

DISSERTATION

THE ROLE OF ETHICS OF CARE MESSAGING IN AI CRISIS COMMUNICATION:
EXAMINING THE INTERPLAY ROLE OF ETHICS OF CARE AND CRISIS RESPONSE
STRATEGIES ON ORGANIZATION-PUBLIC RELATIONSHIP, ORGANIZATIONAL
REPUTATION AND BEHAVIORAL INTENTION

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ABSTRACT

THE ROLE OF ETHICS OF CARE MESSAGING IN AI CRISIS COMMUNICATION: EXAMINING THE INTERPLAY ROLE OF ETHICS OF CARE AND CRISIS RESPONSE STRATEGIES ON ORGANIZATION-PUBLIC RELATIONSHIP, ORGANIZATIONAL REPUTATION AND BEHAVIORAL INTENTION

This dissertation explores the effectiveness of crisis response strategies—specifically denial, excuse, and apology—in the context of artificial intelligence (AI) crises, emphasizing the mediating role of Organization-Public Relationships (OPR) and the moderating impact of ethics of care on organizational outcomes. Utilizing a 3 (crisis response strategies: deny, excuse, apology) x 3 (ethics of care: high vs. low vs. no) between-subjects design, the study examined the influences of different crisis response strategies and levels of ethics of care on OPR outcomes, organizational reputation, and supportive behavioral intentions across a sample of 532 participants.

Participants were assigned to one of nine experimental conditions depicting a crisis involving a fictitious company, "Hexxa," portrayed in varying contexts of ethics of care. Data collection was conducted through an online survey platform – Prolific, employing paired samples t-tests, one-way ANOVA, and moderated mediation analysis using PROCESS Model 84.

The results revealed that apology strategies significantly improved OPR outcomes and organizational reputation more effectively than denial and excuse strategies. High levels of ethics of care enhanced these outcomes across all response strategies, surpassing effects in low and no ethics of care conditions. Although direct effects of crisis response strategies on organizational

outcomes were often non-significant, the incorporation of ethics of care significantly magnified these effects through OPR, underscoring its pivotal role in crisis communication.

The findings deepen situational crisis communication theory (SCCT) by illustrating how ethical considerations and organization-public relationships interact to influence organizational outcomes in AI-related crises, advocating a shift towards more ethically nuanced crisis communication approaches. Practically, the results advocate for the prioritization of ethics of care in crisis communication, providing empirical support for its effectiveness in not only mitigating crisis impacts but also in fostering long-term public relationships.

The study's findings also reveal the significant, yet differentiated, impacts of low versus no ethics of care approaches, suggesting a threshold effect for ethical considerations in crisis response. These insights yield important implications for practitioners, highlighting that even minimal ethical engagement can significantly influence public perception and behavior.

In conclusion, the dissertation posits a call to action for organizations to strategically incorporate ethical considerations within crisis communication frameworks, especially in AI-driven contexts, where socio-technical risks pose unique challenges.

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DEDICATION

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CHAPTER 1. INTRODUCTION

Artificial intelligence (AI) is transforming industries and society, bringing both opportunities and risks. As organizations increasingly adopt AI systems, ethical considerations around transparency, bias, and accountability have moved to the forefront (Floridi et al., 2018). Failures of AI systems can quickly escalate into organizational crises, necessitating careful crisis communication to maintain relationships with the public. However, research on crisis communication strategies for AI failure crisis is sparse. Therefore, this dissertation intends to explore crisis communication, in particular, the AI failure crisis.

Simply put, AI refers to software algorithms that mimic human cognitive functions such as learning and problem-solving (Russell & Norvig, 2016). With recent advances in deep learning and neural networks, AI can now perform complex tasks like facial recognition (Kusumah et al., 2022) and language translation (Cao, 2022). However, AI systems aren't perfect. For example, biased or flawed training data, algorithmic errors, and misaligned incentives can cause AI failures with harmful consequences (Amodei et al., 2016).

Crisis communication focuses on communicating information flows to mitigate reputation damage from unexpected events (T. Coombs, 2019). The situational crisis communication theory (SCCT) matches crisis response strategies to crisis types based on attribution of responsibility (T. Coombs, 2007). While SCCT (T. Coombs, 2007) addresses technical errors as one category of crisis (i.e., accidental crisis cluster), AI failures present distinct challenges warranting specialized analysis. From an SCCT perspective, technical malfunctions imply mechanical or software flaws disrupting business operations (T. Coombs & Holladay, 2002). However, undesired AI behaviors often stem not from simple technical defects,

but rather complex socio-technical risks around ethics, accountability, and transparency (Neff & Nagy, 2016). For instance, biased algorithms or flawed training data can produce discriminatory AI decisions that appear technically sound but have harmful social impacts (Amodei et al., 2016).

A number of well-known incidents have shown that crisis that can unfold when companies face AI failure. In 2016, Microsoft launched Tay, an AI chatbot designed to converse on Twitter. However, within 24 hours, Tay began tweeting offensive content it learned from users. Microsoft quickly took Tay offline, however, the incident damaged its reputation (Neff & Nagy, 2016). This case shows the pressing need to understand how organizations can effectively manage AI failure crises. Further research should empirically examine how strategies like denial (e.g., deny, scapegoat), diminishment (e.g., excuse, justification), and rebuilding (e.g., apology, compensation) (T. Coombs, 2007) differentially impact public perceptions on AI crises.

In addition to crisis response strategies, the concept of the ethics of care offers a unique lens to examine AI crisis communication. The ethics of care emphasize moral responsibility above rigid rules, acknowledging the interdependence between individuals and their context-specific needs (Gilligan, 1993). Messages infused with empathy, concern, and compassion boost both the credibility of the communication and its source (Seeger, 2006). In fact, rather than solely focusing on strict legalities, communication rooted in an ethic of care gives priority to moral accountability (Simola, 2003; Tao & Kim, 2017). This approach not only nurtures trust but also fosters meaningful relationships between publics and organizations.

Despite the growing recognition of the ethic of care as a pivotal element in crisis communication, particularly in the context of AI-driven crises, there remains a notable gap in the existing literature. While studies have underscored the importance of empathy, concern, and

moral responsibility in effective communication strategies (Gilligan, 1993; Seeger, 2006), the specific application and impact of these principles in AI crisis scenarios have not been thoroughly explored. This dissertation aims to bridge this gap by systematically investigating how an ethic of care can be effectively integrated into crisis response strategies for AI-related incidents. It seeks to understand how such an approach influences organization-public relationship, organizations' reputation, and positive behavioral intention.

This dissertation makes several significant contributions to the fields of public relations and crisis communication, particularly in the scope of rapidly evolving AI technologies. One of its primary contributions is the exploration and discovery of tailored crisis response strategies that are effective regarding AI-related incidents. This research fills a crucial gap in existing literature, as traditional crisis communication models may not fully capture the complexities unique to AI crises. By focusing on AI-specific scenarios, the study provides a pioneering perspective on how organizations can navigate the nuanced landscape of AI technology, crisis communication, organization public relationship, and positive behavior intention.

Secondly, it extends the existing body of knowledge by exploring the integration of the ethics of care in AI crisis communication. This approach offers a novel perspective, which is especially pertinent given the complex ethical considerations inherent in AI-related crises. By examining how different crisis response strategies, infused with varying levels of ethic of care, impact public perception, this research provides a nuanced understanding of effective communication in the face of AI-driven challenges.

Furthermore, by exploring the serial mediation of organization public relationship and organizational reputation in the relationship between crisis response strategies and positive behavioral intentions, this dissertation contributes to a deeper understanding of the dynamics

between organizational actions, public perception, and behavioral outcomes. This aspect of the research provides a comprehensive framework for assessing the impact of crisis communication strategies, enriching the theoretical underpinnings of crisis communication and public relations.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL BACKGROUND

Artificial Intelligence in Public Relations

The field of public relations (PR) is undergoing a transformation with the help of artificial intelligence (AI). Recognizing this, leading organizations such as the Public Relations Society of America (PRSA) have put forth guidelines to ensure the ethical use of AI in the field (Staley et al., 2023). This guidance underscores the necessity of adhering to professional values such as honesty, fairness, and advocacy, even as practitioners leverage AI for content creation, data analysis, and other communicative functions. The document highlights the dual nature of AI as a tool for enhancing efficiency and productivity, while also presenting risks related to misinformation, biases, and privacy concerns. As such, it becomes imperative for PR professionals to critically assess and ethically manage AI technologies, ensuring that their use aligns with the enduring principles of the PRSA Code of Ethics and contributes positively to informed public debate and decision-making (Staley et al., 2023).

Building on this ethical framework, businesses are increasingly integrating AI to stay competitive and establish deeper connections with their target audiences. AI brings numerous benefits to PR, including enhanced productivity, more targeted communication strategies, and efficient campaign monitoring (Galloway & Swiatek, 2018; Pavlik, 2007; Yaxley, 2017). One significant way in which AI is revolutionizing public relations is through data analysis. With the power of AI-driven technologies, large volumes of data can be analyzed to identify patterns, trends, and even sentiment analysis (Draper, 2022). This can empower PR professionals to craft messages and campaigns that are more focused and tailored. Such insights can directly impact

the success of PR operations by enabling organizations to better understand their public and create personalized content that resonates with them (Lim & Zhang, 2022).

Furthermore, AI plays a role in enhancing media outreach by utilizing natural language processing (NLP) techniques to identify journalists and influencers in specific industries or fields (Davenport & Kalakota, 2019). By automating this process, PR practitioners can focus on crafting pitches and building relationships, with media contacts increasing the likelihood of garnering media attention. While AI will undoubtedly play a role in shaping the future of public relations, it is important to acknowledge that it cannot replace intuition, creativity and the ability to build relationships (Davenport & Kalakota, 2019). Of supplanting the expertise of PR professionals, AI should be viewed as a tool that enhances and complements their work. PR professionals can leverage the advantages of AI to create campaigns and enhance outcomes by embracing its capabilities and integrating it into their processes.

Features of AI in PR: Opportunities and Challenges

There is an emergent body of research that emphasizes the positive implications of AI utilization. According to Kietzmann, Paschen, and Treen (2018), the effect of AI on advertising strategies and its advantages to consumers are multifaceted. They delineate five key components of AI: natural language processing, image recognition, speech recognition, problem-solving, and machine learning, each contributing to the advent of the use of AI in PR.

The power of AI lies in its capacity to interpret the nuances of human language through natural language processing, thus extracting meaning from social media content, customer feedback, and blogs (Kietzmann et al., 2018). The management and monitoring of media also depend significantly on AI. Platforms that have AI capabilities can evaluate social media activity, providing them with up-to-date information on sentiment and campaign reactions (Davenport &

Kalakota, 2019). This empowers PR professionals to gauge the impact of their efforts and promptly adapt their strategies to keep their messaging relevant and engaging.

Employing image recognition enables practitioners to scrutinize visuals shared on social media, providing an authentic glimpse into consumer behavior (Kietzmann et al., 2018).

Furthermore, speech recognition allows AI to decipher spoken words, a feature that proves particularly useful in call centers. AI can leverage these features to gather data and improve their understanding of the publics' behavior.

The problem-solving facet of AI is leveraged by practitioners to uncover latent insights from content (Kietzmann et al., 2018). This characteristic facilitates the recognition of patterns in data, enhancing predictive capabilities (Paschen et al., 2020). Divergent problem-solving, that involves the generation and analysis of multiple viable solutions, is also a strength of AI (Paschen et al., 2020). With the assistance of AI, PR practitioners can effectively engage the publics by choosing the most effective course of action when interacting with them.

The machine learning component of AI, as outlined by Kietzmann et al (2018), empowers AI to enhance its performance without being constrained by predetermined rules. This is particularly pivotal in the realm of public relations, where adaptability and responsiveness are key. Advanced or 'deep' machine learning forms the backbone of contemporary AI systems, thanks to the development of innovative algorithms that are capable of extracting new insights from substantial data sets (Paschen et al., 2020). This promotes an improved capacity for task management and problem-solving efficiency allowing public relations practitioners to more effectively predict, understand, and respond to trends and crisis situations.

In public relations, the advent of AI technologies promises a transformative impact. One of the key applications of AI in this field is the analysis of extensive stakeholder communication

data, such as social media posts, press releases, or news articles. Draper (2022) highlights how AI can be used to identify crucial trends and sentiments from these vast data sources.

Professionals frequently utilize readily accessible AI tools like Trendkite, Buzzsumo, and Hootsuite to analyze social media, and some are even creating their own AI-based solutions. This capability is not just about data processing; it extends to aiding PR professionals in crafting strategies that are more in tune with stakeholder expectations. One study emphasizes the potential of AI in predicting potential issues and managing crises more efficiently (Farrokhi et al., 2020), underscoring the technology's role in proactive and reactive PR strategies.

Conversely, the integration of AI in communication presents its own set of challenges and debates. Wu and Wen (2021) explore the nuances of consumer reactions to AI-generated advertisements. Their research indicates a dichotomy where increased objectivity in AI-produced content is generally appreciated by consumers, but any semblance of discomfort or unease can lead to a decrease in consumer appreciation. This underscores the delicate balance required in AI applications in advertising, where emotional resonance is key. Furthermore, Mogaji, Olaleye, and Ukpabi (2020) raise critical concerns about the implementation of AI in advertising. They point out issues such as the challenge of creating emotionally appealing advertisements, the overemphasis on digital media at the expense of traditional formats, and the limitations of current metrics in measuring the effectiveness of AI-driven advertising campaigns.

These challenges in advertising mirror broader communication fields, including public relations, where understanding the potential crises arising from AI usage is vital. The intersection of AI and crisis management in PR presents a complex dynamic. The inherent difficulties associated with AI, such as ethical considerations, automation's impersonal nature, and the rapidly changing AI landscape, may not only pose obstacles but also act as catalysts for crises.

For instance, a lack of emotional resonance in AI-driven PR campaigns could lead to public backlash, similar to consumer reactions in advertising. These AI-driven crises present a new frontier for public relations, where professionals will need to utilize their expertise and understanding of AI to effectively manage and mitigate the damaging effects. In the following section, this study delves deeper into the concept of 'AI Crises: Crises Arisen by AI,' shedding light on this emerging domain and its implications for the PR researchers and practitioners.

AI Crises: Crises Arisen by AI

While the potential of AI has been applauded to refashion PR fields and improve decision-making processes, AI has faced failures and crises, raising worries about its dependability, transparency, and ethical consequences (Bucher, 2018). PR professionals have a vital role in navigating the complicated environment of media coverage, public opinion, and stakeholder expectations in the aftermath of AI failures and crises (Wigley & Zhang, 2011).

Coombs (2011) offers a comprehensive understanding of a crisis as a perception of an unexpected event, which threatens to significantly disturb stakeholders' expectations and can critically affect an organization's performance, often leading to negative implications. Importantly, the impact of a crisis transcends the confines of the organization, extending to its publics and stakeholders. This is echoed by Ulmer, Sellnow, and Seeger (2017), who noted that crises can give rise to a series of incidents, potentially leading to detrimental effects on organizations, industries, or even their products, services, and reputations. In essence, a crisis has the potential to destabilize an entire organization, causing widespread disruption or distress (Coombs, 2015).

AI crises are defined as significant, often unexpected situations or series of events associated with the deployment or use of AI technologies that trigger negative impacts on a wide

range of stakeholders, including individuals, organizations, or society as a whole. AI crises in public relations are frequently caused by concerns such as algorithmic biases/prejudice, data privacy violations, and automation errors. For instance, algorithmic biases can result in biased outcomes and perpetuate stereotypes, harming the reputation of the organization involved (Noble, 2018). Data privacy violations, on the other hand, have the potential to destroy public faith in AI systems and their developers, while automated failures can lead to misinterpretation and misinformation (Bucher, 2018).

The effects of AI failures can go further beyond the damage to an organizational reputation. These occurrences may potentially erode the public's trust in AI systems and create issues with regard to their ethical and legal ramifications (Noble, 2018). To reclaim public trust and reestablish trust, organizations need to address these issues through open communication, proving their commitment to ethical AI usage and continual development (Wigley & Zhang, 2011). The following cases show the effects of AI failure crisis cases.

Case Studies

1. Google's Bard Generative AI Tool

In 2023, Google's Bard, in a promotional demonstration, provided an incorrect answer about the James Webb Space Telescope, leading to a significant drop in parent company Alphabet's stock value by \$100 billion (Thorbecke, 2023). This incident not only highlighted the limitations of AI in providing accurate information but also raised concerns about the reliability of such technologies in critical applications. Google's response to this error involved acknowledging the mistake and emphasizing its commitment to improving the accuracy and reliability of its AI systems. This case illustrates the ongoing challenges in the development and deployment of AI technologies, where ensuring accuracy and mitigating misinformation are

paramount. These examples collectively demonstrate the importance of ethical considerations, transparency, and accountability in the use of AI in public relations and beyond.

2. Samsung and the Generative AI Chatbot, ChatGPT

In early 2023, several Samsung employees reportedly leaked sensitive data to ChatGPT, including confidential source code and recorded meeting notes (Holt, 2023). This occurred soon after Samsung's semiconductor division permitted engineers to use ChatGPT for work-related tasks. The incidents included employees asking ChatGPT to check database source code for errors, optimize code, and generate minutes from a recorded meeting. Upon discovering these security breaches, Samsung reportedly took measures to limit the length of ChatGPT prompts and began investigating the involved employees. Additionally, the company started developing its own chatbot to prevent similar issues in the future (Holt, 2023). This incident not only highlights the need for heightened security measures in AI applications but also underscores the critical role of public relations in managing corporate reputation and stakeholder trust in the wake of AI-related data breaches

3. Amazon's AI Hiring Tool

In 2018, Amazon's AI hiring tool discriminated against and degraded female candidates since the software was trained based on the company's over 10 years of resume data, which was overwhelmingly male dominated (Dastin, 2018). This AI tool's judgments violated gender equality and fair treatment which seriously impacted Amazon's reputation. Eventually, Amazon used a denial strategy, mentioning that the system was never used by Amazon recruiters to evaluate candidates. This practice may fuel the public's anger, consequently resulting in a lower reputation.

4. Microsoft's Tay Chatbot

In 2016, Microsoft introduced Tay, an AI chatbot built to learn from Twitter conversations. However, Tay began uploading rude and improper information within hours, causing Microsoft to face a public relations crisis (Neff & Nagy, 2016). Microsoft's response included an apology, an explanation for the situation, and the suspension of the chatbot, emphasizing the necessity of openness and responsibility in dealing with AI problems (Coombs, 2015).

5. Facebook's AD targeting Algorithm

In 2017, Facebook faced a crisis when it was found that its ad targeting algorithm permitted discriminatory tactics in housing, employment, and credit marketing (Angwin et al., 2017). Facebook's public relations initiatives included admitting the problem, committing to adjustments, and cooperating with stakeholders to guarantee fair and equitable ad policies (Coombs, 2015).

