions. Figure 2 depicts this interaction with means and standard deviations for the following analyses presented in Table 2. Post hoc analyses with a Bonferroni correction revealed that when there are incongruent beliefs, participants were significantly more likely to ostracize supervisors ($M = 24.44, SD = 15.58$) than coworkers ($M = 14.69, SD = 8.83$). However, when beliefs were congruent with the information source, participants were significantly more likely to ostracize coworkers ($M = 22.57, SD = 14.07$) than supervisors ($M = 13.31, SD = 7.04$). Therefore, Hypothesis 3b was supported. Exploratory post-hoc analyses based on the disordinal interaction were completed. When the information source was a coworker, participants were more likely to ostracize those with congruent beliefs than those with incongruent

beliefs. When the information source was a supervisor instead, participants were more likely to ostracize those with incongruent beliefs than congruent beliefs.

Figure 2

Interaction Between Belief Similarity and Information Source on Ostracism

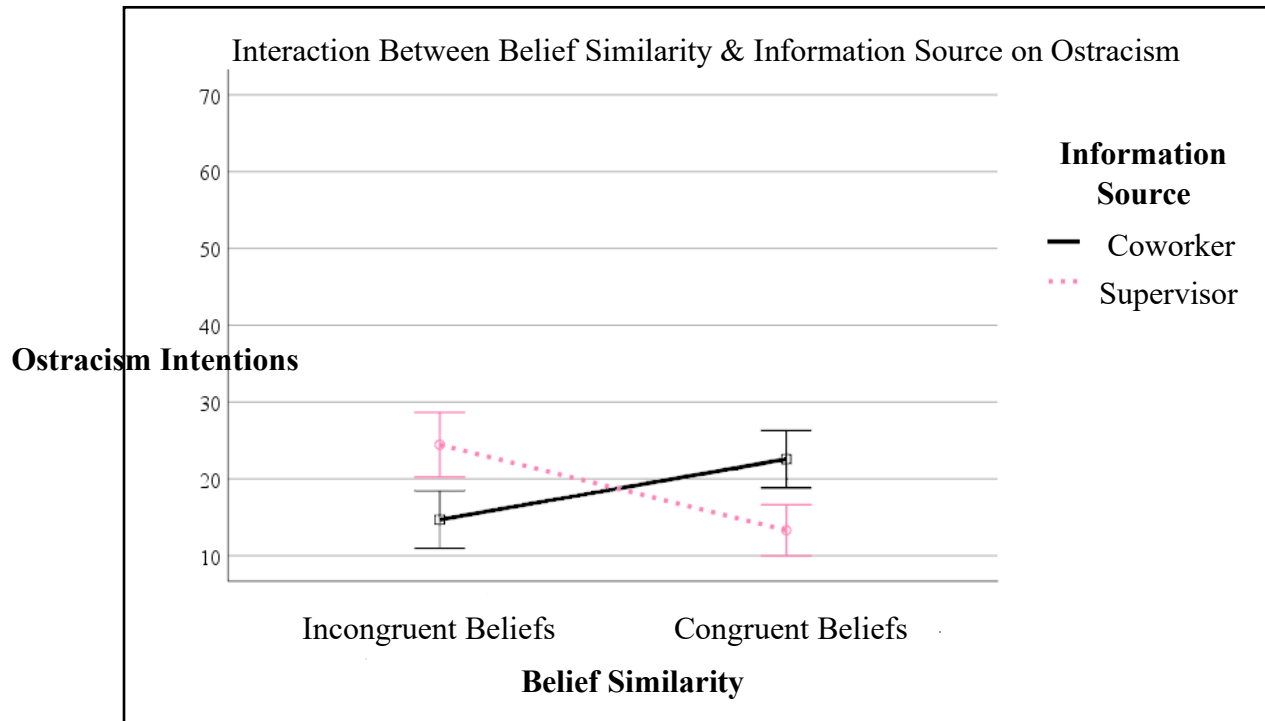


Table 2

ANCOVA results for belief similarity and information source on ostracism.