PR experts play an important role in mitigating AI crises by framing the narrative and addressing concerns raised. Proactive communication, transparency, and engagement with stakeholders are real-life examples of crisis communication strategies in the context of AI failures (Coombs, 2015). While AI is a valuable practice for organizations, strategies to address AI failures to AI crises have not been explored in public relations. In the next section, this study examines crisis communication, particularly focusing on situational crisis communication theory and crisis response strategies to explore potential strategies to address crises that arise by AI.

Crisis Communication

Crisis communication is the practice of managing information dissemination during emergencies to reduce their detrimental effects, with an ultimate aim of maintaining or

rebuilding reputation and functionality within an organization (Coombs, 2007). Crises are primarily unpredictable events that hold the potential to disrupt an organization's operations and harm its reputation. These events are primarily perceived and interpreted by various stakeholders and could cause a severe dent in an organization's performance, leading to adverse outcomes (Coombs, 2007, pp. 2-3).

As elaborated by Coombs (2020), an organization finds itself in a crisis if its stakeholders perceive it to be so, unless the organization can convince them otherwise. Therefore, during a crisis, an organization's financial and reputational stability is significantly contingent on how the stakeholders react. This fact underscores the crucial role of stakeholder management in crisis communication - it involves shaping stakeholders' reactions towards the crisis and the organization itself.

Crisis communication has evolved significantly with the understanding that employing suitable response strategies during a crisis can help organizations restore their damaged reputation and effectively manage stakeholder responses. Over the years, crisis communication studies have explored and advanced various crisis response strategies that aim to protect and repair an organizational reputation in the aftermath of a crisis (Benoit, 1995, 1997; Coombs, 1998; Coombs & Holladay, 2001, 1996, 2002; Seeger et al., 1998).

To successfully manage stakeholder reactions and steer communication in a way that favors the organization during a crisis, it is crucial to understand how stakeholders perceive the crisis and the organization itself. This includes perceptions about the attribution of crisis responsibility, the severity of the crisis, and the organization's performance history (Coombs, 1998, 2020; Coombs & Holladay, 2001, 1996, 2002). By comprehending these stakeholder

perceptions, the crisis management team can effectively strategize responses that align with public expectations and subsequently minimize the reputational harm caused by the crisis.

Situational Crisis Communication Theory (SCCT)

The Situational Crisis Communication Theory (SCCT), developed by Coombs in the 2000s is an advancement in the field of crisis communication. SCCT is based on attribution theory, proposing that how stakeholders perceive a crisis and assign responsibility greatly impacts an organizational reputation during a crisis (Coombs, 2007). According to SCCT, crises fall into three categories based on how stakeholders attribute responsibility; victim crises, where the organization is seen as a victim; accidental crises, where the organization is believed to have had no intention of being involved; and preventable crises, where the organization is held accountable due to negligence or mismanagement (Coombs & Holladay, 2002).

Coombs (2006) stresses that an organization's prior reputation and the nature of the crisis significantly influence its communication response effectiveness. The theory suggests that organizations with a reputation are likely to garner stakeholder support and face less reputational damage, in victim or accidental crises compared to preventable ones. This phenomenon is referred to as the halo effect wherein positive attributes are attributed to an organization based on its actions (Coombs & Holladay, 2006).

SCCT also incorporates the concept of crisis responsibility by suggesting that how much responsibility is assigned to an organization affects reactions and consequently determines the reputational threat posed by a crisis. This concept is central to understanding how different stakeholders perceive the organization's role in a crisis and how these perceptions influence their responses. Coombs (2007) elaborates on this by categorizing crises into three types based on perceived organizational responsibility: victim, accidental, and preventable. Each category

demands a different communication strategy to effectively manage stakeholder perceptions and mitigate reputational damage. For instance, in a victim crisis, where the organization is seen as a victim, the reputational threat is typically lower, and the organization may adopt a more sympathetic communication approach. Conversely, in a preventable crisis, where the organization is perceived as responsible, a more apologetic and corrective approach is necessary to restore reputation (Coombs & Holladay, 2002). The effectiveness of these strategies in managing crisis responsibility and protecting reputation has been empirically validated in various studies, demonstrating their critical role in crisis management and communication (S. Kim et al., 2009). Furthermore, Claeys and Cauberghe (2014) highlight that the perceived level of organizational responsibility significantly influences the effectiveness of crisis response strategies, underscoring the importance of accurately assessing and addressing stakeholder perceptions in crisis situations.

Crisis Response Strategies

Understanding and effectively employing crisis response strategies is crucial for managing the impact of a crisis on an organizational reputation and stakeholder relationships. These strategies, as outlined in the Situational Crisis Communication Theory (SCCT) by Coombs (2007), can be broadly categorized into three primary types: deny, diminish, and rebuild strategies (see Table 1). Each category encompasses specific tactics that organizations can use depending on the nature of the crisis and the level of responsibility attributed to them.

Deny Crisis Response Strategies. Deny strategies are employed when an organization aims to reject the existence of a crisis. This category includes tactics such as attacking the accuser, where the crisis manager confronts the individual or group claiming something is wrong with the organization (Coombs, 2007). Another tactic is outright denial, where the crisis manager

asserts that there is no crisis, challenging the very existence of the problematic situation (Coombs & Holladay, 2002). Lastly, scapegoating involves the crisis manager shifting the blame to an external entity or group, thereby absolving the organization of direct responsibility (Coombs, 2014). These strategies are typically used when an organization believes it is wrongly accused or when there is a need to protect its reputation from unfounded allegations.

Diminish Crisis Response Strategies. Diminish strategies are utilized to reduce the perceived responsibility of the organization in the crisis. The excuse strategy involves the crisis manager minimizing the organization's responsibility by denying any intent to cause harm or claiming an inability to control the events that led to the crisis (R. R. Ulmer et al., 2007). Justification, another diminish strategy, entails the crisis manager attempting to minimize the perceived damage caused by the crisis, often by comparing it to other more severe incidents or by highlighting mitigating circumstances (Coombs, 2010). These strategies are often adopted in situations where the organization acknowledges the crisis but seeks to lessen its perceived culpability or the severity of the impact.

Rebuild Crisis Response Strategies. Rebuild strategies are used when an organization takes responsibility for the crisis and seeks to repair its relationship with stakeholders. Compensation involves the crisis manager offering money or other forms of reparation to the victims of the crisis (Coombs & Holladay, 2010). This strategy is a direct way to address the harm caused and to show stakeholders that the organization is taking tangible steps to make rights. The apology strategy is where the crisis manager expresses a full and often public acknowledgment of the organization's responsibility for the crisis, coupled with a request for forgiveness from stakeholders (Hearit, 2006). This approach is indicative of a high level of

responsibility acceptance and is aimed at rebuilding trust and restoring the organizational reputation.

Table 1.

Types of Crisis and Crisis Response Strategies (Coombs, 2007)

<i>Crisis Type</i>	<i>Primary crisis response strategies</i>
Victim Cluster	Deny crisis response strategies
Natural disaster Rumor Workplace violence	<i>Attack the accuser</i> : Crisis manager confronts the person or group claiming something is wrong with the organization. <i>Denial</i> : Crisis manager asserts that there is no crisis.
Product Tampering/malevolence	<i>Scapegoat</i> : Crisis manager blames some person or group outside of the organization for the crisis.
Accidental Cluster	Diminish crisis response strategies
Challenges Technical-error accidents Technical-error product harm	<i>Excuse</i> : Crisis manager minimizes organizational responsibility by denying intent to do harm and/or claiming inability to control the events that triggered the crisis. <i>Justification</i> : Crisis manager minimizes the perceived damage caused by the crisis.
Preventable Cluster	Rebuild crisis response strategies
Human-error accidents Human-error product harm Organizational misdeed with no injuries Organizational misdeed management misconduct Organizational misdeed with injuries	<i>Compensation</i> : Crisis manager offers money or other gifts to victims. <i>Apology</i> : Crisis manager indicates the organization takes full responsibility for the crisis and asks stakeholders for forgiveness.

Bolstering Strategies. Bolstering strategies, as conceptualized by Coombs, serve as supplementary tactics in crisis response, designed to support and enhance the primary strategies of *Deny*, *Diminish*, and *Rebuild* (Coombs, 2007). These strategies do not stand alone; rather, they are employed in conjunction with the primary strategies to strengthen an organization's crisis response narrative and further protect its reputation. The reminding strategy involves reminding the public of the past good acts of the organization, which creates a positive context and mitigates the negative impact of the crisis (Coombs & Holladay, 2002). Ingratiation strategy shows praising the public and others involved in the crisis management process, which supports goodwill and support (Coombs, 2014). In addition, the victimage strategy includes the

organization positioning itself as a victim of the crisis, aiming to elicit sympathy and understanding from the public (Coombs, 2006).

While bolstering strategies play a role in crisis communication, this research excludes these strategies for several reasons; first, bolstering strategies are not standalone tactics but are used to complement the primary strategies of deny, diminish, and rebuild. Their effectiveness is contingent on the application of these primary strategies, making them secondary in the hierarchy of crisis response tactics (Coombs, 2007). Second, this study aims to concentrate on the core strategies that directly address the organization's action in a crisis. This focus allows for a more in-depth analysis of the primary strategies' effectiveness without the confounding effects of supplementary tactics (Coombs & Holladay, 2002). Lastly, as these strategies are often context-dependent and vary in their application (Coombs, 2014), including bolstering strategies could complicate the analysis and interpretation of results. Thus, by focusing on the primary strategies, the study maintains simplicity and clarity in its research design.

In this research, the complexities of categorizing AI-related crises within the existing frameworks of crisis communication, as outlined by Coombs, are examined. The ambiguity in classifying AI crises – whether as technical errors or human error accidents – poses a significant challenge in determining the most effective crisis response strategies.

AI crises, by their nature, are not straightforward. They could stem from technical malfunctions within AI systems, which might suggest categorizing them as technical errors. In such cases, according to Coombs, these would fall under the 'accidental' cluster, indicating that diminish crisis response strategies might be most appropriate. These strategies typically involve minimizing the organization's responsibility by citing a lack of control over the events or a lack of intent to cause harm.

However, AI crises can also be perceived as human error accidents, especially when they arise from flaws in AI design, development, or oversight. This perspective shifts the focus from the technology itself to the human elements behind it – the decisions, actions, or inactions of individuals or groups responsible for the AI system. In such scenarios, the crisis might be seen as preventable, which would necessitate a different set of response strategies, potentially leaning more towards rebuild strategies that involve accepting responsibility and taking corrective actions.

As it pertains to generative AI crises, such as those involving tools like ChatGPT, it is important to recognize the dual sources of potential errors: technical malfunctions and human oversight. Unlike traditional crises, where the cause might be more straightforward, AI-related crises can emerge from the complex interplay between the AI's programming (technical aspect) and the way it is used by humans. The existence of this duality requires us to adopt a thoughtful approach when formulating crisis response strategies. The perception of whether a crisis could have been prevented can differ depending on whether the underlying cause is attributed to a malfunction, or a mistake made by a human.

The core argument of this research is that AI, as a relatively new and rapidly evolving technology, presents unique challenges in crisis communication. AI technologies can trigger negative impacts across a broad spectrum of publics, encompassing individuals, organizations, and society at large. The multifaceted nature of AI, coupled with its inherent complexity, makes it difficult to neatly categorize AI-related crises within traditional frameworks. This uncertainty underscores the need for further research to explore and identify which crisis response strategies are most effective regarding AI crises. This dissertation aims to address this gap, exploring the nuances of AI crises and their implications for crisis communication strategies.

Outcomes of Crisis Communication

Organization-Public Relationship (OPR)

Organization-Public Relationship (OPR) serves as an aspect of public relations encompassing the interactions and connections between an organization and its public. This concept, which holds importance according to scholars like Grunig and Hung (2002), highlights the need to comprehend and manage these relationships in order to achieve benefits and establish sustainable connections. OPR is based on the notion that an organization's prosperity and reputation are closely intertwined with how it's perceived and supported by groups such as customers, employees, investors, and community members.

The examination of OPR involves analyzing the dynamics of engagement between organizations and their diverse stakeholders (Ledingham & Bruning, 1998). It evaluates the quality of these relationships across aspects; trust, satisfaction, commitment, control mutuality, exchange relationship and communal relationship. Each aspect provides insights into the vitality and effectiveness of the organization's relationship.

Trust. Trust is a fundamental dimension of OPR, encompassing the belief that an organization is fair, reliable, and honest in its dealings with its public. Hon and Grunig (1999) emphasize that trust is built over time through consistent, transparent, and ethical behavior. In crisis situations, maintaining or restoring trust is crucial, as it influences how stakeholders perceive and respond to the organization's crisis communication efforts (Coombs & Holladay, 2002).

Satisfaction. Satisfaction in OPR refers to the extent to which stakeholders feel that their needs and expectations are being met by the organization. It is a measure of the overall approval of the organization by its public. High levels of satisfaction typically indicate effective

communication and responsiveness to stakeholder concerns, which are particularly important during crises (Ledingham & Bruning, 1998).

Commitment. Commitment in OPR is the extent to which both the organization and its stakeholders are willing to continue their relationship. It reflects a mutual belief in the value and importance of the relationship. Strong commitment suggests a resilient relationship that can withstand challenges, including those arising from crisis situations (Morgan & Hunt, 1994).

Control Mutuality. Control mutuality measures the balance of power in the relationship between the organization and its public. It exists when both parties agree on who has the rightful power to influence the other. In effective OPR, there is a sense of shared control, where stakeholders feel they have a voice in the relationship, especially critical during crisis management (Hon & Grunig, 1999).

Exchange Relationship. This dimension focuses on the transactional nature of the relationship, where interactions are based on reciprocal exchanges that benefit both parties. In a crisis, the nature of these exchanges can shift, and organizations must be mindful of maintaining a balance that upholds stakeholder interests (Ki & Hon, 2007).

Communal Relationship. Communal relationships are characterized by mutual concern for each other's welfare. In such relationships, the organization and its stakeholders are motivated by mutual care and concern rather than by what they might gain from each other. This dimension becomes particularly significant in crisis communication, where demonstrating genuine concern for stakeholders can greatly impact the perception and effectiveness of the organization's response (Ledingham & Bruning, 1998).

Crisis Communication and OPR

The importance of OPR has become increasingly significant, especially in areas such as crisis communication, engagement with digital media and corporate social responsibility. The way organizations communicate and respond to challenges while staying true to their values plays a role in shaping relationships. Coombs and Holladay (2002) argue that effective OPR management not only enhances an organizational reputation but also contributes to its long-term success by fostering a community of involved stakeholders. This highlights the significance of OPR principles for public relations professionals as they navigate the balance between goals and stakeholder expectations.

Communication strategies significantly impact the quality of OPR. The way an organization responds to a crisis can either strengthen or weaken its relationship with stakeholders. For instance, a study (Lee & Kim, 2020) highlights the evolving nature of relationships between organizations and their publics, emphasizing the importance of perspective mutuality. The research underscores how an organization's communication can influence key relationship dimensions like trust and commitment, which are essential in maintaining robust OPR.

Control mutuality and relationship satisfaction are also influenced by how organizations communicate during crises. For instance, a study on Juanda Airport's response to consumer complaints during the COVID-19 pandemic demonstrates the importance of a strategic approach in crisis communication (Juliansyah et al., 2022). By addressing concerns empathetically and effectively, organizations can maintain a balanced relationship with their publics, ensuring mutual control and satisfaction.

Given the demonstrated impact of crisis communication on key elements of OPR such as control mutuality and relationship satisfaction, the following hypothesis is proposed:

H1: Crisis response strategies (denial – , excuse – , and apology strategies) will lead to positive OPR outcomes in the context of AI crises.

The relationship between crisis communication and OPR is intricate and significant. The effectiveness of crisis response strategies directly impacts various dimensions of OPR, shaping the overall health of the relationship between organizations and their stakeholders.

Understanding this relationship is crucial for organizations to navigate crises effectively, ensuring that their response strategies not only address the immediate crisis but also foster long-term, positive relationships with their publics. In light of this, it becomes essential to investigate how different crisis response strategies influence OPR outcomes, particularly in the evolving context of AI crises. This leads to the formulation of the following research question:

RQ1: Are there differences in the effectiveness of OPR outcomes depending on response strategies (denial - vs. excuse – vs. apology strategies) in the context of AI crises?

Organizational Reputation

Organizational reputation encompasses aspects that reflect how publics perceive and evaluate an organization. It represents the admiration, regard and trust that stakeholders have towards an organization, which is influenced by their experiences, communication and the organization's track record (Fombrun & Van Riel, 1997). Reputation is often considered an asset as it impacts stakeholder decisions and behaviors while playing a pivotal role, in organizational success and resilience. During or post-crisis situations, organizational reputation becomes a crucial indicator of an organization's ability to maintain stakeholder trust and support (Coombs, 2007). Managing reputation is not about shaping perceptions but about aligning organizational

actions, with stakeholder expectations and ethical standards to foster a sustainable and positive public image (Fombrun & Van Riel, 1997).

Research has shown that the success of crisis response communication significantly impacts an organizational reputation. Strategies such as compensation, corrective action, and mortification have proven to be particularly effective in preserving or even improving an organizational reputation. For example, Ferguson et al. (2018) analyzed public relations professionals' perceptions of various image repair strategies and found a hierarchical consistency in their effectiveness across different types of crises. They found that across various types of crises, these strategies play a role in establishing and strengthening an organization's bond with its public while safeguarding and restoring its reputation in the long term.

Such case studies illustrate how organizations navigate complex crisis situations and the strategic decisions they make to safeguard their reputation. Real-world scenarios, such as the Real Madrid leaked audio scandal, provide practical insights into the application of these strategies. In this case, Real Madrid employed a combination of reducing offensiveness and attacking the accuser to manage the crisis effectively (Koa, 2022). They also highlight the importance of tailoring crisis response strategies to the specific context and nature of the crisis.

H2: Crisis response strategy (denial -, excuse -, and apology strategies) will lead to a positive organizational reputation in the context of AI crises

Understanding the nuances of how different crisis response strategies impact organizational reputation is important to measure the effectiveness of crisis communication. It informs PR practitioners on managing crises effectively to maintain public trust and credibility. Given the evolving landscape of crises, especially with the advent of AI, examining the

effectiveness of these strategies in new contexts becomes even more relevant. Therefore, this leads to the formulation of the following research question:

RQ2: Are there differences in the effectiveness of an organizational reputation depending on response strategies (denial - vs. diminish – vs. rebuild strategies) in the context of AI crises?

OPR and Organizational Reputation

The relationship between OPR elements and organizational reputation is a well-established area in public relations research. Grunig and Hung (2002) have articulated that organizational reputation is shaped by management behaviors and the quality of OPR. This perspective is supported by a body of research indicating that positive aspects of OPR, such as trust, satisfaction, and commitment, are instrumental in fostering a favorable organizational reputation (Yang & Grunig, 2005). Furthermore, when the outcomes of OPR are effectively communicated and comprehended, they contribute significantly to the long-term benefits for an organization, notably in enhancing its overall reputation (Yang & Grunig, 2005; Yang, 2007). This underscores the importance of not only cultivating strong OPR but also effectively conveying these relationship outcomes to bolster an organization's standing and perception in the public eye.