Source	<i>df</i>	<i>SS</i>	<i>F</i>	<i>p</i>
Belief Similarity	1	87.29	0.73	.39
Information Source	1	1.96	0.02	.90
Interpersonal Trust	1	5.41	0.13	.72
Conspiracist Ideation	1	103.14	0.86	.36
Political Ideology	1	41.32	0.35	.56
Trait Aggression	1	1,791.59	15.02	.000
Age	1	9.60	0.08	.78
Gender Identity	1	5.40	0.05	.83
Education	1	333.46	2.80	.10
Vaccination Status	1	802.36	6.73	.01
Belief Similarity x Information Source	1	2,997.10	25.12	.000

Chapter 4

Discussion

Previous research has examined conspiracy beliefs and their impact on social behaviors such as ostracism and aggression, but the rise of COVID-19 conspiracy theories and the impact that COVID-19 beliefs have had on the workplace raises concern on their specific impact. The aim of this study was to explore this relationship, specifically with coworker and supervisor beliefs in COVID-19 conspiracy theories. Hypotheses 1 and 2 focused on the main effects of belief similarity and information source on aggression and ostracism, respectively. None of the main effects were significant. Hypotheses 3a & 3b focused on the interaction between belief similarity and information source on aggression and ostracism, respectively. While the results showed no significant interaction effect on aggression, there was a significant interaction effect on ostracism intentions. Discussing COVID-19 at work seems to have consequences for ostracizing intentions, but not aggressive intentions. Specifically, if a coworker with congruent beliefs as the participant discusses COVID-19, the participant is more likely to ostracize the coworker than if a supervisor with congruent beliefs discusses COVID-19 with the participant. In contrast, when the COVID-19 beliefs being discussed are inconsistent with the participant's views, the ostracism intentions flip, such that participants are more likely to ostracize supervisors than coworkers. Upon reflection of these findings, one possible explanation for the surprising results surrounding coworkers is fatigue surrounding COVID-19. As early as July 2021, individuals were experiencing fatigue and even avoidance of news pertaining to COVID-19 (Buneviciene et al., 2021). Other researchers have found that over 70% of individuals are tired of hearing about

COVID-19 in some way (Guan et al., 2022). It is possible that ostracizing intentions toward a coworker increased even for congruent beliefs as individuals seek to avoid any COVID-19 related information. For the individuals with incongruent beliefs with their coworker, it is additionally possible that ostracizing intentions were lower as they may have a desire to attempt to change their mind, warranting further communication rather than ostracism. Although the relationship found for supervisors is in support of Hypothesis 3b, the finding for coworkers was surprising and warrants further research to fully elucidate these findings and their potential explanation.

Practical Implications

This study had important findings that apply to organizations and the workplace. Firstly, the surprising interaction found in this study illustrates that the differences in beliefs across different types of employees (i.e., coworker or supervisor) impacts ostracism intentions. For organizations, this encourages a healthy wariness of discussing any COVID-19 conspiracy beliefs in the workplace, as even similar beliefs were related to increased ostracism in certain cases. Because of this finding, it is recommended that managers be wary of discussing political beliefs with their subordinates. Given the ever-growing diversity in the workplace, we do not advocate censoring discussions, as this would likely be unrealistic. Instead, we urge managers to use caution when such discussions occur.

Despite the significant interaction found, overall scores for both aggression and ostracism were both well below the median of each scale. This shows that, regardless of other traits, belief similarity, or information source, the intention to act aggressively or ostracize another is still relatively low. This does offer some solace to organizations in

recognizing that discussing COVID-19 (conspiracy) beliefs in the workplace does not produce high rates of ostracism or aggression.

Limitations & Future Directions

One limitation for this study was the use of written scenarios to present stimuli to participants. It is possible that these scenarios may not have been powerful enough to elicit reactions to the degree with which they were assessed, possibly leading to the nonsignificant findings for belief similarity and information source on either aggression or ostracism. Because there was no manipulation check used, there was no way to determine if these scenarios were effective. Future research should aim to create higher fidelity scenarios to more closely match what would be seen in the workplace and potentially generate the power needed to invoke these responses.

Another limitation is that several measures used in the study had to be modified to align with the aims of this study. The scales measuring aggression, ostracism, COVID-19 conspiracy beliefs, and political ideology were all modified to fit the future-oriented, hypothetical scenarios presented. The modified Kidwell et al. (2013) political ideology scale had poor reliability after modifications were made. Despite the other tests having adequate reliability, it is still possible that the modifications made affected the validity of each scale. In the future, researchers should work to create and subsequently utilize validated measures in such studies.

One statistical limitation of this study was the use of mean centering to dichotomize the measure of congruent and incongruent beliefs. The average of this sample was within 1 standard deviation of the median of the scale, and the skew and kurtosis values were within an acceptable range. However, the use of dichotomization

still removed potentially valuable variance and information from the final results. This could have also contributed to the lack of significant findings for many of the hypotheses tested.

Another major and unavoidable limitation regarding this study is the frequency of changing information and persistently changing public focus on COVID-19. New research and information regarding COVID-19 is consistently being published (Cillizza, 2021; Gallagher, 2021; Hsu & Tracy, 2021; Leach & Probyn, 2021). The scenarios were created with this in mind; however, the information used that is relatively unchanging is much less polarizing than others. In addition to the changing information, the focus on COVID-19 in the media and by the public often wavers and falters depending on other events. For example, Google searches for “COVID-19” were at an all-time low during the data collection period for this study compared to the six months prior (Google, 2022). It is possible that low public focus on COVID-19 during this time period could have led to less powerful reactions to COVID-19 conspiracy beliefs and the nonsignificant findings from this study. Similarly, given the prevalence of COVID-19 fatigue (Guan et al., 2022), people could simply be burned out by the effects that COVID-19 has had on everyone and on discussing COVID-19. The scenarios in this study were also created using the most extreme available conspiracy theories to elicit a reaction. While this was the goal, the use of these extreme conspiracies may have alternatively led individuals to disengage further. This too may have led to the less powerful reactions to the COVID-19 discussions in the scenarios in this study. Therefore, future research should explore how belief similarity and information source impacts aggression and ostracism for other commonly held conspiracy beliefs, such as the conspiracy that vaccines cause autism.

Conclusion

Previous research has shown that conspiracy beliefs are related to and can even cause in some cases aggression and ostracism (Poon et al., 2020; Rudert et al., 2021). This study sought to examine how COVID-19 conspiracy beliefs and information source on aggressive and ostracizing behaviors. Participants completed several scales before reading a scenario depicting a conversation with either a supervisor or coworker on the supervisor's or coworker's conspiracy beliefs. Participants then rated their aggression or ostracism intentions toward the individual. Results found no support for the main effects on either aggression or ostracism. However, the results demonstrated that when beliefs differ between the participant and the target, ostracizing behaviors were increased for supervisors. When beliefs match between the two, ostracizing behaviors were increased for coworkers. Overall, these results highlight the need for further research on the impact that conspiracy belief discussions in the workplace can have on treatment of others at work.

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APPENDIX A

Study Scenarios

1. Target is a supervisor who believes in COVID-19 conspiracies.

While at work, you decide to take a break and take a walk through your office building.

*As you walk through the office, you run into your **supervisor** and stop to greet them.*

You say, “Hey, how is your day going?”

Your supervisor responds, “It’s been alright. I’ve been trying to catch up on work, but I’m having a hard time focusing. The company is about to start enforcing the COVID-19 vaccine mandate, and it’s all I can think about. The vaccine has microchips in it that the government will use to track us, and it’s causing all kinds of bad side effects, like infertility and heart problems. Not to mention that COVID-19 was man-made by China. Anyways, I am definitely NOT getting the vaccine. I hope you don’t get it either. Well, I had better get back to work. I’ll talk to you later.”

You head back to your desk to continue your work for the day.

2. Target is a supervisor does not believe in COVID-19 conspiracies.

While at work, you decide to take a break and take a walk through your office building.

*As you walk through the office, you run into your **supervisor** and stop to greet them.*

You say, “Hey, how is your day going?”