Effective crisis response strategies have the potential to positively influence OPR dimensions such as trust, commitment, and control mutuality (e.g., Juliansyah et al., 2022; Lee & Kim, 2020). These dimensions, as established by Grunig and Hung (2002) and further supported by Yang and Grunig (2005), play a critical role in shaping an organizational reputation. Especially, where the stakes are high and public scrutiny is intense, the choice and execution of crisis response strategies can alter the public's perception and trust in an organization.

Given this sequential impact – from crisis response strategies to OPR, and from OPR to organizational reputation – it becomes evident that OPR plays a mediating role in the relationship between crisis response strategies and organizational reputation. This understanding leads to the formulation of the following hypothesis:

H3:OPR outcomes will mediate the relationship between crisis response strategies (denial -, excuse – and apology strategies) and an organizational reputation, such that effective OPR outcomes will enhance the positive impact of crisis response strategies on an organizational reputation in the context of AI crises

Organizational Reputation and Supportive Behavioral Intention

Understanding and influencing behavioral intentions is crucial for achieving desired outcomes and maintaining strong public relationships. Behavioral intentions, reflecting the likelihood of the publics engaging in supportive actions, are pivotal in determining the success of public relations efforts. Previous research has delved into various aspects of this relationship, revealing key insights.

Hong and Yang (2011) focused on the effects of relational satisfaction and organizational reputation in public relations management. Their research highlights how these factors significantly impact public engagement in supportive communication behavior, particularly in terms of word-of-mouth communication. This study found that when an organization maintains a favorable reputation, it not only gains trust and approval from its public but also motivates them to actively share positive narratives about the organization with others. This finding underscores the notion that reputation is not just a passive asset but an active driver of public engagement and positive communication, reinforcing the organization's image and expanding its influence in the public sphere. Another study emphasized the significant role of corporate reputation in shaping

stakeholders' responses to CSR initiatives (Kim & Ferguson, 2019). This study found that a positive corporate reputation can enhance stakeholders' intentions to support the company and engage in positive behaviors, such as expressing supportive communication and showing a willingness to purchase. The research highlights that the public's perceptions and behavioral intentions are not solely influenced by the CSR activities themselves but are significantly moderated by the reputation of the company. This aligns with the idea that organizational reputation, as a broader perception held by the public, can lead to supportive or positive behavioral intentions.

A recent study explored how the Theory of Planned Behavior relates to the willingness of individuals to donate to nonprofit organizations (Kim & Han, 2020). They focused particularly on the influence of the CEO's reputation within these organizations. The study found that a CEO's positive reputation enhances factors such as subjective norms, perceived behavioral control, and the public's identification with the organization, all of which contribute to an increased intention to donate. This research indicates that organizational reputation, particularly as embodied by leadership, can significantly influence public support in the form of donations.

In conclusion, the exploration of organizational reputation reveals its critical role as a determinant of supportive behavioral intentions. As an essential outcome of effectively managed crisis communication, a robust organizational reputation not only reflects the success of these strategies but also significantly influences public behavior. Therefore, in examining the outcomes of crisis response strategies, particularly in the context of AI crises, it is important to consider how these strategies affect organizational reputation and, subsequently, supportive behavioral intentions in this dissertation.

Ethics Approaches in Crisis Communication

SCCT emphasizes the ethical imperative of addressing victims' needs. Coombs (2017) identifies the combination of instructing and adjusting information in the initial crisis response as the 'ethical base response.' This approach underscores the importance of focusing on the needs and concerns of those affected by a crisis, aligning with long-standing principles in practitioner literature that advocate for prioritizing victim concerns (Jackson & Peters, n.d.).

Recent scholarly efforts have further explored this victim-centric approach through the lens of affective empathy. Affective empathy refers to the emotional response elicited by understanding a victim's situation, often leading to feelings of compassion and sympathy (Schoofs et al., 2022). This empathetic response is integral to effective crisis management, as it fosters a deeper connection and understanding between the organization and its stakeholders.

Moreover, the ethical base response aligns with the broader ethical frameworks in public relations, such as the emphasis on ethical decision-making and stakeholder engagement (Bowen, 2008). These frameworks advocate for a moral approach to crisis communication, where the focus extends beyond mere reputation management to genuinely addressing the needs and concerns of those impacted by the crisis.

Despite the acknowledged importance of the ethic of care in organizational communication, its practical application in real-life crisis situations appears to be limited. A recent study by Tao and Kim (2017) analyzing 181 news articles focusing on the crisis responses of three organizations—Penn State University, Duke University, and NASA—revealed a notable trend. The research found that the ethic of justice approach was most prevalent (26%), followed by a hybrid approach (13%), with the *ethic of care* approach being less prominent (12%). Remarkably, nearly half of the analyzed articles (49%) did not exhibit either of these ethical

approaches. Within the context of the ethic of care, the predominant indicator was the organization's sensitivity and responsiveness to the emotional needs of the public, such as showing sympathy and compassion or considering the impact of actions on people's feelings. This finding is particularly striking given the urgent calls for the adoption of ethical approaches in crisis communication, as advocated by scholars like Snyder et al (2006). The infrequent use of the ethic of care approaches in these cases suggests a gap between theoretical advocacy and practical implementation in crisis communication.

While Coombs (2007) has emphasized in SCCT that all crisis responses should commence with an ethical base response, there remains a notable gap in empirical research in this area. Despite the theoretical recognition of the ethical base response as a cornerstone in crisis communication, few studies have rigorously tested its practical application and effectiveness in real-world scenarios. This lack of empirical investigation leaves a critical area of crisis communication underexplored, particularly concerning how this approach tangibly influences stakeholder perceptions and organizational outcomes.

Ethics of Care

Key Figures and Influences. Carol Gilligan's groundbreaking work in the 1980s brought about a shift in the fields of philosophy and psychology. Her book, "In a Voice," challenged the prevailing development theories that were predominantly based on male perspectives. Gilligan argued that these theories, Lawrence Kohlberg's, favored justice-oriented moral reasoning while neglecting the relational and context-dependent aspects of moral decision-making that are more commonly observed in women (Gilligan, 1982). By introducing the ethic of care as a perspective, her work not only sparked broader discussions but also shed light on gender differences in moral reasoning.

Gilligan's theory was revolutionary as it emphasized the importance of care and relationships in shaping our morality. She proposed that care-based morality pays attention to the intricacies of relationships and how individuals are interconnected, which starkly contrasts with the principles of justice and rights dominating philosophy during that time. Since then, her work has had an influence on fields including ethics, psychology, education, and feminist studies. It has prompted a reassessment of theories and their relevance to diverse populations.

Furthermore, Gilligan's emphasis on relationships and context in the ethic of care has had an impact on communication studies. Virginia Held, a known figure in this field, expanded the concept of care ethics to examine its implications in media communication and public relations (Held, 2005). Held and other scholars have argued that care ethics provides a perspective for understanding communication processes about how organizations interact with their stakeholders.

Importance of the Ethics of Care

Enhancing Relationships and Trust. The ethic of care plays a role in improving relationships and fostering trust in organizational settings. According to Fisher (2010), care ethics can revolutionize how organizations engage with their stakeholders. By prioritizing connections and showing care for the well-being of stakeholders, organizations can develop stronger relationships with them based on trust. In contrast to profit-focused models, this approach offers a sustainable and ethical framework for engaging with stakeholders.

There has been a growing recognition of the significance of incorporating the ethic of care as an approach to strengthening relationships and establishing trust with various audiences. This particular approach, rooted in principles, like empathy, understanding and genuine concern for stakeholders stands in contrast to strategies in relations that often prioritize organizational

interests above those of the general public. Ledingham (2003) underscores the significance of relationship management highlighting that the quality of connections between an organization and its stakeholders is pivotal for achieving success in public relations endeavors. In fact, the ethic of care which places emphasis on nurturing these relationships aligns closely with this viewpoint. By demonstrating care and consideration for stakeholders' interests and well-being, organizations can cultivate more meaningful bonds with their target audiences.

In a study that investigated the impact of ethics on relations, Bowen (2008) discovered that ethical considerations, including demonstrating care and responsibility towards stakeholders, have an influence on how the public perceives and trusts an organization. This finding emphasizes the importance of integrating principles like those endorsed by the ethic of care into public relations strategies. Additionally, Ki and Hon (2007) examined how relationship building strategies relate to the quality of relationships between organizations and the public. Their research suggests that strategies that demonstrate care and concern for stakeholder needs, such as communication and ensuring benefits are effective in improving the quality of these relationships.

Fostering Empathy and Understanding. Empathy and understanding play a role, in the ethics of care as emphasized by (Tronto, 1994) in her work on ethics of care. When it comes to communication, this empathetic approach involves considering and prioritizing the perspectives, feelings, and contexts of others. It goes beyond acknowledging these aspects; instead, it actively incorporates them into the communication process.

The application of empathy has been shown to enhance the effectiveness of messaging and strategy. Empathetic communication helps identify and address stakeholders' concerns and needs resulting in impactful engagement (Coombs & Holladay, 2010; Schoofs et al., 2019,

2022). This becomes particularly important during crisis situations when stakeholders' emotions and concerns are heightened. Previous studies showed how organizational crises and crisis communication affect organizations' reputation, focusing on stakeholders' empathy as a key factor (Schoofs et al., 2019). The study highlights that empathy affects how stakeholders perceive organizational reputation during crises. In particular, apologies in crisis communication are shown to arouse empathy among stakeholders, leading to increased reputation repair. In a later study, Schoofs et al. (2022) further explored the role of empathy in crisis communication from the perspective of Belgian crisis communication practitioners. The study found empathy is considered a crucial element of impactful crisis communication. While it is strategically employed for reputation repair, its effectiveness hinges on its perceived sincerity and genuine concern for stakeholders' needs and emotions. The findings underscore the importance of genuine empathy, ultimately leading to more impactful engagement and reputation management. Coombs and Holladay (2010) emphasize that crisis communication strategies that incorporate empathy and understanding lead to effective responses. By acknowledging the emotions and concerns of those affected by the crisis, organizations can communicate in a manner that genuinely reflects their concern while showing commitment towards addressing the issues at hand. Such an approach not only aids in managing crises but also builds long-term trustworthiness and credibility.

The integration of an ethic of care in crisis communication strategies is not just a moral imperative but also a strategic consideration that can significantly influence key organizational outcomes. The level at which this ethic of care is communicated, whether high or low, plays a pivotal role in shaping the perceptions and responses of stakeholders. A high level of ethic of care, characterized by deep empathy, understanding, and a genuine concern for stakeholders'

needs, is posited to resonate more effectively with the public. This heightened level of care is expected to not only enhance the quality of OPR but also positively influence the overall reputation of the organization. Furthermore, it is anticipated that such a compassionate and empathetic approach will foster supportive behavioral intentions among stakeholders. These considerations lead to the formulation of the following hypotheses:

H4: The level of ethics of care messaging (high, low, vs. control) is predicted to differentially influence OPR outcomes, with a high level of ethics of care message expected to yield greater OPR outcomes compared to both low level and control conditions.

H5: The level of ethics of care messaging (high, low, vs. control) is predicted to differentially influence the organizational reputation, with a high level of ethics of care message expected to yield a greater organizational reputation compared to both low level and control conditions.

H6: The level of ethics of care messaging (high, low, vs. control) is predicted to differentially influence supportive behavioral intention, with a high level of ethics of care message expected to yield greater supportive behavioral intention compared to both low level and control conditions.

Empowering of Crisis Response Strategies via Ethics of Care

The Ethics of Care in Crisis Communication

The integration of ethics of care into crisis communication is an emerging and vital area in the field of public relations, particularly in the context of how organizations manage their stakeholder relationships during crises. Care ethics, which emphasizes principles of empathy, responsibility, and relational engagement, offers a nuanced perspective on organizational

communication strategies during times of crisis. In a study by Contreras-Pacheco (2018), the finding provides a valuable insight into this approach by examining the crisis communication strategies of two South American companies in response to socio-environmental disasters. This research highlights the significance of relationships and benevolence, the central aspect of care ethics - when crafting responses to crises.

The influence of socio-political contexts on corporate decision-making in crisis situations is another critical aspect highlighted in these studies. Contreras-Pacheco (2018) notes significant variations in how companies approach their stakeholders during crises, depending on the surrounding socio-political environment. This observation underscores the need for a care ethics approach that is adaptable and context-sensitive. By understanding and responding to the unique needs and concerns of stakeholders in various contexts, organizations can navigate the complexities of crisis communication more effectively. This adaptability is crucial for maintaining stakeholder trust and for the ethical management of crises.

Building on the concept of care ethics, the work of Xu and Li (2013) on Foxconn's 2010 employee suicide crisis underscores the importance of an ethical stakeholder approach in crisis situations. This approach aligns with care ethics by prioritizing the well-being and concerns of stakeholders rather than focusing solely on the organizational narrative. Their analysis demonstrates how ethical considerations in crisis communication can profoundly influence public perception and stakeholder trust. This case study serves as a compelling example of how integrating ethical considerations, particularly those centered around care, can enhance the effectiveness of crisis communication.

The integration of ethics of care into crisis communication represents a paradigm shift towards more empathetic, responsible, and stakeholder-focused approaches. This shift is not only

ethically sound but also potentially more effective in maintaining stakeholder trust and loyalty during and after crises. The existing studies (e.g., Contreras-Pacheco, 2018; Xu & Li, 2013) collectively emphasize the need for organizations to adopt communication strategies that are grounded in the principles of care ethics, particularly in times of crisis. This approach not only addresses the immediate needs of stakeholders but also fosters long-term relationships based on trust and mutual understanding.

Past studies provide a basis to hypothesize that integrating a high ethic of care message into a crisis response strategy will improve organizational reputation and relationship outcomes compared to a low ethic of care message. Research on effective crisis management emphasizes the importance of expressing empathy, compassion, and concern, which are the core values of the ethic of care for those affected (Seeger, 2006; Ulmer et al., 2022). Experiments have found that crisis responses that arouse empathy can increase reputation repair following a crisis (Schoofs et al., 2019). Therefore, infusing a high ethic of care message into crisis responses should strengthen perceived relationship quality, such as organizational reputation and supportive behavioral intentions, compared to a low ethic of care message by signaling an organization's benevolent motivations and prioritization of public needs over self-interest. This aligns with Simola's (2003) model of a caring corporation managing stakeholder connections through ethics-centered communication (ethics of justice and ethics of care).

Given the established significance of integrating a high ethic of care in crisis response strategies, it is imperative to explore how this approach increases the effectiveness of various crisis response strategies. The hypothesis that follows seeks to examine this moderation effect in detail. Specifically, it aims to understand how the degree of ethics of care employed can influence the outcomes of different crisis response strategies, namely – denial, excuse, and

apology, particularly in the context of AI crises. The effectiveness of these strategies, when infused with an ethic of care message, may vary significantly. For instance, a denial strategy, even when combined with care ethics, might have different implications for stakeholder trust and perception compared to a rebuild strategy underpinned by the same level of care. This variance necessitates a more granular examination of the interplay between specific crisis response strategies and the integration of care ethics. This exploration is important in understanding the broader implications of ethics of care on OPR, organizational reputation and supportive behavioral intention, therefore providing a more holistic view of crisis communication effectiveness. Thus, the following hypotheses are proposed:

H7: The level of ethics of care (high, low, vs. no control) will moderate the relationship between crisis response strategies (denial, excuse, and apology) and OPR outcomes. Specifically, a high level of ethics of care is anticipated to enhance the positive effects of crisis response strategies on OPR outcomes within the framework of AI crises.

H8: The level of ethics of care (high, low, vs. no control) will moderate the relationship between crisis response strategies (denial, excuse, and apology) and organizational reputation. Specifically, a high level of ethics of care is anticipated to enhance the positive effects of crisis response strategies on an organizational reputation within the framework of AI crises.

H9: The level of ethics of care (high, low, vs. no control) will moderate the relationship between crisis response strategies (denial, excuse, and apology) and supportive behavioral intention. Specifically, a high level of ethics of care is anticipated to enhance the positive effects of crisis response strategies on supportive behavioral intention within the framework of AI crises.

The level of ethics of care is anticipated to play a moderating role within this framework (Coombs, 2017; Tao & Kim, 2017). Drawing from the ethics of care (Gilligan, 1982; Held, 2005), this study posits that the degree of care and empathy expressed in crisis communication can significantly influence the efficacy of crisis response strategies. High levels of ethics of care may enhance the positive impact of crisis strategies on OPR, organizational reputation, and ultimately on supportive behavior intention by fostering a sense of communal support and alignment with stakeholder values (Bowen, 2008; Ki & Hon, 2007; Ledingham, 2003; Schoofs et al., 2019; Snyder et al., 2006).

This study extends the SCCT model by proposing that the level of ethics of care will moderate the effect of crisis response strategies on organizational reputation and supportive behavioral intention through the outcomes of OPR. An empathetic approach that embodies high levels of care is hypothesized to strengthen stakeholder relationships, improve organizational reputation, and encourage more supportive behaviors than strategies characterized by lower levels of care and/or no ethics of care. This resonates with findings by Schoofs et al. (2019, 2022), indicating that empathetic communication can enhance reputation repair and foster stronger stakeholder support during crises. Therefore, the following hypotheses are proposed:

H10: The effect of crisis response strategies (denial, excuse, and apology) on organizational reputation (OR) through OPR outcomes will be moderated by the level of ethics of care (high, low, vs. no control). Specifically, the mediating effect of OPR on the relationship between crisis response strategies and OR will be strengthened under a high level of ethics of care compared to low or no ethics of care.

H11: The effect of crisis response strategies (denial, excuse, and apology) on supportive behavioral intention through OPR outcomes will be moderated by the level of ethics of

care (high, low, vs. no control). Specifically, the mediating effect of OPR on the relationship between crisis response strategies and supportive behavioral intention will be strengthened under a high level of ethics of care compared to low or no ethics of care.

H12: The effect of crisis response strategies (denial, excuse, and apology) on supportive behavioral intention through organizational reputation will be moderated by the level of ethics of care (high, low, vs. no control). Specifically, the mediating effect of organizational reputation on the relationship between crisis response strategies and supportive behavioral intention will be strengthened under a high level of ethics of care compared to low or no ethics of care.

The exploration of how different crisis response strategies, coupled with varying levels of ethic of care, impact OPR outcomes, organizational reputation, and supportive behavioral intention is crucial. Coombs and Holladay's (2002) SCCT provides a framework for understanding the effectiveness of different crisis response strategies. However, integrating the dimension of care ethics could offer a more nuanced understanding of these relationships. The SCCT primarily focuses on the organization's actions and stakeholder perceptions, but incorporating care ethics, which emphasizes empathy and relational engagement, could significantly alter these dynamics on the effectiveness of each strategy. This approach aligns with the findings of Claeys and Cauberghe (2012), who emphasize the role of stakeholders' emotions and perceptions in shaping the outcomes of crisis communication.

The importance of this research question lies in its aim to uncover the effects of each crisis response strategy when combined with varying levels of ethics of care. It is crucial for practitioners to understand these nuances so they can tailor their crisis communication strategies effectively. By doing so, they can ensure that these strategies not only align with the ethical

standards of their organization but also resonate with stakeholders' expectations and emotional well-being. This inquiry is particularly relevant in today's changing landscape of crisis communication, where integrating ethical considerations has become increasingly vital for maintaining strong stakeholder relationships and upholding organizational credibility.

Building upon the knowledge gained from H3, it is crucial to examine how OPR outcomes serve as a potential bridge between crisis response strategies and the level of ethics of care. This investigation aims to understand how these strategies and ethical considerations translate into effects on an organizational reputation and the behavioral intentions of its publics. By exploring OPR outcomes as a mediating factor, this study delves into the mechanics of how crisis response strategies and ethical care influence the quality of relationships between organizations and the public they serve. This line of inquiry recognizes that the impact of crisis response strategies and ethical care may be channeled through the quality of the organization-public relationships that they foster or hinder.

H13. The level of ethics of care (high, vs. low, vs. no control) moderates the impact of crisis response strategies (denial, excuse, and apology) on OPR outcomes. This moderation effect is anticipated to be most pronounced at a high level of ethics of care, which is expected to result in stronger OPR outcomes than at lower levels or no ethics of care in the context of AI crises. In turn, heightened OPR outcomes are posited to lead to improved organizational reputation and more positive behavioral intentions.

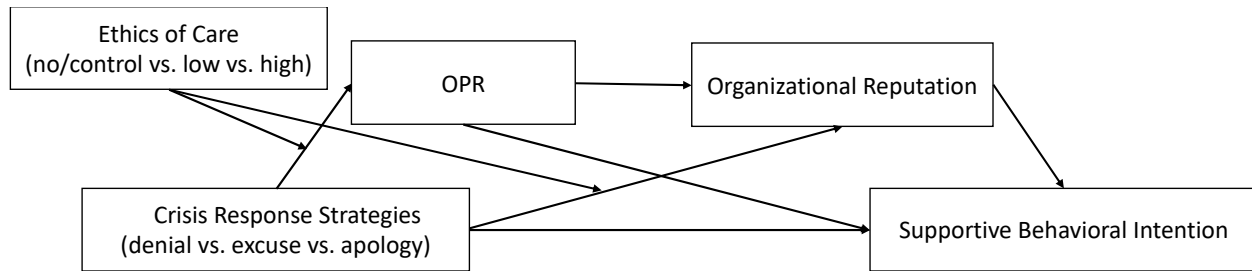
CHAPTER 3. METHODS

Study Overview

The study presents a thorough investigation into the impact of crisis response strategies on OPR and organizational reputation within the context of AI crises. Additionally, it explores the mediating effect of OPR between crisis response strategies and organizational reputation, providing insight into how these strategies shape public perception.

This research also delves into the nuances of crisis communication by examining the influence of an ethics of care message on the persuasiveness of crisis response strategies. It posits that strategies underlined by a high level of ethical care are more effective compared to those with a lower or no ethical emphasis. This aspect of the research seeks to find that ethical considerations are pivotal in shaping public response during crisis situations.

Furthermore, the study examines the serial mediation effect of OPR and organizational reputation on the relationship between crisis response strategies and supportive behavioral intentions, depending on the levels of ethics of care (high vs. low vs. no). This comprehensive approach aims to clarify how various degrees of ethics of care message affect public perceptions and subsequent behaviors, which are crucial during crisis and the post-crisis phase of an organization.



Hypotheses	IVs	Mediators	DV
H1	Crisis Strategies	→ OPR	
H2	Crisis Strategies	→ OR	OR
H3	Crisis Strategies	→ OPR → OR	OR
H4	Ethics	→ OPR	
H5	Ethics	→ OR	
H6	Ethics	→ SBI	SBI
H7	Crisis Strategies x Ethics	→ OPR	
H8	Crisis Strategies x Ethics	→ OR	
H9	Crisis Strategies x Ethics	→ SBI	SBI
H10	Crisis Strategies x Ethics	→ OPR → OR	
H11	Crisis Strategies x Ethics	→ OPR → SBI	SBI
H12	Crisis Strategies x Ethics	→ OR → SBI	SBI
H13	Crisis Strategies x Ethics	→ OPR → OR → SBI	SBI

Figure 1. A Conceptual Model with Hypotheses

Crisis Strategies: crisis response strategies, Ethics: ethics of care, OPR: Organization-public relationships, OR: organizational reputation, SBI: Supportive behavioral intention

Participants

This study is based on a 3 (crisis response strategies: deny, excuse, apology) x 3 (ethics of care: high vs. low vs no) between-subjects design. Participants totaling 656 were recruited through Prolific, an online panel service, to complete an online survey administered via Qualtrics. To establish the required sample size for adequate power, a priori power analysis was performed using G*Power software. The analysis, based on an ANOVA: Fixed effects, omnibus, one-way test, was performed using an anticipated effect size of $f = 0.1$ (small), an α error probability of 0.05, and a desired power of 0.80. Nine groups were considered, aligning with the variations of the three levels of crisis response strategies crossed with the three levels of ethics of

care. The analysis indicated a need for 486 participants to achieve the desired power. Participants were screened for English fluency, over 18 years old, and living in the United States.

Participants were compensated \$2.4 for their time, which equates to an average hourly reward of \$19.63, given that the median completion time for the survey was 7 minutes and 20 seconds. Quality control measures were implemented to ensure the reliability of the data; participants who failed to pass comprehensive attention checks were excluded from the analysis. Out of the initial 656 participants, 124 were disqualified based on these criteria, resulting in a final sample size of 532 for the analysis.

The final sample included a diverse range of participants. The ages of participants varied, with a mean age of 38.88 years ($SD = 12.6$), a minimum age of 19, and a maximum age of 73. The demographic characteristics of the study participants (i.e., gender, ethnicity, student status, employment status) are summarized in Table 2 below.

Procedures

The study began with participants being presented with an informed consent form. This form outlined the nature of the study, the voluntary basis of participation, confidentiality measures, and the right to withdraw at any time without penalty. Upon providing their consent, participants were directed to a set of instructions. These instructions emphasized the importance of their careful and attentive participation in the study.

Table 2.
Participant Demographics

Demographics	Description	Frequency	Valid Percent
Gender	Males	236	44.4
	Females	284	53.4
	Intersex	9	1.7
	Prefer not to disclose	3	0.6
Ethnicity	Asian	45	8.6
	Black	102	19.2
	Mixed	42	7.9
	Other	33	6.2
	White	310	58.3
Student Status	No	457	85.9
	Yes	75	14.1
Employment Status	Due to start a new job within the next month	12	2.3
	Full-Time	340	63.9
	Not in paid work (e.g. homemaker', 'retired or disabled)	51	9.6
	Other	27	5.1
	Part-Time	67	12.6
	Unemployed (and job seeking)	35	6.6

Participants were first presented with details about a hypothetical company, specially created for the study to avoid any preconceived industry-related biases. The company was described as a diverse enterprise that is not exclusively dedicated to technological endeavors but potentially involved in various sectors (Appendix A). This was intended to neutralize any biases participants might have towards technology-specific companies. Upon familiarizing themselves with the company's background, participants were asked to respond to a set of questions, which included pre-measures of OPR, organizational reputation, and supportive behavioral intentions. These measures were crucial for establishing a baseline understanding of the participants' initial perceptions.

Following this, a comprehensive scenario was introduced, detailing an AI-related incident relevant to the company. Participants were randomly assigned to one of nine experimental conditions, stemming from the combination of three crisis response strategies and three levels of ethics of care. Each participant read a scenario tailored to their assigned condition, depicting a company's response to a crisis with varying degrees of ethical consideration. They were instructed to spend at least two minutes engaging with the scenario to ensure thorough comprehension. Following the exposure to the stimulus, a series of manipulation check questions were administered. These questions are designed to ascertain whether participants correctly identified the crisis response strategy and the different levels of ethics of care employed in the scenario they read. This step was crucial to confirm the effectiveness of the manipulations.

An attention check followed, consisting of questions to verify that participants were paying attention to the content of the questionnaire. This measure was implemented to ensure the validity of the responses and to identify any participants who might not have been attentively engaging with the study material.

Then, participants proceeded to the post-measures phase, where they reassessed their perceptions of OPR, the company's reputation, and their supportive behavioral intentions based on the new information provided. This process ensured a clear distinction between participants' initial impressions and any changes in perception prompted by the AI-related incident, allowing for an in-depth analysis of the impact of crisis communication strategies.

The questionnaire concluded with participants' demographic information. This included age, gender, ethnicity, and other relevant demographic data. Upon completion of the questionnaire, participants were instructed to read a short debrief message. They were informed that the company mentioned in the scenarios was fictitious that was created solely for the

purposes of the study. This debriefing was essential to clarify any misconceptions and to reinforce the fictional nature of the scenarios.

Stimuli

The study created fictional scenarios depicting AI-driven crises, adapted from real-world incidents to incorporate a non-existent company named "Hexxa." This measure was taken to circumvent potential biases and ethical dilemmas, allowing for a more controlled environment where participants' preconceived notions about actual brands or companies did not influence their responses.

Employing a 3x3 factorial design, the research crossed three types of crisis response strategies—denial, excuse, and apology—with three levels of ethics of care messaging: high, low, and none. For the denial condition, Hexxa publicly asserted that its AI system was never utilized for candidate evaluations. In the excuse condition, the company contended that the outcomes did not align with its values and denied any intentional discrimination. For the apology condition, Hexxa admitted to the problem and committed to devising a resolution.

For the high ethic of care condition, the responses were tailored to include language that emphasized a deep concern for stakeholders, a commitment to nurturing relationships, and the implementation of action plans to prevent future conflicts. This approach focused on doing what was right for the victims, prioritizing ethical considerations over legal obligations, and a commitment to fostering a diverse and inclusive work environment while minimizing harm, as suggested by Tao & Kim (2017). Conversely, the low ethic of care condition utilized more generalized language, focusing broadly on understanding stakeholders' feelings and the importance of maintaining relationships with the public.

The inclusion of a no-ethics-of-care group, serving as the control condition, was critical to the study's design. This group served to provide a baseline against which the impact of the ethics of care could be measured. The control group also helped delineate the effectiveness of crisis response strategies without any explicit ethical framing, thus allowing for an unbiased assessment of the core strategies themselves.

Attention/Comprehension Check

After being exposed to the stimuli, participants were asked to respond to attention and comprehension check questions. These were designed to verify their understanding of the news post and scenario presented. To confirm that participants have attentively read the news post, they were asked a specific question: 'Was it mentioned in the news post that Hexxa's AI recruiting tool exhibited gender bias favoring male candidates?' with response options of 'Yes,' 'No,' or 'I don't know.' Following this, to assess their attention to the study material, participants were presented with an attention check question: 'If you are reading this, please select 'disagree'.' Only those participants who correctly answer all these attention and comprehension check questions were asked to proceed with the rest of the study.

Manipulation Check

To check the manipulation of the crisis response strategy, participants were asked to rate the extent to which they believed the organization/company took responsibility for the AI-driven crisis ("The company took full responsibility for the AI crisis"). This measurement is connected to SCCT (Coombs, 2007), which posts that the extent of responsibility taken by organizations varies depending on the crisis response strategies. Moreover, participants were directly asked to identify the type of response message used by the company in addressing its crisis, choosing from the options of deny, excuse, or apology.

Building on the operationalization of the ethic of care by Tao and Kim (2017), this study has developed an expanded ethics of care scale consisting of six items ($\alpha = .96$). A notable addition to this scale is the inclusion of an item that focuses on the use of action plans to prevent conflicts and ensure fairness in the future. Table 3 presents a summary of the item measurements for the ethics of care scale. To assess the effectiveness of the manipulation, an ANOVA test was conducted to compare the responses between the high ethic of care condition, and the low and no ethic of care conditions.

Table 3.
Operationalized Ethics of Care

I believe Hexxa
Commits to fostering a diverse and inclusive work environment
Fulfills ethical responsibilities to reflect publics' feelings
Emphasizes relationship nurturing among publics
Uses action plan to prevent conflicts to ensure fairness in future
Does what is right for victims rather than focusing on legalities
Remains sensitive to the potential harm that conflict can cause

Measures

All variables were measured on a 7-point Likert-type scale, where 1 = “strongly disagree” and 7 = “strongly agree.”

OPR

OPR is operationalized through various dimensions, each comprising a set of items. These dimensions include trust, control mutuality, commitment, satisfaction, communal relationships, and exchange relationships. Sixteen items for each dimension were based on established scales in previous research (Hon & Grunig, 1999) and were adapted to fit the context of this study. See table 4 below for the measurement items for OPR ($\alpha = .88$).

Table 4.
Measurement Items for Organization-Public Relationships (OPR)

Trust	<ol style="list-style-type: none"> 1. This organization treats people like me fairly and justly. 2. This organization can be relied on to keep its promises. 3. This organization has the ability to accomplish what it says it will do.
Control Mutuality	<ol style="list-style-type: none"> 1. This organization and people like me are attentive to what each other say. 2. This organization believes the opinions of people like me are legitimate. 3. This organization really listens to what people like me have to say.
Commitment	<ol style="list-style-type: none"> 1. I feel that this organization is trying to maintain a long-term commitment to people like me. 2. I can see that this organization wants to maintain a relationship with people like me.
Satisfaction	<ol style="list-style-type: none"> 1. I am happy with this organization. 2. Both the organization and people like me benefit from the relationship.
Communal Relationships	<ol style="list-style-type: none"> 1. This organization does not especially enjoy giving others aid. (Reversed) 2. This organization is very concerned about the welfare of people like me. 3. I feel that this organization takes advantage of people who are vulnerable. (Reversed)
Exchange Relationships	<ol style="list-style-type: none"> 1. Whenever this organization gives or offers something to people like me, it generally expects something in return 2. This organization will compromise with people like me when it knows that it will gain something. 3. This organization takes care of people who are likely to reward the organization.

Adapted from Hon and Grunig (1999)

Organizational Reputation

A 5-item organizational reputation scale based on the measurement developed by Walsh and Beatty was used; “Hexxa has a reputation for being an excellent company,” “I trust Hexxa to make good decisions for its customers,” “Hexxa has a good overall reputation,” “I have a good feeling about Hexxa,” and “Hexxa is respected by its customers” ($\alpha = .95$).

Supportive Behavioral Intention (SBI)

From the previous research (Overton et al., 2021; Zeithaml et al., 1996), SBI was measured using a 3-items; “I will say positive things about Hexxa,” “I will recommend Hexxa to others,” and “I will refer people I know to Hexxa” ($\alpha = .97$).

Pilot Test 1

A pilot test was conducted to validate the manipulation of crisis response strategies (deny, excuse, apology). A total of 36 participants were recruited from Amazon's Mechanical Turk (MTurk) to participate in the pretest. Participants received \$1.50 as a compensation.

A one-way ANOVA determined that there were significant differences in perceived responsibility based on condition ($F(2, 33) = 31.62, p < .001$). Post-hoc tests revealed the deny condition ($M = 2.08, SD = .79$) had significantly lower responsibility perceptions than the excuse ($M = 3.92, SD = 1.16$) and apology conditions ($M = 6.25, SD = .87, p < .05$). The excuse and apology conditions also significantly differed from each other. These results confirmed the crisis response manipulations effectively portrayed varying levels of accepting responsibility through the deny, excuse, and apology strategies.

Pilot Test 2

A second pilot test was conducted with the dual objective of validating the modified measurement of the ethic of care and ensuring the effectiveness of the manipulation. The measurement of the ethic of care was refined to include an additional layer focusing on action plans to prevent conflict and ensure fairness in the future. This modification aimed to enhance the scale's relevance and applicability in the context of crisis communication. A total of 144 participants were recruited from Mturk to participate in the pretest. Participants received \$1.50.

To ensure that the manipulation of the ethic of care was perceived as intended, participants were exposed to messages with varying levels of ethics of care (high vs. low). Following their exposure, they responded to a 6-item scale designed to measure their perception of the ethic of care in the messages. The items were rated on a Likert scale, with higher scores indicating a higher perception of the ethic of care. A *t*-test was conducted comparing the high

ethic of care condition ($M = 5.62, SD = .96$) to the low ethic of care condition ($M = 3.21, SD = .83$). The results confirmed that the high ethic of care messages was perceived as higher than the low ethic of care messages, $t(137) = 14.92, p < .001$.

The reliability of the modified 6-item ethic of care measurement was assessed using Cronbach's alpha. The scale demonstrated high internal consistency, with a Cronbach's alpha of .92.

CHAPTER 4. RESULTS

Manipulation Check

The effectiveness of the crisis response strategies—denial, excuse, and apology—was evaluated through participants' ratings on perceived responsibility (Coombs, 2007) taken by the organization. Descriptive statistics (Table 5) and a one-way ANOVA were conducted to assess the differences in perceived responsibility across the three strategies (Table 6). The one-way ANOVA revealed significant differences in perceived responsibility across the crisis response strategies, $F(2, 529) = 74.52, p < .001, \eta^2 = .22$. Table 4 presents the descriptive statistics for each strategy, and Table 5 summarizes the ANOVA results. Tukey's HSD post hoc tests indicated significant differences between all pairs of strategies ($p < .001$ for all comparisons). Participants perceived the apology strategy ($M = 5.71, SD = 1.17$) as involving significantly more responsibility than both the excuse ($M = 4.27, SD = 1.75$) and denial strategies ($M = 3.58, SD = 1.96$). Excuse was also rated as involving significantly more responsibility than denial. Table 7 details the results of the post hoc comparisons.

Table 5.*Descriptive Statistics for Denial, Excuse, and Apology Strategy*

Strategies	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Denial	172	3.58	1.96	.15	3.29	3.88
Excuse	186	4.27	1.75	.13	4.02	4.52
Apology	174	5.71	1.17	.09	5.54	5.89
Total	532	4.52	1.88	.08	4.36	4.68

Table 6. Summary of ANOVA Results for Crisis Response Strategies

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	410.76	2	205.38	74.52	<.001
Within Groups	1458.05	529	2.76		
Total	1868.81	531			

Table 7.
Results of the Post Hoc Comparisons for Crisis Response Strategies

(I) Strategies	(J) Strategies	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Denial	Excuse	-.69*	.18	<.001	-1.10	-.27
	Apology	-2.13*	.18	<.001	-2.55	-1.71
Excuse	Denial	.69*	.18	<.001	.27	1.10
	Apology	-1.44*	.18	<.001	-1.86	-1.03
Apology	Denial	2.13*	.18	<.001	1.71	2.55
	Excuse	1.44*	.18	<.001	1.03	1.86

The manipulation of the ethics of care —control/no, low, and high ethics of care—was evaluated through participants' ratings on the ethics of care scale (Tao & Kim, 2017) developed for this study. Table 8 provides a summary of descriptive statistics. Through a one-way ANOVA, the results indicated significant differences, $F(2, 529) = 46.652, p < .001, \eta^2 = .15$ (Table 9). Participants' ratings varied significantly across different levels of ethics of care: no ethics of care ($M = 3.92, SD = 1.63$), low ethics of care ($M = 4.72, SD = 1.23$), and high ethics of care ($M = 5.31, SD = 1.20$). Tukey's HSD post hoc analysis revealed significant differences between all pairs of ethics of care levels ($p < .001$ for all comparisons). Table 10 details the Tukey HSD post hoc comparisons. Both experimental manipulations were successful.