Your supervisor responds, “It’s been alright. I’ve been trying to catch up on work, but I’m having a hard time focusing. The company is about to start enforcing the COVID-19 vaccine mandate, and it’s all I can think about. Some people are saying the vaccine is causing all kinds of bad side effects, like infertility and heart problems. It frustrates me because some people are saying that COVID-19 was man-made by China. I don’t believe any of that, and I am definitely getting the vaccine. I hope you get the vaccine too. Well, I had better get back to work. I’ll talk to you later.”

You head back to your desk to continue your work for the day.

3. Target is a coworker who believes in COVID-19 conspiracies.

*While at work, you decide to take a break and take a walk through your office building. As you walk through the office, you run into your **coworker** and stop to greet them.*

You say, “Hey, how is your day going?”

Your coworker responds, “It’s been alright. I’ve been trying to catch up on work, but I’m having a hard time focusing. The company is about to start enforcing the COVID-19 vaccine mandate, and it’s all I can think about. The vaccine has microchips in it that the

government will use to track us, and it's causing all kinds of bad side effects, like infertility and heart problems. Not to mention that COVID-19 was man-made by China. Anyways, I am definitely NOT getting the vaccine. I hope you don't get it either. Well, I had better get back to work. I'll talk to you later."

You head back to your desk to continue your work for the day.

4. Target is a coworker does not believe in COVID-19 conspiracies.

*While at work, you decide to take a break and take a walk through your office building. As you walk through the office, you run into your **coworker** and stop to greet them.*

You say, "Hey, how is your day going?"

Your coworker responds, "It's been alright. I've been trying to catch up on work, but I'm having a hard time focusing. The company is about to start enforcing the COVID-19 vaccine mandate, and it's all I can think about. Some people are saying the vaccine is causing all kinds of bad side effects, like infertility and heart problems. It frustrates me because some people are saying that COVID-19 was man-made by China. I don't believe any of that, and I am definitely getting the vaccine. I hope you get the vaccine too. Well, I had better get back to work. I'll talk to you later."

You head back to your desk to continue your work for the day

APPENDIX B

Modified Workplace Aggression Scale

Consider the recent scenario you read when answering the following questions. Over the next 3 months, how likely would you do the following things to that coworker [supervisor]? Please rate the likelihood or unlikelihood.

1. Yell/shout at them?
2. Publicly embarrass or put them down?
3. Judge or criticize them to their face?
4. Insult/ridicule them to their face?
5. Spread a rumor/lie about them behind their back?
6. Delay action on matters important to them?
7. Secretly do things to make them look bad?
8. Fail to warn them about impending danger/problems?

APPENDIX C

Modified Workplace Ostracism Scale

Consider the recent scenario you read. Please rate the likelihood or unlikelihood.

How likely is it that you would find yourself exhibiting the following behaviors?

1. Ignoring them at work?
2. Leaving the area when they enter?
3. Leaving their greetings unanswered?
4. Not inviting them to sit with you when they are alone in a crowded lunchroom at work?
5. Avoiding them at work?
6. Refusing to look at their work?
7. Shutting them out of the conversation?
8. Refusing to talk to them at work?
9. Treating them as if they weren't there?
10. Not inviting them or asking if they want anything when you go out for coffee?

APPENDIX D

Modified COVID-19 Conspiracy Belief Scale

Please rate your agreement or disagreement with the following items.

1. COVID-19 is a man-made virus.
2. The COVID-19 vaccine is a way of implanting the population with microchips.
3. COVID-19 vaccine safety data is often fabricated.
4. COVID-19 was developed by the Chinese government as part of a biological weapon program.
5. COVID-19 was accidentally released by the U.S.
6. Scientists are exaggerating the seriousness of COVID-19.
7. The media is exaggerating the seriousness of COVID-19.
8. COVID-19 is just an ordinary flu that pharmaceutical companies have used to increase profits.
9. Personal protective equipment such as masks were purposefully withheld.

APPENDIX E

Conspiracy Mentality Questionnaire

Please rate the extent to which you believe the following items to be true.