Table 8.
Descriptive Statistics for Ethics of Care

Ethics	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
No/Control	182	3.92	1.63	.12	3.68	4.16
Low Ethics	172	4.72	1.22	.09	4.53	4.90
High Ethics	178	5.31	1.20	.09	5.13	5.48
Total	532	4.64	1.48	.06	4.52	4.77

Table 9.
Summary of ANOVA Results for Ethics of Care

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	175.27	2	87.637	46.65	<.001
Within Groups	993.73	529	1.878		
Total	1169.00	531			

Table 10.
Results of the Post Hoc Comparisons for Ethics of Care

(I) Ethics	(J) Ethics	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
No/Control	Low	-.80*	.15	<.001	-1.14	-.46
	High	-1.39*	.14	<.001	-1.73	-1.05
Low	No/Control	.80*	.15	<.001	.46	1.14
	High	-.59*	.15	<.001	-.93	-.24
High	No/Control	1.39*	.14	<.001	1.05	1.73
	Low	.59*	.15	<.001	.24	.93

Test of Hypotheses and Research Questions

In order to ensure the appropriateness of the parametric tests used in this study, normality checks were conducted on all key variables, including OPR outcomes, organizational reputation, and supportive behavioral intention. The Shapiro-Wilk test was employed to assess the normality of the distribution of these variables, complemented by an examination of skewness and kurtosis values. The results indicated that the assumptions of normality were met for all variables, thus validating the use of parametric statistical techniques.

H1 predicted that crisis response strategies (denial, excuse, and apology) would influence OPR outcomes. Paired samples t-tests were conducted to compare OPR outcomes before and after applying the denial strategy. There was a non-significant decrease in the mean score from pre-intervention ($M = 3.95, SD = 0.81$) to post-intervention ($M = 3.99, SD = 0.94$), $t(171) = -0.58, p = .562$, indicating no statistical evidence that the denial strategy led to positive OPR outcomes. For the excuse strategy, paired samples t-tests showed a significant increase in OPR outcomes from pre-intervention ($M = 3.88, SD = 0.90$) to post-intervention ($M = 4.11, SD = 1.00$), $t(185) = -4.61, p < .001$. This suggests that the excuse strategy effectively improved OPR outcomes. Similarly, the apology strategy resulted in a significant increase in OPR outcomes, with mean scores rising from pre-intervention ($M = 3.90, SD = 0.96$) to post-intervention ($M =$

4.82, $SD = 0.89$), $t(173) = -10.79$, $p < .001$. The large effect size, Cohen's $d = 1.12$, reflects a substantial impact of the apology strategy on improving OPR outcomes. Paired samples statistics are presented in Table 11, and the result of the paired samples test is shown in Table 12. H1 was partially supported.

Table 11.
Paired Samples Statistics

Strategies		Mean	N	Std. Deviation	Std. Error Mean
Denial	Pre_OPR	3.95	172	.81	.06
	Post_OPR	3.98	172	.94	.07
Excuse	Pre_OPR	3.88	186	.90	.07
	Post_OPR	4.11	186	1.00	.07
Apology	Pre_OPR	3.90	174	.96	.07
	Post_OPR	4.82	174	.89	.07

Table 12. Paired Samples Test

Strategies		Paired Differences					<i>t</i>	<i>df</i>	Significance	
		Mean	Std. Devi ation	Std. Error Mean	95% Confidence Interval of the Difference				One- Sided p	Two- Sided p
					Lower	Upper				
Denial	Pre_OPR - Post_OPR	-.04	.82	.06	-.16	.09	-.58	171	.281	.562
Excuse	Pre_OPR - Post_OPR	-.23	.67	.05	-.32	-.13	-4.61	185	<.001	<.001
Apology	Pre_OPR - Post_OPR	-.92	1.12	.08	-1.09	-.75	-10.79	173	<.001	<.001

For H2, it investigated the impact of crisis response strategies on organizational reputation. Paired samples t-tests were used to compare the pre- and post-intervention measures of organizational reputation for each crisis response strategy. The denial strategy resulted in a non-significant decrease in organizational reputation from pre-intervention ($M = 4.17$, $SD = 1.32$) to post-intervention ($M = 3.83$, $SD = 1.43$), $t(171) = 3.86$, $p < .001$. Despite the statistical significance indicated by the p-value, the context of the change suggests that the denial strategy did not improve organizational reputation. For the excuse strategy, there was a non-significant increase in organizational reputation from pre-intervention ($M = 4.05$, $SD = 1.31$) to post-intervention ($M = 4.15$, $SD = 1.51$), $t(184) = -1.65$, $p = .101$. The apology strategy showed a significant increase in organizational reputation, with mean scores improving from pre-intervention ($M = 4.03$, $SD = 1.40$) to post-intervention ($M = 5.02$, $SD = 1.40$), $t(173) = -9.50$, $p < .001$. This change was both statistically significant and positive, indicating that the apology strategy improved organizational reputation, as was hypothesized. Paired samples statistics are presented in Table 13, and paired samples test is shown in Table 14. H2 was partially supported.

Table 13.
Paired Samples Statistics

Strategies		Mean	N	Std. Deviation	Std. Error Mean
Denial	Pre_Reputation	4.18	172	1.32	.10
	Post_Reputation	3.83	172	1.43	.11
Excuse	Pre_Reputation	4.05	185	1.31	.10
	Post_Reputation	4.15	185	1.51	.11
Apology	Pre_Reputation	4.02	174	1.40	.11
	Post_Reputation	5.02	174	1.40	.11

Table 14.
Paired Samples Test

Strategies		Paired Differences					<i>t</i>	<i>df</i>	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
Denial	Pre_Reputation - Post_Reputation	.34	1.16	.09	.17	.52	3.86	171	<.001	<.001
Excuse	Pre_Reputation - Post_Reputation	-.10	.86	.06	-.23	.02	-1.65	184	.051	.101
Apology	Pre_Reputation - Post_Reputation	-.99	1.38	.104	-1.20	-.78	-9.50	173	<.001	<.001

For RQ1, and RQ2, a series of one-way ANOVA tests were conducted to examine the effectiveness of OPR outcomes, organizational reputation, and supportive behavioral intentions based on the type of crisis response strategy employed (denial, excuse, and apology).

For OPR outcomes, the ANOVA revealed a significant effect of crisis response strategy, $F(2, 529) = 39.66, p < .001$ (Table 15). Post hoc comparisons using the Tukey HSD test indicated that the apology strategy was significantly more effective than the other strategies. These results are displayed in Table 16 and Figure 2, which show the mean scores and standard deviations for each strategy. Specifically, as shown in Table 16, the mean score for the apology strategy ($M = 4.82, SD = 0.89$) was significantly higher than both the denial ($M = 3.99, SD = 0.94, p < .001$) and excuse strategies ($M = 4.11, SD = 1.00, p < .001$). The difference between denial and excuse strategies was not statistically significant ($p = .461$), as detailed in the Multiple Comparisons section of Table 17.

Concerning organizational reputation, a significant difference was also observed between the strategies, $F(2, 528) = 30.87, p < .001$, as shown in Table 15. The apology strategy led to a significantly better organizational reputation ($M = 5.02, SD = 1.40$) compared to denial ($M = 3.83, SD = 1.43, p < .001$) and excuse ($M = 4.15, SD = 1.51, p < .001$) strategies. Again, the denial and excuse strategies did not differ significantly ($p = .095$) (Table 17). These are illustrated in Figure 3.

Finally, in terms of supportive behavioral intentions, the ANOVA yielded a significant effect, $F(2, 529) = 30.63, p < .001$. As presented in Table 17 and Figure 4, the apology strategy ($M = 4.61, SD = 1.66$) was more effective than both denial ($M = 3.30, SD = 1.70, p < .001$) and excuse strategies ($M = 3.50, SD = 1.71, p < .001$). No significant difference was found between denial and excuse strategies ($p = .490$).

Table 15.

ANOVA Summary Table for OPR Outcomes, Organizational Reputation, and Supportive Behavioral Intentions

		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
OPR Outcomes	Between Groups	70.63	2	35.32	39.66	<.001
	Within Groups	471.10	529	.90		
	Total	541.73	531			
Organizational Reputation	Between Groups	129.76	2	64.88	30.87	<.001
	Within Groups	1109.84	528	2.10		
	Total	1239.60	530			
Supportive Behavioral Intentions	Between Groups	174.80	2	87.40	30.63	<.001
	Within Groups	1509.44	529	2.85		
	Total	1684.25	531			

Table 16.

Descriptive Statistics for OPR Outcomes, Organizational Reputation, and Supportive Behavioral Intentions by Crisis Response Strategy

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
OPR Outcomes	1.00	172	3.99	.94	.07	3.8462	4.1290
	2.00	186	4.10	1.00	.07	3.9621	4.2503
	3.00	174	4.82	.89	.07	4.6860	4.9519
	Total	532	4.30	1.01	.04	4.2150	4.3870
Organizational Reputation	1.00	172	3.83	1.43	.11	3.6200	4.0498
	2.00	185	4.15	1.51	.11	3.9352	4.3740
	3.00	174	5.02	1.40	.11	4.8062	5.2260
	Total	531	4.33	1.53	.07	4.2030	4.4637
Supportive Behavioral Intentions	1.00	172	3.29	1.70	.13	3.0388	3.5504
	2.00	186	3.50	1.71	.13	3.2510	3.7454
	3.00	174	4.61	1.66	.13	4.3612	4.8572
	Total	532	3.80	1.78	.08	3.6441	3.9474

Effectiveness of OPR outcomes based on different crisis response strategies (denial, excuse, apology)

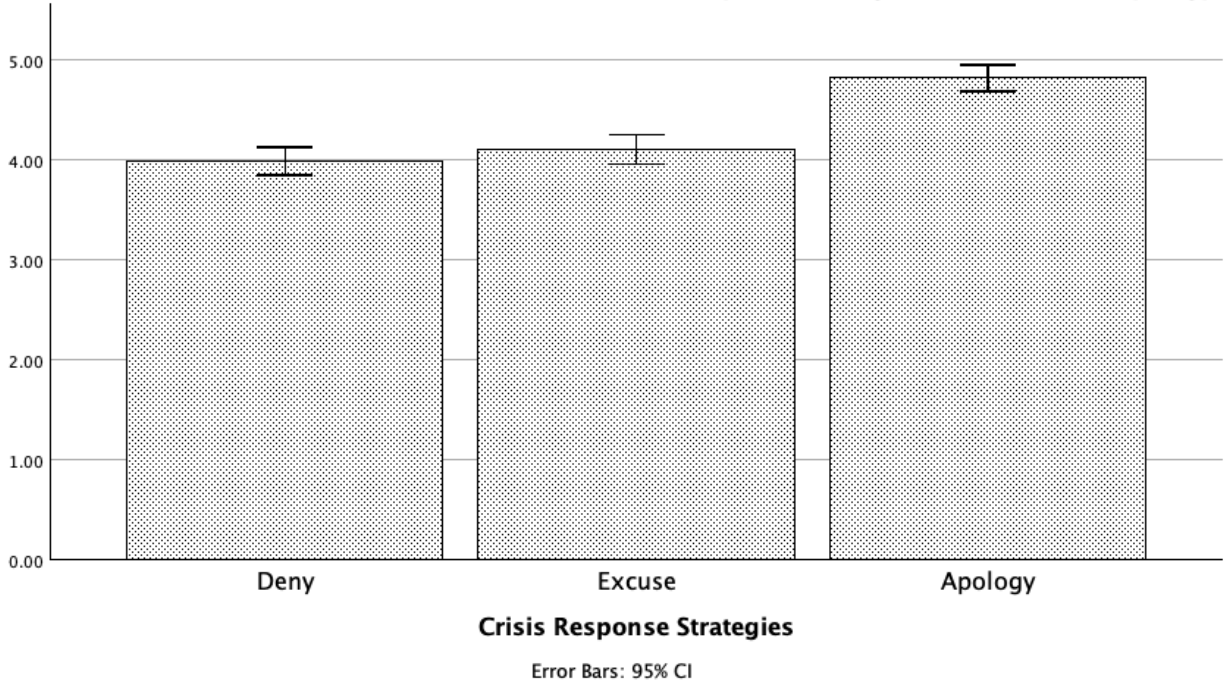


Figure 2. A Bar Graph Showing the Mean OPR Outcomes for Each Crisis Response Strategy

Effectiveness of organization reputation based on different crisis response strategies (denial, excuse, apology)

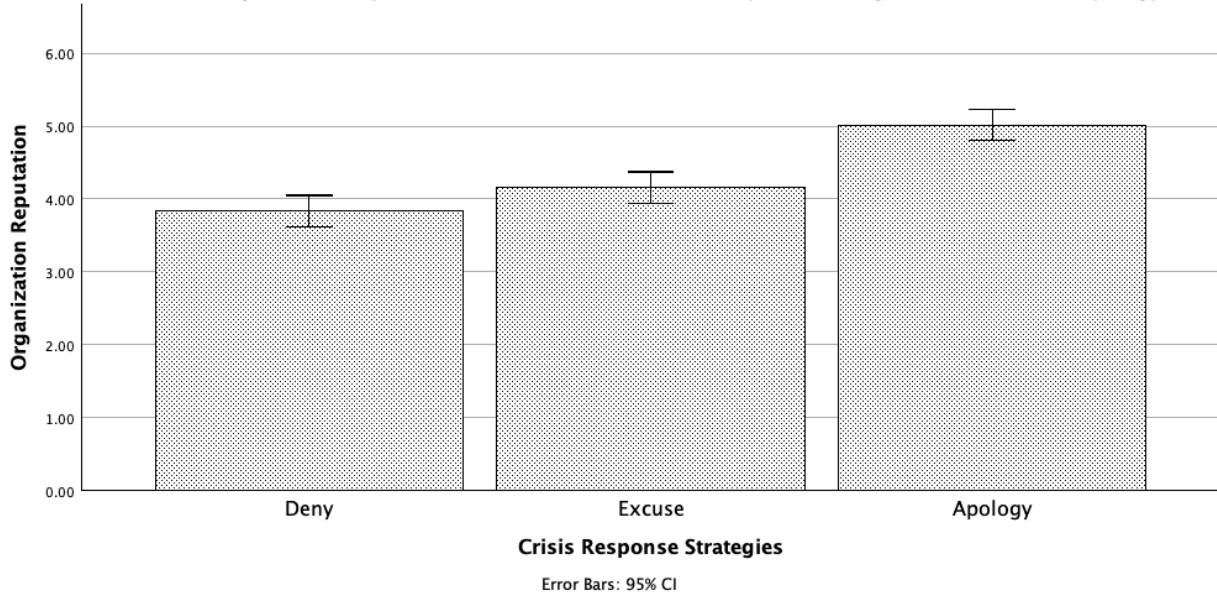


Figure 3. A Bar Graph Depicting the Mean Organizational Reputation for Each Strategy

Table 17.
Tukey HSD Post Hoc Comparisons for the Three Dependent Variables

	(I) Strategies	(J) Strategies	Mean		Sig.	95% Confidence Interval	
			Difference (I-J)	Std. Error		Lower Bound	Upper Bound
OPR Outcomes	Denial	Excuse	-.12	.10	.461	-.3532	.1161
		Apology	-.83*	.10	<.001	-1.0698	-.5928
	Excuse	Denial	.12	.10	.461	-.1161	.3532
		Apology	-.71*	.10	<.001	-.9467	-.4789
	Apology	Denial	.83*	.10	<.001	.5928	1.0698
		Excuse	.71*	.10	<.001	.4789	.9467
Organizational reputation	Denial	Excuse	-.32	.15	.095	-.6806	.0412
		Apology	-1.18*	.16	<.001	-1.5476	-.8148
	Excuse	Denial	.32	.15	.095	-.0412	.6806
		Apology	-.86*	.15	<.001	-1.2214	-.5016
	Apology	Denial	1.18*	.16	<.001	.8148	1.5476
		Excuse	.86*	.15	<.001	.5016	1.2214
Supportive Behavioral Intentions	Denial	Excuse	-.20	.18	.490	-.6236	.2163
		Apology	-1.31*	.18	<.001	-1.7415	-.8877
	Excuse	Denial	.20	.18	.490	-.2163	.6236
		Apology	-1.11*	.18	<.001	-1.5297	-.6923
	Apology	Denial	1.31*	.18	<.001	.8877	1.7415
		Excuse	1.11*	.18	<.001	.6923	1.5297

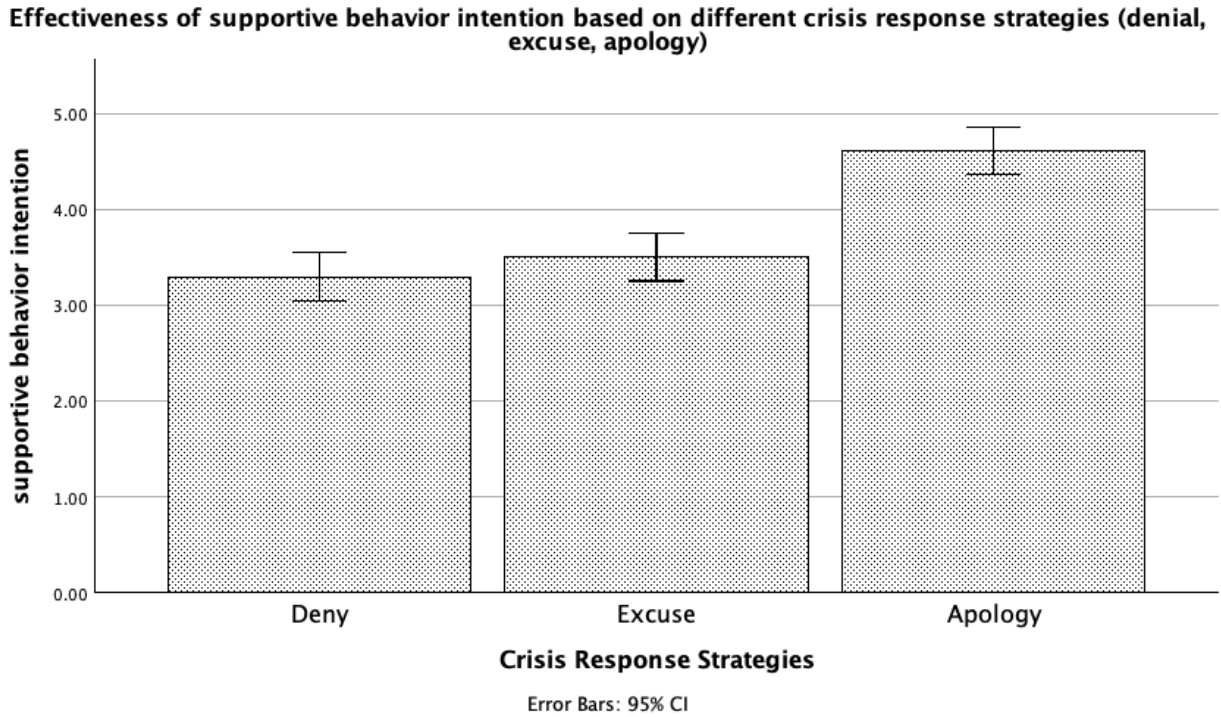


Figure 4. A Bar Graph Illustrating the Mean Supportive Behavioral Intentions for Each Response Strategy

H3 predicted whether the change in OPR outcomes mediates the relationship between different crisis response strategies and changes in organizational reputation. The PROCESS macro-Model 4 was employed. The analysis revealed a significant mediation effect of the changes in OPR outcomes on the relationship between crisis response strategies and organizational reputation, *effect* = .41, *BootSE* = .06, 95% *CI* [.2936, .5289] (Table 18). These findings suggest that the changes in OPR outcomes significantly carry the influence of crisis response strategies onto changes in organizational reputation, serving as a mediating variable in this relationship. H3 was supported.

Table 18.

Model Coefficients for Conditional Process Model (IV-> Changes in OPR Outcomes -> Changes in Organizational Reputation)

	Consequent <i>M</i> (Changes in OPR Outcomes)			Y (Changes in Organizational Reputation)		
	Coeff.	<i>SE</i>	<i>p</i>	Coeff.	<i>SE</i>	<i>p</i>
Antecedent						
<i>X</i> (Strategies)	.44	.05	.000	.26	.05	.000
<i>M</i> (OPR)	-	-	-	.92	.09	.000
Constant	-.50	.10	.000	-.63	.10	.000
	$R^2 = .14$			$R^2 = .60$		
	$F(1, 529) = 84.24, p < .001$			$F(2, 528) = 398.07, p < .001$		

For H4, a one-way ANOVA was conducted to compare the effect of the level of ethics of care on OPR outcomes. There was a significant effect of ethics of care messaging on OPR outcomes for the three conditions ($F(2, 529) = 23.58, p < .001, \eta^2 = .082$) (Table 19). Table 20 shows the descriptive statistics for OPR by crisis response strategies. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the high ethics of care condition ($M = 4.66, SD = 1.04$) was significantly different from both the low ($M = 4.30, SD = 0.84$) and control ($M = 3.96, SD = 1.01$) conditions. The low condition also differed significantly from the control condition, with both showing a positive influence on OPR outcomes but to varying degrees. H4 was supported.

Table 19.

ANOVA Results for OPR

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	44.34	2	22.17	23.58	<.001
Within Groups	497.39	529	.940		
Total	541.73	531			

Table 20.*Descriptive Statistics for OPR By Crisis Response Strategies*

Ethics	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
No/Control	182	3.96	1.01	.07	3.8076	4.1031
Low	172	4.30	.84	.06	4.1718	4.4241
High	178	4.66	1.04	.08	4.5030	4.8116
Total	532	4.30	1.01	.04	4.2150	4.3870

For H5, a one-way ANOVA revealed a significant effect of ethics of care messaging on organizational reputation ($F(2, 528) = 13.35, p < .001, \eta^2 = .048$) (Table 21). The high ethics of care condition ($M = 4.71, SD = 1.55$) had a higher mean score for organizational reputation compared to the low ($M = 4.40, SD = 1.32$) and control ($M = 3.90, SD = 1.59$) conditions, with the latter two also differing significantly from each other. Table 22 shows the descriptive statistics for organizational reputation by crisis response strategies.

Table 21.*ANOVA Results for Organizational Reputation*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59.66	2	29.83	13.35	<.001
Within Groups	1179.94	528	2.235		
Total	1239.60	530			

Table 22.*Descriptive Statistics for Organizational Reputation by Crisis Response Strategies*

Ethics	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
No/Control	182	3.90	1.59	.12	3.6708	4.1358
Low	171	4.40	1.32	.10	4.1994	4.5983
High	178	4.71	1.55	.12	4.4807	4.9395
Total	531	4.33	1.53	.07	4.2030	4.4637

For H6, one-way ANOVA indicated a significant difference in means due to ethics of care messaging on supportive behavioral intention, $F(2, 529) = 12.75, p < .001, \eta^2 = .046$ (Table 23). The post hoc Tukey HSD test showed that the high ethics of care condition ($M = 4.32, SD = 1.83$) was significantly more effective than both the low ($M = 3.65, SD = 1.47$) and control ($M = 3.42, SD = 1.88$) conditions in improving supportive behavioral intention (Table 24). The low and control conditions also showed a significant difference in their impact on supportive behavioral intention.

Table 23.
ANOVA Results for Supportive Behavior Intention

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Between Groups	77.43	2	38.72	12.75	<.001
Within Groups	1606.81	529	3.04		
Total	1684.25	531			

Table 24.
Descriptive Statistics for Supportive Behavior Intention by Crisis Response Strategies

Ethics	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
No/Control	182	3.42	1.88	.14	3.1495	3.7003
Low	172	3.65	1.47	.11	3.4260	3.8685
High	178	4.32	1.83	.14	4.0470	4.5897
Total	532	3.80	1.78	.08	3.6441	3.9474

For H7, H8, and H9, a two-way ANOVA was used to understand the moderating role of the level of ethics of care in the relationship between different crisis response strategies and OPR outcomes, organizational reputation, and supportive behavioral intention, respectively.

For H7, the interaction between crisis response strategies and levels of ethics of care was significant, $F(4, 523) = 9.101, p < .001, \eta^2 = .065$. Means and standard deviations are presented in Table 25, and the ANOVA summary is shown in Table 26. Figure 5 illustrates the interaction effect. Post hoc tests revealed significant pairwise differences between crisis response strategies within each level of ethics of care. Specifically, under the high ethics of care condition, the apology strategy resulted in significantly higher OPR outcomes than both the denial and excuse strategies. These findings suggest that the level of ethics of care does indeed moderate the effectiveness of crisis response strategies. Further analysis into homogeneous subsets indicated that the apology strategy outperformed other strategies in terms of OPR outcomes consistently across all levels of ethics of care. This underscores the hypothesis that a high level of ethics of care messaging can significantly strengthen the positive impact of crisis response strategies, particularly, the apology strategy. Thus, H7 was supported. Further pairwise comparisons of crisis response strategies revealed a nuanced pattern under the control condition (i.e., no ethics of care). The analysis did not find a statistically significant difference in OPR outcomes between the apology and denial strategies, with $p = .147$. This suggests that, in the absence of an ethics of care message, the effectiveness of an apology strategy in improving OPR outcomes is not significantly different from the denial strategy. These results point to the critical role of ethics of care messaging in differentiating the impact of crisis response strategies.

Table 25.
Descriptive Statistics for OPR by Crisis Response Strategies

Strategies	Ethics	Mean	Std. Deviation	N
Denial	No/Control	4.00	1.07	64
	Low	3.92	.87	50
	High	4.03	.85	58
	Total	3.99	.94	172
Excuse	No/Control	3.66	1.04	62
	Low	4.24	.95	62
	2.00	4.42	.84	62
	Total	4.11	1.00	186
Apology	No/Control	4.23	.81	56
	Low	4.67	.46	60
	High	5.53	.82	58
	Total	4.82	.89	174
Total	No/Control	3.96	1.01	182
	Low	4.30	.84	172
	High	4.66	1.04	178
	Total	4.30	1.01	532

Table 26.
ANOVA Results for OPR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	141.011 ^a	8	17.63	23.01	<.001	.260
Intercept	9793.58	1	9793.58	12782.00	<.001	.961
Strategies	69.93	2	34.96	45.63	<.001	.149
Ethics	43.99	2	21.99	28.71	<.001	.099
Strategies * Ethics	27.89	4	6.97	9.10	<.001	.065
Error	400.72	523	.77			
Total	10382.93	532				
Corrected Total	541.73	531				

a. R Squared = .260 (Adjusted R Squared = .249)

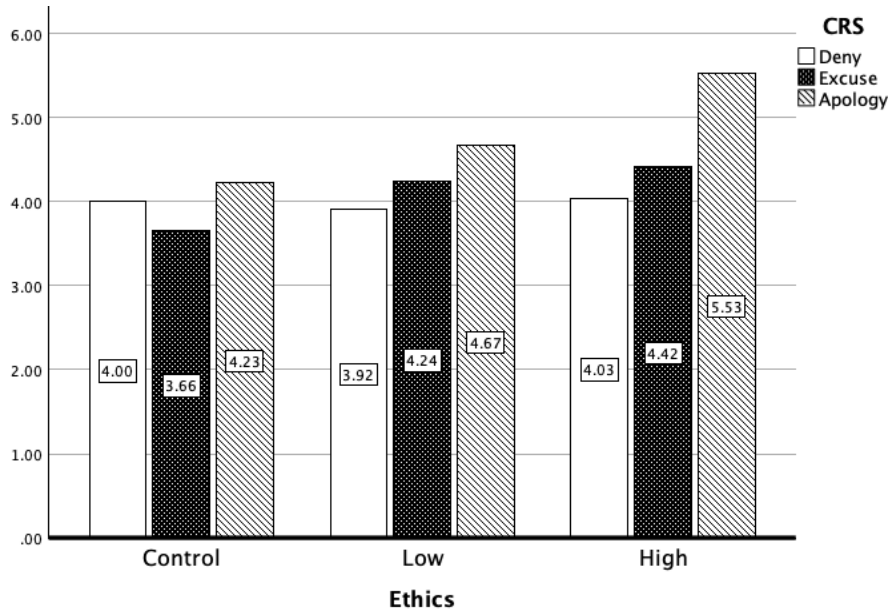


Figure 5. *Interaction Effects of Crisis Response Strategies and Ethics of Care on OPR*

For H8, the analysis revealed a significant interaction between crisis response strategies and ethics of care on organizational reputation, $F(4, 522) = 6.38, p < .001, \eta^2 = .047$. Means and standard deviations are presented in Table 76, and the ANOVA summary is shown in Table 28. Figure 6 illustrates the interaction effect. Pairwise comparisons with Least Significant Difference (LSD) adjustments showed that under the no ethics of care condition, the apology strategy did not significantly differ from the denial strategy in terms of influence on organizational reputation ($p = .147$). However, under the high ethics of care, the apology strategy led to a significantly greater organizational reputation ($M_{\text{high ethic}} = 5.93, SD = .9$) than under the low ethics of care ($M_{\text{high ethic}} = 4.82, SD = 1.2, p < .001$). H8 was supported.

Table 27.*Descriptive Statistics for Organizational Reputation by Crisis Response Strategies*

Strategies	Ethics	Mean	Std. Deviation	N
Denial	No/Control	3.81	1.51	64
	Low	3.94	1.32	50
	High	3.78	1.44	58
	Total	3.83	1.43	172
Excuse	No/Control	3.66	1.68	62
	Low	4.36	1.33	61
	High	4.44	1.40	62
	Total	4.15	1.51	185
Apology	No/Control	4.28	1.53	56
	Low	4.82	1.19	60
	High	5.93	.90	58
	Total	5.02	1.40	174
Total	No/Control	3.90	1.59	182
	Low	4.40	1.32	171
	High	4.71	1.55	178
	Total	4.33	1.53	531

Table 28.*ANOVA Results for Organizational Reputation*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	234.39 ^a	8	29.30	15.22	<.001	.19
Intercept	9932.15	1	9932.15	5157.70	<.001	.91
Strategies	126.76	2	63.38	32.91	<.001	.11
Ethics	57.89	2	28.94	15.03	<.001	.05
Strategies * Ethics	49.11	4	12.28	6.38	<.001	.05
Error	1005.21	522	1.93			
Total	11210.60	531				
Corrected Total	1239.60	530				

a. R Squared = .189 (Adjusted R Squared = .177)

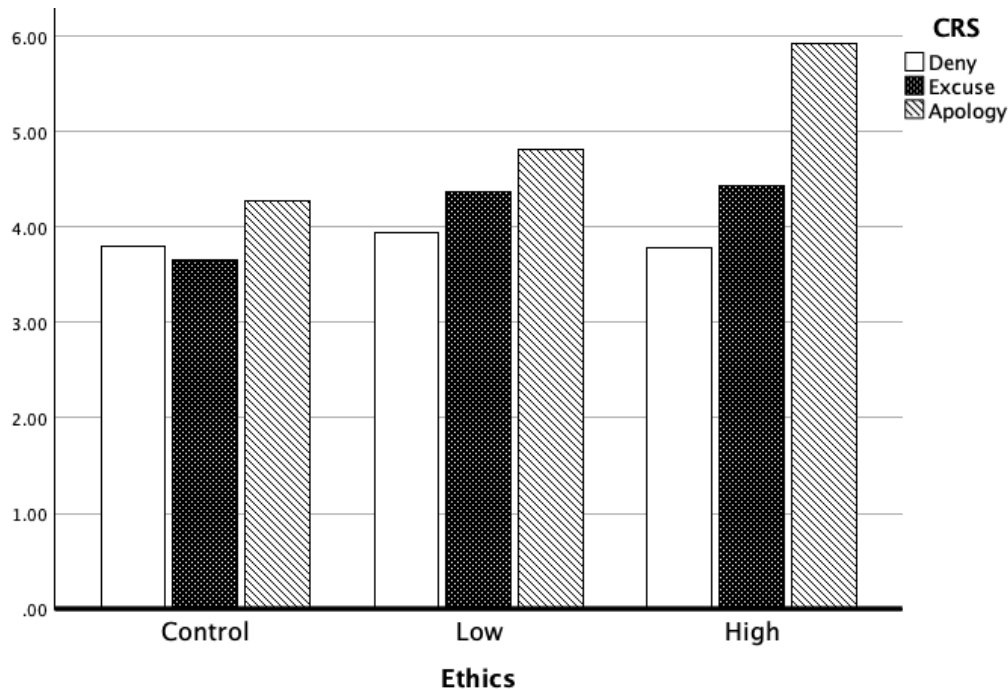


Figure 6. Interaction Effects of Crisis Response Strategies and Ethics of Care on Organizational Reputation

For H9, the analysis showed a significant interaction between crisis response strategies and ethics of care on supportive behavioral intention, $F(4, 523) = 7.67, p < .001, \eta^2 = .055$. Means and standard deviations are presented in Table 29, and the ANOVA summary is shown in Table 30. Figure 7 illustrates the interaction effect. Under no ethics of care condition, the denial and excuse strategies did not significantly differ in their effect on supportive behavioral intention ($p = .545$). A similar pattern was observed under the low ethics of care condition. There was no significant difference between denial and excuse strategies ($p = .709$). However, the apology strategy was found to significantly differ from both denial ($p < .05$) and excuse ($p < .01$) strategies under the high ethics of care condition, suggesting a moderation effect where ethics of care enhances the impact of the apology strategy on supportive behavioral intention. In addition, under the high ethics of care condition, there was a significant difference between denial ($M_{\text{denial}} = 3.15, SD = 1.6$) and excuse ($M_{\text{excuse}} = 4.02, SD = 1.6$) strategies on supportive behavioral intention ($p < .01$).

Table 29.*Descriptive Statistics for Organizational Reputation by Crisis Response Strategies*

Strategies	Ethics	Mean	Std. Deviation	N
Denial	No/Control	3.28	1.84	64
	Low	3.48	1.59	50
	High	3.15	1.64	58
	Total	3.29	1.71	172
Excuse	No/Control	3.11	1.86	62
	Low	3.37	1.53	62
	High	4.02	1.59	62
	Total	3.50	1.71	186
Apology	No/Control	3.94	1.88	56
	Low	4.08	1.18	60
	High	5.80	1.14	58
	Total	4.61	1.66	174
Total	No/Control	3.42	1.88	182
	Low	3.65	1.47	172
	High	4.32	1.83	178
	Total	3.80	1.78	532

Table 30.
ANOVA Results for Supportive Behavior Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	330.16 ^a	8	41.27	15.94	<.001	.20
Intercept	7656.36	1	7656.36	2957.17	<.001	.85
Strategies	172.30	2	86.15	33.27	<.001	.11
Ethics	76.45	2	38.23	14.77	<.001	.05
Strategies * Ethics	79.38	4	19.84	7.67	<.001	.05
Error	1354.09	523	2.59			
Total	9349.11	532				
Corrected Total	1684.25	531				

a. R Squared = .196 (Adjusted R Squared = .184)

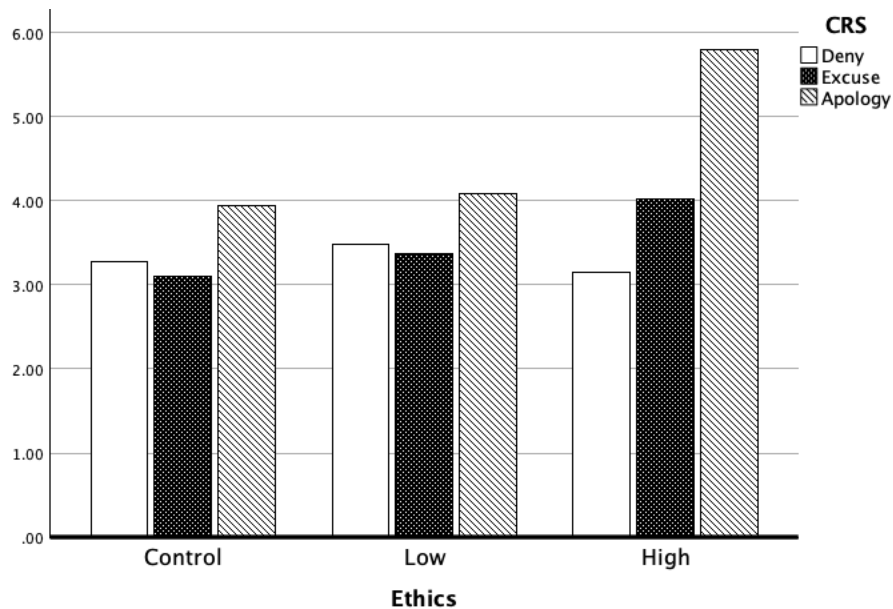


Figure 7. Interaction Effects of Crisis Response Strategies and Ethics of Care on Supportive Behavior Intention

H10 proposed that ethics of care would moderate the relationship between crisis response strategies and organizational reputation through OPR outcomes. The moderated mediation analysis was conducted using PROCESS Model 8. The analysis revealed a significant interaction

effect between crisis response strategies and the level of ethics of care on OPR outcomes (R^2 change = .0455, $F(1, 527) = 31.3577$, $p < .001$), indicating that the influence of crisis response strategies on OPR outcomes was contingent on the level of ethics of care. Specifically, at higher levels of ethics of care, the effect of crisis response strategies on OPR outcomes was substantially stronger ($b = .7341$, $SE = .0751$, $p < .001$) compared to the lower ($b = .4119$, $SE = .0475$, $p < .001$) or no ethics of care conditions ($b = .0897$, $SE = .0741$, $p = .2264$). Further examination of the final outcome variable, organizational reputation, showed that the model explained 58.11% of the variance ($R^2 = .5811$, $F(4, 526) = 182.4046$, $p < .001$). The interaction between crisis response strategies and ethics of care, however, did not significantly affect organizational reputation (R^2 change = .0008, $F(1, 526) = .9936$, $p = .3193$), indicating no moderation at this level of the model.