1. Many very important things happen in the world, which the public is never informed about.
2. Politicians usually do not tell us the true motives for their decisions.
3. Government agencies closely monitor all citizens.
4. Events which superficially seem to lack a connection are often the result of secret activities.
5. There are secret organizations that greatly influence political decisions.

APPENDIX F

General Trust Scale

Please rate your agreement or disagreement with the following items.

1. Most people are basically honest.
2. Most people are trustworthy.
3. Most people are basically good and kind.
4. Most people are trustful of others.
5. I am trustful.
6. Most people will respond in kind when they are trusted by others.

APPENDIX G

Modified Political Ideology Scale

Please rate your support or opposition with the following items.

1. Capital punishment
2. Pro-Life
3. Gun control (*Reverse scored*)
4. Socialized healthcare (*Reverse scored*)
5. Same-sex marriage (*Reverse scored*)
6. Illegal immigration (*Reverse scored*)
7. Cancel student debt (*Reverse scored*)
8. The Government (*Exploratory*)
9. Politicians (*Exploratory*)

APPENDIX H

Brief Aggression Questionnaire

Please rate each of the following items in terms of how characteristic they are of you.

1. Given enough provocation, I may hit another person.
2. If I have to resort to violence to protect my rights, I will.
3. There are people who pushed me so far that we came to blows.
4. I tell my friends openly when I disagree with them.
5. When people annoy me, I may tell them what I think of them.
6. My friends say that I'm somewhat argumentative.
7. I am an even-tempered person. (*Reverse scored*)
8. Sometimes I fly off the handle for no good reason.
9. I have trouble controlling my temper.
10. Other people always seem to get the breaks.
11. I sometimes feel that people are laughing at me behind my back.
12. When people are especially nice, I wonder what they want.

APPENDIX I

IRB**INSTITUTIONAL REVIEW BOARD**

Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129
FWA: 00005331/IRB Regn.. 0003571

**IRBN007 – EXEMPTION DETERMINATION NOTICE**

Wednesday, March 16, 2022

Protocol Title **COVID-19 Conspiracies at Work**
Protocol ID **22-1121 2q**

Principal Investigator **Kaitlyn Berry** (Student) Faculty Advisor: Alexander Jackson
Co-Investigators Judith Van Hein and Mark Frame
Investigator Email(s) **keb6x@mtmail.mtsu.edu; alexander.jackson@mtsu.edu**
Department/Affiliation Psychology

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category **(2) Educational Tests, surveys, interviews or observations of public behavior** (Click here to enter text.). A summary of the IRB action and other particulars of this protocol are shown below:

IRB Action	EXEMPT from further IRB Review Exempt from further continuing review but other oversight requirements apply
Date of Expiration	8/31/2024 Date of Approval: 3/16/22 Recent Amendment: NONE
Sample Size	FIVE HUNDRED (500)
Participant Pool	Healthy adults (18 or older) – English speaking US workers recruited through Prolific Academic
Exceptions	Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).
Type of Interaction	☐ Non-interventional or Data Analysis ☒ Virtual/Remote/Online Interview/survey ☐ In person or physical– Mandatory COVID-19 Management (refer next page)
Mandatory Restrictions	1. All restrictions for exemption apply. 2. The participants must be 18 years or older. 3. Mandatory ACTIVE informed consent. 4. Identifiable information, such as, names, addresses, and voice/video data, must not be obtained. 5. NOT approved for in-person data collection.
Approved IRB Templates	IRB Templates: Online Informed Consent Non-MTSU Templates: Recruitment Script
Research Inducement	\$3.25 paid through Prolific Academic
Comments	NONE

Summary of the Post-approval Requirements: The PI and FA must read and abide by the post-approval conditions (Refer "Quick Links" in the bottom):