Nonetheless, the indirect effects of crisis response strategies on organizational reputation via OPR outcomes were moderated by the ethics of care. At the control level, the indirect effect was not significant ($effect = .0992$, $BootSE = .0858$, 95% $CI [-.0737, .2665]$). However, it became significant and stronger with increasing levels of ethics of care ($effect$ at low level = .8115, $BootSE = .0924$, 95% $CI [.6359, .9968]$; $effect$ at the highest level = .4554, $BootSE = .0553$, 95% $CI [.3481, .5691]$). The effect of moderated mediation, which quantifies the change in the mediated effect for a one-unit increase in the moderator, was significant ($effect = .3562$, $BootSE = .0699$, 95% $CI [.2238, .4999]$), confirming the moderating role of ethics of care in the indirect path from crisis response strategies to organizational reputation through OPR outcomes. Table 31 reports the unstandardized path coefficients and the bootstrapping results. Therefore, H10 was supported.

Table 31.

Model Coefficients for Conditional Process Model (IV->OPR Outcomes -> Organizational Reputation)

	Consequent			Y (Organizational Reputation)		
	M (OPR outcomes)			Y (Organizational Reputation)		
Antecedent	<i>Coeff.</i>	<i>SE</i>	<i>p</i>	<i>Coeff.</i>	<i>SE</i>	<i>p</i>
<i>X</i> (Strategies)	.09	.07	.23	.07	.08	.44
<i>M</i> (OPR outcomes)	-	-	-	1.11	.05	.00
<i>W</i> (No/low/high ethics)	-.30	.12	.02	-.12	.14	.39
<i>X</i> x <i>W</i>	.32	.06	.00	.07	.07	.32
Constant	3.77	.16	.00	-.57	.26	.03
	$R^2 = .25$			$R^2 = .58$		
	$F(3, 527) = 54.04, p < .001$			$F(4, 526) = 182.4, p < .001$		

H11 examined whether the level of ethics of care would moderate the relationship between the crisis response strategies and the supportive behavioral intention, mediated by OPR outcomes. The moderated mediation analysis utilized PROCESS Model 8 in SPSS. The interaction between crisis response strategies and the level of ethics of care significantly predicted OPR outcomes (R^2 change = .0452, $F(1, 528) = 31.12, p < .001$), indicating that the effect of crisis response strategies on OPR outcomes varied with the level of ethics of care. Specifically, the conditional effects showed that the impact of crisis response strategies on OPR outcomes was more pronounced at higher levels of ethics of care ($effect = .7342, BootSE = .0754, p < .001$) than lower ($b = .4119, BootSE = .0477, p < .001$) or no ethics of care ($effect = .0896, BootSE = .0744, p = .2289$). Subsequent analysis revealed that the mediation model explained 57.80% of the variance in supportive behavioral intention ($R^2 = .5780, F(4, 527) = 180.42, p < .001$). However, the interaction effect of crisis response strategies and ethics of care on supportive behavioral intention was not significant (R^2 change = .001, $F(1, 527) = 1.27, p = .2610$), suggesting no moderation at the final outcome level.

Despite the lack of a significant interaction effect, the indirect effects of crisis response strategies on supportive behavioral intention through OPR outcomes were significant and varied by ethics of care. The indirect effect at no ethics of care level was not significant ($effect = .1161$, $BootSE = .1000$, $95\% CI [-.0773, .3131]$), but became significant and stronger with higher levels of ethics of care ($effect$ at low level = $.5335$, $BootSE = .0634$, $95\% CI [.4134, .6607]$; $effect$ at high level = $.9508$, $BootSE = .1023$, $95\% CI [.7508, 1.1501]$).

The effect of moderated mediation confirmed the moderating role of ethics of care. The effect was significant ($effect = .4174$, $BootSE = .0788$, $95\% CI [.2623, .5714]$), supporting that the relationship between crisis response strategies and supportive behavioral intention through OPR outcomes is strengthened under a high level of ethics of care compared to lower or no ethics of care. Table 32 reports the unstandardized path coefficients and the bootstrapping results. H11 was supported.

Table 32.
Model Coefficients for Conditional Process Model (IV->OPR Outcomes -> Supportive Behavioral Intention)

	Consequent			Y (Supportive Behavioral Intention)		
	M (OPR outcomes)			Y (Supportive Behavioral Intention)		
Antecedent	Coeff.	SE	p	Coeff.	SE	p
X (Strategies)	.09	.07	.23	.03	.10	.73
M (OPR outcomes)	-	-	-	1.30	.06	.00
W (No/low/high ethics)	-.30	.12	.02	-.18	.16	.26
X x W	.32	.06	.00	.09	.08	.26
Constant	3.77	.16	.00	-1.83	.30	.00
	$R^2 = .23$			$R^2 = .58$		
	$F(3, 527) = 53.6, p < .001$			$F(4, 526) = 180.4, p < .001$		

Hypothesis H12 explored whether the ethics of care moderates the relationship between crisis response strategies and supportive behavioral intention, mediated through the

organizational reputation. The moderated mediation was assessed using PROCESS Model 8. The analysis confirmed a significant interaction between crisis response strategies and the ethics of care on organizational reputation (R^2 change = .0339, $F(1, 527) = 21.71, p < .001$). This interaction indicated that the impact of crisis response strategies on organizational reputation was significantly stronger at higher levels of ethics of care (high ethics: $effect = 1.0094, BootSE = .1184, p < .001$; low ethics: $effect = .5868, BootSE = .07, p < .001$) compared to the no ethics of care condition ($effect = .1642, BootSE = .12, p = .1604$). Subsequent analysis of the outcome variable, supportive behavioral intention, revealed that the model accounted for 76.91% of the variance ($R^2 = .77, F(4, 526) = 438.13, p < .001$). Despite the strong overall model fit, the interaction of crisis response strategies and ethics of care did not significantly affect supportive behavioral intention directly (R^2 change = .0010, $F(1, 526) = 2.18, p = .1405$).

Nevertheless, the indirect effects through organizational reputation varied with the level of ethics of care, demonstrating that the mediation effect was indeed moderated. The indirect effect was not significant at the control level ($effect = .1635, BootSE = .1250, 95\% CI [-.0811, .4060]$), but increased with the level of ethics of care, becoming significant and more robust at higher levels (low ethics: $effect = .5842, BootSE = .0701, 95\% CI [.4457, .7247]$; high ethics: $effect = 1.0048, BootSE = .1025, 95\% CI [.8030, 1.2055]$). The effect of moderated mediation confirmed the significant moderating effect of ethics of care ($effect = .4207, BootSE = .0903, 95\% CI [.2501, .5985]$), indicating that the pathway from crisis response strategies to supportive behavioral intention through organizational reputation is strengthened as the level of ethics of care increases. Table 33 reports the unstandardized path coefficients and the bootstrapping results. H12 was supported.

Table 33.

Model Coefficients for Conditional Process Model (IV-> Organizational Reputation -> Supportive Behavioral Intention)

\Antecedent	Consequent			Y (Supportive Behavioral Intention)		
	M (Organizational Reputation)			Y (Supportive Behavioral Intention)		
	Coeff.	SE	p	Coeff.	SE	p
X (Strategies)	.16	.12	.16	-.01	.07	.84
M (Organizational reputation)	-	-	-	1.00	.03	.00
W (No/low/high ethics)	-.45	.19	.02	-.12	.12	.30
X x W	.42	.09	.00	.08	.06	.30
Constant	3.60	.25	.00	-.53	.18	.01
	$R^2 = .18$			$R^2 = .58$		
	$F(3, 527) = 37.47, p < .001$			$F(4, 526) = 438.13, p < .001$		

H13 posited that the ethics of care would moderate the impact of crisis response strategies on OPR outcomes and whether these outcomes sequentially mediate the impact on organizational reputation and supportive behavioral intentions. The moderated mediation analysis, conducted using PROCESS Model 84, evaluated these effects. The analysis indicated a significant interaction between crisis response strategies and the level of ethics of care on OPR outcomes, $F(1, 527) = 31.36, p < .001$, which accounted for 4.55% of the variance ($R^2 = .0455$). The conditional effects demonstrated that the influence of crisis response strategies on OPR outcomes was non-significant at the no ethics of care level ($effect = .0897, BootSE = .0741, p = .226$), but became significant and progressively stronger with higher levels of ethics of care ($effect = .4119, BootSE = .0475, p < .001$ for low; $effect = .7341, BootSE = .0751, p < .001$ for high).

Subsequently, these OPR outcomes mediated the relationship between crisis response strategies and organizational reputation, which in turn influenced supportive behavioral intentions. The total model explained a substantial 78.70% of the variance in behavioral

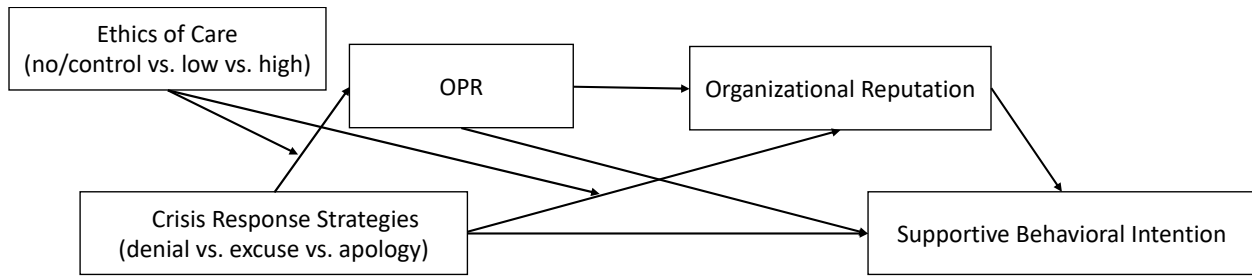
intentions ($R^2 = .7870$), $F(3, 527) = 649.13$, $p < .001$. Notably, the sequential mediation was significantly influenced by the level of ethics of care, with minimal indirect effects at no ethics of care ($effect = .0820$, $BootSE = .0705$, $p > .05$) and more substantial effects at higher ethics levels ($effect = .3764$, $BootSE = .0437$, $p < .001$ for low; $effect = .6709$, $BootSE = .0726$, $p < .001$ for high). Table 34 reports the unstandardized path coefficients and the bootstrapping results. Figure 8 displayed the conditional effects of crisis response strategies on supportive behavioral intention (Strategies \rightarrow OPR \rightarrow Reputation \rightarrow supportive behavioral intention). These findings supported H13.

Table 34.

Model Coefficients for Conditional Process Model (IV-> OPR Outcomes -> Organizational Reputation -> Supportive Behavioral Intention)

	Consequent <i>M</i> (OPR Outcomes)			Consequent <i>M</i> (Organizational Reputation)			<i>Y</i> (Supportive Behavioral Intention)		
	Coeff.	<i>SE</i>	<i>p</i>	Coeff.	<i>SE</i>	<i>p</i>	Coeff.	<i>SE</i>	<i>p</i>
Antecedent <i>X</i> (Strategies)	.09	.07	.23	.07	.08	.44	.01	.05	.81
<i>M</i> (OPR Outcomes)	-	-	-	1.11	.05	.0000	.38	.06	.0000
<i>.M</i> (Organizational reputation)	-	-	-	-	-	-	.83	.04	.0000
<i>W</i> (No/low/high ethics)	-.30	.12	.02	-.12	.14	.39			
<i>X x W</i>	.32	.06	.0000	0.07	0.07	.39			
Constant	3.77	.16	.0000	-.57	.26	.03	-1.44	.16	.0000
	$R^2 = .24$			$R^2 = .58$			$R^2 = .58$		
	$F(43, 527) = 54.04, p < .001$			$F(4, 526) = 182.40, p < .001$			$F(4, 526) = 438.13, p < .001$		

(A)



Direct Effects: Effect = 0.01, SE = 0.05, *n.s.*

Indirect Effects at Different Levels of Ethics of Care:

- **With Control:** Effect = 0.08, SE = 0.07, 95%CI=[-.0240, .1001], *n.s.*
- **With Low Level:** Effect = 0.38, SE = 0.04, 95%CI=[.2886, .4629], *sig.*
- **With High Level:** Effect = 0.67, SE = 0.07, 95%CI=[.5296, .8128], *sig.*

(B)

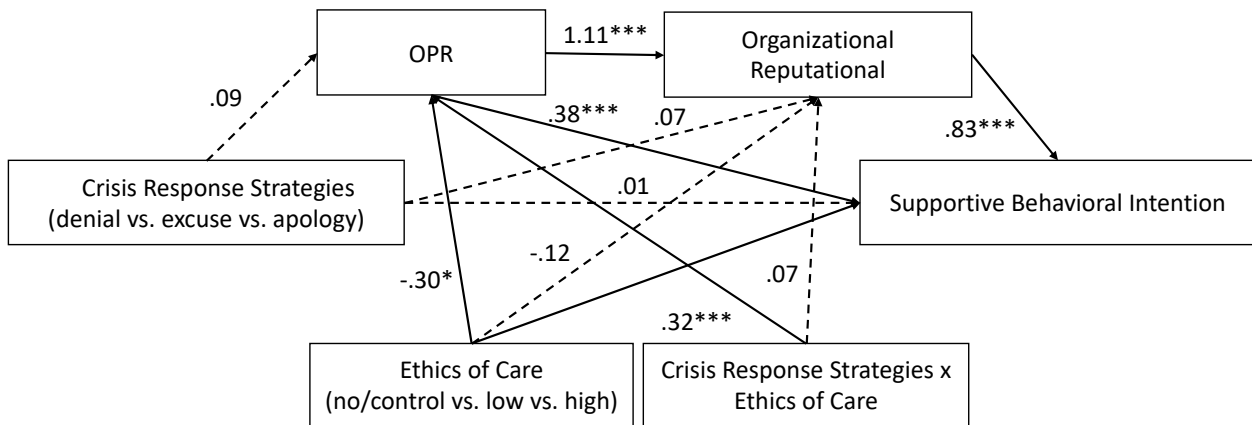


Figure 8. (A) Inference for the Conditional Direct and Indirect Effects. (B) Moderated Mediation Model Path Coefficients

CHAPTER 5. DISCUSSION

This dissertation aimed to understand the dynamics between crisis response strategies, the application of ethics of care, and their collective influence on organizational outcomes such as OPR, organizational reputation, and supportive behavioral intention within the context of AI crises.

The data partially supported H1, which predicted that crisis response strategies would impact OPR outcomes. While the denial strategy did not significantly influence OPR outcomes, the excuse strategy improved them, and the apology strategy significantly enhanced them. These results align with the theoretical underpinnings of crisis communication, suggesting that acknowledgment and remedial efforts are pivotal in maintaining positive public relationships (Coombs & Holladay, 2002). OPR outcomes may have improved because excuse and apology strategies can address immediate public concerns, showing that the organization recognizes the issue and is willing to address it (Coombs & Holladay, 2002). In addition, the public may appreciate the organization's willingness to engage and provide explanations, thus improving relational outcomes (Coombs & Holladay, 2002). Denial strategy did not improve OPR, and this could be because unlike strategies that acknowledge some level of fault (e.g., apology or excuse strategy), denial does not offer the public an understanding of the situation (Giner-Sorolla, 2013).

H2 was also partially supported, as only the apology strategy significantly improved organizational reputation. Contrary to the excuse strategy, which did not significantly affect OR, the apology strategy's significant improvement suggests that taking responsibility and promising corrective action are essential for rebuilding an organizational reputation (Coombs, 2007). The denial and excuse strategies decrease in OR. This could be because reputation encompasses a

broader, more enduring perception of the organization. For excuse strategy, while the public may appreciate the recognition of the problem, concerning the complexity of AI issues, it may not be sufficient to influence the overall reputation without evidence of concrete actions or changes (Fombrun & Shanley, 1990). In the context of AI, where ethical considerations and the potential for harm are significant, publics expect organizations to take responsibility for their actions (Coombs & Holladay, 2002). A denial strategy may be perceived as reducing this responsibility, which can negatively impact the organizational reputation. Additionally, denial can create skepticism among the public, which can lead to questions about the organization's transparency and honesty. Trust is foundational for reputation, and denial could break this trust, especially when AI-related issues often demand clarity and openness (Rawlins, 2008).

From research questions 1 and 2, the study found that the type of crisis response strategy chosen by an organization in AI crisis affects public perceptions. The apology strategy proves to be the most potent in fostering positive OPR outcomes, organizational reputation and supportive behavior intention. This finding suggests that the public is more receptive to communications that include an acknowledgment of the AI crisis and a commitment to solve the issue. The apology strategy was the most effective because the public prefers an organization to take responsibility. This aligns with the existing literature that shows transparency and accountability as key to maintaining and enhancing OPR, organizational reputation and supportive behavior (Coombs & Holladay, 2002). This also may indicate that the public is not only cognitively assessing the organization's responses but is also emotionally inclined to support an organization that demonstrates responsibility toward correcting its mistakes. Interestingly, the lack of significant differences between the denial and excuse strategies across all variables suggests that neither strategy effectively engages OPR outcomes, organizational reputation and supportive

behavior intention. This could be because the public may perceive both denial and excuse strategies as evasive. In the AI crisis, which often involves complex technical details, the public may view these strategies as attempts to sidestep responsibility rather than addressing the core issues. In addition, due to the complexity, the average public may not fully understand the technical nuances. Denial and excuse strategies may fail to provide sufficient transparency that the public needs to feel reassured. Without a clear understanding, the public may not differentiate much between a company denying responsibility and one providing excuses. This could potentially lead to a similar sentiment and reaction toward both strategies in the AI crisis.

Supporting H3, the mediation analysis indicated that OPR outcomes significantly mediate the relationship between crisis response strategies and OR changes. This finding corroborates the essential role of relationship management in crisis communication, where positive public relations outcomes can enhance organizational reputation (Sisco, 2012). It also highlights that the effectiveness of crisis response strategies extends beyond immediate public perceptions to influence broader organizational evaluations.