- **Final Report:** The Faculty Advisor (FA) is responsible for submitting a final report to close-out this protocol before **8/31/2024**; if more time is needed to complete the data collection, the FA must request an extension by email. **REMINDERS WILL NOT BE SENT. Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- **Protocol Amendments:** IRB approval must be obtained for all types of amendments, such as:
 - Addition/removal of subject population and sample size.
 - Change in investigators.
 - Changes to the research sites – appropriate permission letter(s) from may be needed.
 - Alternation to funding.
 - Amendments must be clearly described in an addendum request form submitted by the FA.
 - The proposed change must be consistent with the approved protocol and they must comply with exemption requirements.
- **Reporting Adverse Events:** Research-related injuries to the participants and other events, such as, deviations & misconduct, must be reported within 48 hours of such events to compliance@mtsu.edu.
- **Research Participant Compensation:** Compensation for research participation must be awarded as proposed in Chapter 6 of the Exempt protocol. The documentation of the monetary compensation must Appendix J and MUST NOT include protocol details when reporting to the MTSU Business Office.
- **COVID-19:** Regardless whether this study poses a threat to the participants or not, refer to the COVID-19 Management section for important information for the FA.

COVID-19 Management:

The FA must enforce social distancing guidelines and other practices to avoid viral exposure to the participants and other workers when physical contact with the subjects is made during the study.

- The study must be stopped if a participant or an investigator should test positive for COVID-19 within 14 days of the research interaction. This must be reported to the IRB as an "adverse event."
- The FA must enforce the MTSU's "Return-to-work" questionnaire found in Pipeline must be filled and signed by the investigators on the day of the research interaction prior to physical contact.
- PPE must be worn if the participant would be within 6 feet from the each other or with an investigator.
- Physical surfaces that will come in contact with the participants must be sanitized between use
- **FA's Responsibility:** The FA is given the administrative authority to make emergency changes to protect the wellbeing of the participants and student researchers during the COVID-19 pandemic. However, the FA must notify the IRB after such changes have been made. The IRB will audit the changes at a later date and the PI will be instructed to carryout remedial measures if needed.

Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol's eligibility for exemption. **Only THREE procedural amendments will be entertained per year (changes like addition/removal of research personnel are not restricted by this rule).**

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Post-approval IRB Actions:

The following actions are done subsequent to the approval of this protocol on request by the PI or on recommendation by the IRB or by both.

Date	IRB Action(s)	IRB Comments
NONE	NONE.	NONE

Mandatory Data Storage Requirement:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additionally, IRBN007 – Exemption Notice (Stu)

Institutional Review Board, MTSU

FWA: 00005331

IRB Registration: 0003571

the Tennessee State data retention requirement may apply (*refer "Quick Links" below for policy 129*). Subsequently, the data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
- Exemption Procedures: <https://mtsu.edu/irb/ExemptPaperWork.php>
- MTSU Policy 129: Records retention & Disposal: <https://www.mtsu.edu/policies/general/129.php>

APPENDIX J

Pearson Correlations & Reliability

Variables	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12
1. Aggression	12.68	7.32	-	.91										
2. Ostracism	18.20	12.16	.66	-	.95									
3. COVID-19 Beliefs	23.95	11.79	.14	-.03	-	.91								
4. Conspiracy Mentality	314.17	97.35	.04	.02	.43	-	.80							
5. Interpersonal Trust	27.49	5.93	-.11	-.08	-.09	-.21	-	.83						
6. Political Ideology	21.12	6.62	.22	.05	.39	.14	-.06	-	.56					
7. Trait Aggression	31.53	6.55	.36	.24	.21	.29	-.34	.07	-	.74				
8. Age	29.75	8.25	.05	-.01	.07	-.09	.21	.11	-.12	-				
9. Gender Identity	--	--	-.16	.00	-.09	.01	-.09	-.29	.02	-.20	-			
10. Vaccination Status	--	--	-.10	.09	-.49	-.29	.04	-.36	-.21	.07	.13	-		
11. Education	--	--	-.17	-.14	-.06	-.04	-.01	-.14	-.03	.09	-.06	.09	-	
12. Belief Similarity	--	--	-.04	-.04	.01	.02	-.04	-.02	.05	-.04	.16	.14	.08	-
13. Information Source	--	--	.01	-.06	-.01	-.05	.01	.01	-.06	.15	.01	-.09	-.07	.09

Reliability coefficients for each scale are indicated following the diagonal. Bold values are significant at $p < .05$