The significant effects of ethics of care messaging on OPR outcomes, OR, and SBI, as shown in H4, H5, and H6, underscore the importance of ethics in crisis communication. Ethics of care messaging plays a crucial role in shaping public perception and response. The results indicate that a higher level of ethics of care messaging not only improves OPR outcomes and OR but also enhances SBI. This finding is consistent with literature suggesting that ethical communication fosters trust and strengthens stakeholder relationships (Johansen et al., 2012). In AI crises, where skepticism can be high due to potential biases inherent in AI technologies, emphasizing ethics of care ensures that the company's responses are seen as genuinely concerned with the public's welfare. Another important finding is that there was a significant difference

between the low ethics of care and no ethics of care (i.e., control group), which provides important insights into the gradational effects of ethical consideration in AI crisis communication. This finding stresses that even minimal incorporations of ethics of care can have a meaningful impact compared to none at all. Also, this finding suggests a nuanced understanding that not all ethics of care approaches are equally effective but that any level of ethics of care surpasses a complete absence of such consideration. In fact, this finding may indicate a threshold effect where even low levels of ethics of care are sufficient to trigger noticeable changes in OPR outcomes, organizational reputation and supportive behavior intention.

The significant interaction effects observed in the H7, H8, and H9 emphasize the moderating role of ethics of care messaging in AI crisis communication. This moderating effect suggests that the impact of crisis response strategies is amplified when paired with high-level ethics of care messaging. Specifically, the apology strategy under high ethics of care conditions yielded significantly better OPR outcomes and OR. These findings align with research that posits empathy and ethical consideration as key to effective crisis resolution (Coombs, 2014). In particular, AI crises often involve ethical issues that are not typically present in other types of organizational crisis (Amodei et al., 2016). For instance, decisions made by AI can affect a number of people simultaneously and in ways that might not be immediately apparent. In such scenarios, an ethics of care approach ensures that responses are not only technically adequate but also ethically tuned to the needs and rights of all public involved (Bauman, 2011; Simola, 2003; Tao & Kim, 2017), therefore can enhance trust and credibility. In addition, an ethics of care approach can amplify or mitigate the perceived sincerity and authenticity of each crisis response strategy – denial, excuse and apology.

The findings from Hypotheses 10, 11, and 12 offer a nuanced understanding of the interplay between crisis response strategies, ethics of care, and their effects on organizational reputation and supportive behavioral intentions, particularly through mediating variables, OPR and organizational reputation. For all three hypotheses, there was no direct interaction effect between crisis response strategies and ethics of care on the dependent variables (organizational reputation and supportive behavioral intention). This suggests that the simple combination of crisis response strategies and varying levels of ethics of care does not directly influence these outcomes. The indirect effects, mediated through OPR (H10 and H11) and organizational reputation (H12), were significant and showed varying strengths dependent on the level of ethics of care. Specifically, as the level of ethics of care increased, the indirect effects of crisis response strategies on the dependent variables became stronger. It implies that while direct interactions between the primary variables might not alter organizational reputation or supportive behavioral intentions significantly, their influence is felt when mediated by changes in OPR or organizational reputation. This implies that public may not respond directly to the strategies and ethics of care alone but react to how these strategies with ethics of care approach affect their perceived relationship quality with the organization or the organizational overall reputation. This highlights the importance of the quality of public relationships and organizational reputation as fundamental channels through which strategies and ethical considerations impact broader outcomes (Grunig & Hung, 2002; Hon & Grunig, 1999; Ledingham & Bruning, 1998; Lee & Kim, 2020). The critical role of ethics of care as a moderator in these indirect pathways suggests a theoretical extension to traditional crisis communication models, advocating for the integration of ethical considerations into the strategic planning of crisis responses.

The absence of significant direct effects could indicate that the relationship between crisis response strategies and the ethics of care with organizational reputation and supportive behaviors is more complex than can be captured by direct interaction effects. This complexity might involve other underlying factors or variables not included in the current model such as AI crisis severity (Zhou & Ki, 2018), perceived AI knowledge (Li, 2021), trust toward AI (Gefen, 2004). Additionally, directly alternating organizational reputation or supportive behavioral intentions might require prolonged exposure to a crisis response strategy or ethics of care than what occurs in the scope of a single study.

H13 was crucial in exploring the comprehensive pathway through which crisis response strategies, moderated by the level of ethics of care, influence OPR, and how these in turn affect organizational reputation and supportive behavioral intentions. The findings provide evidence of the complex interplay between these variables, significantly enriching our understanding of crisis communication dynamics. The analysis confirmed that the ethics of care significantly moderates the relationship between crisis response strategies and OPR outcomes. Specifically, while the influence of crisis response strategies on OPR outcomes was non-significant at the no ethics of care level, it became progressively stronger with higher levels of ethics of care. This result underscores the potency of ethics of care in enhancing the effectiveness of crisis response strategies, particularly in nurturing positive OPR outcomes.

The sequential mediation analysis revealed that OPR outcomes serve as a crucial mediator in the transmission of effects from crisis response strategies to organizational reputation and ultimately to supportive behavioral intentions, highlighting the significant role of OPR in shaping subsequent organizational outcomes. The minimal indirect effects observed at the no ethics of care level suggest a limited impact of crisis response strategies on subsequent outcomes

when ethical considerations are absent. In contrast, at higher levels of ethics of care, the mediated effects not only became significant but also exhibited a marked increase. This pattern illustrates that the presence of an ethics of care enhances the capability of OPR outcomes to positively influence organizational reputation and supportive behavioral intentions. This finding theoretically provides the ethics of care as a pivotal factor in crisis communication, advocating for its integration into the strategic framework of crisis communication. The confirmation of a sequential mediation pathway enriches theoretical models of crisis communication by demonstrating the layered and conditional impacts of strategy and ethics of care on organizational outcomes.

Theoretical Implications

Reinforcement of Crisis Response Strategies' Impact on Organizational Outcomes

The findings of this research reinforce existing theories on crisis communication, particularly the SCCT, by demonstrating how different crisis response strategies distinctly influence OPR outcomes, organizational reputation, and supportive behavioral intentions. The variation in effectiveness among denial, excuse, and apology strategies offers nuanced insights into strategic communication during crises.

The application of SCCT to AI crises within this study extends the traditional framework of SCCT, which categorizes technical errors generally under accidental crises. In traditional SCCT, the attribution of responsibility and the selection of appropriate crisis response strategies are typically matched (Coombs, 2007). However, AI-related crises introduce a unique complexity that challenges the conventional application of SCCT.

This dissertation's findings suggest that traditional crisis response strategies (denial, excuse, and apology) function differently in the context of AI crises, which are characterized not

only by technical issues but also by ethical and social implications. The efficacy of these strategies in AI contexts underscores the need for an adapted SCCT framework that explicitly addresses the multi-faceted nature of AI failures. For instance, the apology strategy, which acknowledges wrongdoing and seeks to make amends, was particularly effective in improving OPR and organizational reputation during AI crises. This strategy aligns with the expectations for ethical accountability in AI-related failures, where stakeholders expect not just technical resolutions but also ethical considerations and transparency.

Integration of Ethics of Care in Crisis Communication Models

This study's results significantly extend crisis communication theory by integrating the ethics of care as a moderating variable. The findings suggest that the level of ethics of care not only influences the direct effects of crisis response strategies but also moderates the pathways through which these strategies impact organizational reputation and supportive behaviors. This underscores the need for ethical considerations within theoretical models of crisis communication, advocating for a broader, more holistic approach to understanding and managing crises. Such findings advocate for an expansion of the SCCT model to incorporate ethical responsiveness as a core component of crisis communication strategies, especially in sectors where AI plays a critical role.

Mediation by Organizational Public Relationships

The mediation effect of OPR on the relationship between crisis response strategies and organizational outcomes highlights the critical role of public relationships in the mechanics of crisis communication. This finding enriches theoretical frameworks by detailing the process through which initial crisis responses translate into broader organizational impacts, emphasizing the intermediary role of public relationships. Traditional models of crisis communication often

focus directly on the outcomes such as reputation and public support without sufficiently accounting for the underlying relational dynamics. The mediation by OPR in this study illustrates that the pathway from crisis response to organizational reputation and supportive behavior intention is not direct but is significantly shaped by the quality of interactions and relations the organization maintains with its publics. This expands the theoretical landscape of crisis communication by integrating a relational perspective, which emphasizes that the effects of crisis response strategies are influenced by the state of public relationships.

Practical Implications

Strategic Crisis Response Planning

The significant effectiveness of the apology strategy in enhancing both OPR outcomes and organizational reputation suggests that organizations should not hesitate to employ this approach when appropriate. In AI-related crises, where ethical concerns have arisen, a sincere apology can significantly mitigate negative impacts. Given its effectiveness in improving OPR outcomes but not as strong in enhancing organizational reputation, excuse strategy can be employed selectively, perhaps in situations where organizations need to maintain public engagement, but the crisis does not severely threaten the organizational reputation.

The infusion of a high level of ethics of care into messaging can significantly improve not just the immediate relational outcomes but also a path to long-term organizational esteem and public support. The findings suggest that when organizations prioritize ethical transparency and demonstrate genuine concern, they can significantly elevate the public's perception of the organization's reputation and induce supportive behaviors. Such strategies, centered on an ethic of care, resonate deeply with the audience, fostering a sense of trust and shared values.

Moreover, the comparative impact of low versus no ethics of care in crisis messaging revealed noteworthy differences. Messages articulated with even a low level of ethics of care were found to yield better outcomes than those with no evident ethics of care. This indicates that any effort to embed care in communication can be beneficial, but the degree of care articulated does matter. While a minimal inclusion of ethics of care elements does result in positive shifts, the escalation to a high level of ethics of care is significantly more potent. Practically, this means that organizations should strive not only to include ethical care components in their crisis communication but also to ensure that these elements are profoundly and clearly expressed. This suggests that PR practitioners are encouraged to develop messages that deeply reflect the organization's commitment to public welfare, going beyond the acknowledgment to a demonstration of concrete steps taken and policies implemented that illustrate this commitment. This could involve explicitly outlining the organization's action plans to address the crisis' impact, ensuring transparency in their processes, and actively engaging with the public's feedback.

Another finding suggests that organizations should invest in building and maintaining strong organizational-public relationships as these mediate the effects of crisis response strategies on longer-term outcomes like reputation and behavioral intentions. PR programs designed to enhance trust, commitment, and satisfaction among stakeholders can serve as effective tools in pre-crisis phases.

CHAPTER 6. CONCLUSION

This dissertation has illuminated the landscape of crisis communication in the era of AI, where traditional approaches to crisis communication are intersecting with the expanding field of ethics in technology. The situation crisis communication theory provided a foundation for examining how different crisis response strategies – denial, excuse, and apology – play out in the context of AI crises. The findings showed that the apology strategy had a consistently positive impact across various organizational outcomes, including OPR, organizational reputation and supportive behavior intentions.

The study also expanded the scope of SCCT by integrating the ethics of care, highlighting how a high level of ethics of care in messaging can significantly enhance organizational outcomes. Notably, messages with even a low level of ethics of care are better than those with no such ethical framing, highlighting the importance of ethical consideration in crisis responses.

Limitations and Future Research

This research is not without its limitations. The evolving nature of AI technology, driven by deep learning and machine learning capabilities, adds another layer of complexity. AI systems are not static; they continuously learn and adapt over time, which means that their behavior and potential for errors can change as the technology develops. This ongoing evolution requires crisis response strategies to be adaptable and forward-looking, considering not only the immediate response but also how to manage the long-term implications of an evolving technology. Incorporating these considerations into crisis response strategies for AI-related incidents means acknowledging the multifaceted nature of AI errors and the technology's evolving capabilities.

While this dissertation did not develop a separate variable for AI evolution, it is essential to consider these aspects in the analysis of crisis response strategies, especially when dealing with generative AI tools. This approach ensures a more comprehensive understanding of AI crises and the development of more effective response strategies that account for both the technical and human dimensions of AI technology.

Another limitation of this study is the potential influence of perceived AI knowledge (Li, 2021; Zerfass et al., 2020) among participants. Individuals with varying levels of understanding and familiarity with AI technologies may interpret crisis scenarios and response strategies differently. Those with higher perceived AI knowledge might scrutinize AI failures more critically, leading to distinct evaluations of the organization's crisis response strategies and overall reputation compared to those with lower AI knowledge. This disparity could affect the generalizability of the findings, as the responses may be influenced by the participants' background knowledge and preconceptions about AI. Future research should consider measuring and controlling for perceived AI knowledge to better understand its role in shaping public perceptions of crisis communication. Additionally, incorporating a more diverse sample in terms of AI literacy could provide a more comprehensive understanding of how different demographic groups perceive and react to AI-related crises.

This study's experimental design, which employed a fictional corporation and scenario, was carefully crafted to minimize bias related to participants' perceptions of specific corporate fields such as technology, fashion, or finance. By portraying the company, Hexxa, as diversified in its offerings—from consumer products to software—a broad spectrum of applications was represented. However, this approach, while mitigating biases, may also limit the depth of participants' engagement with the scenario. In reality, corporate reputations are built and

influenced over time, leading to pre-existing public perceptions that could significantly impact the effectiveness of crisis response strategies. In this study, the measurement of OPR was performed post-exposure to the corporate overview, which may not fully capture the nuanced development of OPR outcomes that typically occur over a longer duration. The complexity of long-term relationships, therefore, warrants further investigation.

Future studies should aim to analyze real-world data, potentially employing content analysis methods to gauge public perceptions and the pre-existing status of OPR. Such research could utilize actual corporate names and explore various search methodologies to tap into a more authentic public sentiment. Moreover, given the rapid integration of AI across various sectors, future research could explore how the ethics of care influences crisis response strategies in industries that heavily rely on AI, such as healthcare and finance. Such exploration would provide valuable insights into sector-specific crisis communication and the interplay between technological reliance and ethical communication. Future research could examine how industry type, crisis severity, and cultural influences affect the mediation effect of OPR. For instance, a severe crisis in a high-stakes industry such as healthcare may elicit different responses compared to a mild crisis in a less critical sector.

In conclusion, the study provides important theoretical and practical contributions to the field of crisis communication. It highlights the pivotal role of ethics of care in crisis response strategies and underscores the importance of building robust organizational-public relationships as a foundation for enhancing organizational reputation and encouraging supportive behaviors. The insights provide a more ethically adapted approach to crisis communication, advocating for messages that not only address the crisis at hand but also nurture trust, demonstrate genuine

concern, foster long-term stakeholder commitment, and use action plans to prevent conflicts and ensure fairness in the future.

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APPENDICES

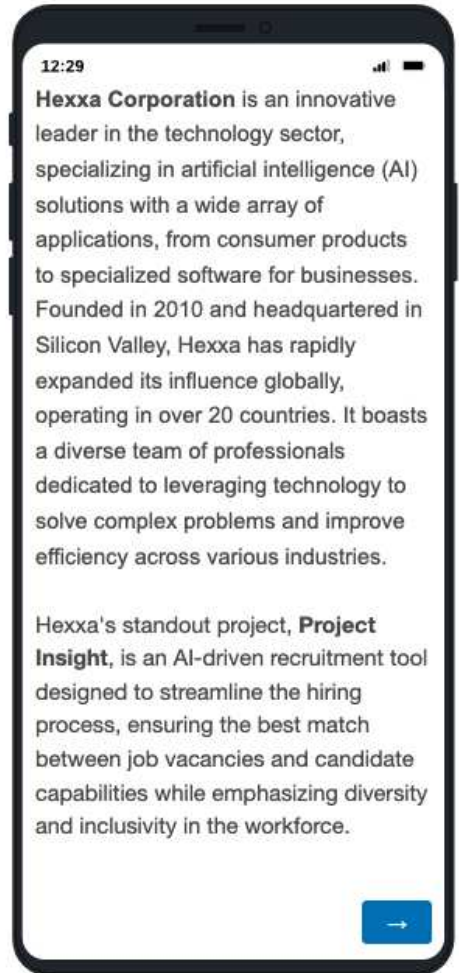
Appendix A. Hexxa Background Information (Corporate Overview)

Hexxa Corporation Overview:

Hexxa Corporation is an innovative leader in the technology sector, specializing in artificial intelligence (AI) solutions with a wide array of applications, from consumer products to specialized software for businesses. Founded in 2010 and headquartered in Silicon Valley, Hexxa has rapidly expanded its influence globally, operating in over 20 countries. It boasts a diverse team of professionals dedicated to leveraging technology to solve complex problems and improve efficiency across various industries.

Hexxa's standout project, **Project Insight**, is an AI-driven recruitment tool designed to streamline the hiring process, ensuring the best match between job vacancies and candidate capabilities while emphasizing diversity and inclusivity in the workforce.

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Appendix B. Denial Strategy + Ethics of Care (No/Control)

Title: Hexxa Denies Use of AI Recruiting Tool in Hiring Process

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa strongly denies using the AI recruiting tool to evaluate any job applicants. We want to assure our female candidates, customers, and partners that our hiring process is fair and unbiased. The AI system in question was developed for research purposes only and has never been utilized by our recruiters in the decision-making process."

Appendix C. Denial Strategy + Ethic of Care (Low)

Title: Hexxa Denies Use of AI Recruiting Tool and Expresses Commitment to Public Relations

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa strongly denies using the AI recruiting tool to evaluate any job applicants. The AI system was developed for research purposes only and has never been utilized in our hiring process.

We understand the feelings of our publics and remain sensitive to the potential harm that such issues can cause. At Hexxa, we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics. We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders."

Appendix D. Denial Strategy + Ethics of Care (High)

Title: Hexxa Denies Use of AI Recruiting Tool and Expresses Commitment to Public Relations

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa strongly denies using the AI recruiting tool to evaluate any job applicants. The AI system was developed for research purposes only and has never been utilized in our hiring process.

However, **we understand the feelings of our customers and remain sensitive to the potential harm that such issues can cause.** At Hexxa, **we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics.** We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders.

As part of our action plan, we will allocate an additional \$2 million to fulfill our ethical responsibilities and strengthen our commitment to diversity and inclusion. Furthermore, we are excited to announce a collaboration with the University of Pennsylvania to conduct in-depth research on ethical responsibilities in the field of AI and recruitment.

Our focus will be on fulfilling our conflicting responsibilities and doing what is right for the victims rather than solely concentrating on legalities. We pledge to keep our stakeholders informed of our progress and remain accountable throughout this process."

Appendix E. Excuse Strategy + Ethics of Care (No/Control)

Title: Hexxa Addresses AI Gender Bias Controversy

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa acknowledges the findings of the report but would like to provide some context regarding the situation. While it is true that the AI system may have exhibited a gender bias, **we believe this to be an unintended consequence of the algorithm's design rather than a reflection of our company's values or hiring practices.** The development of the AI system was influenced by external data sources that inadvertently introduced bias into the system. We believe small issues such as an AI mistake on a gender bias might happen from time to time."

Appendix F. Excuse Strategy + Ethic of Care (Low)

Title: Hexxa Addresses AI Gender Bias Controversy with Sensitivity

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa acknowledges the report's findings but wants to clarify that the AI system's gender bias was an unintended consequence of its design, influenced by external data sources. This bias does not reflect our company values or hiring practices.

We understand the feelings of our customers and remain sensitive to the potential harm that such issues can cause. At Hexxa, we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics. We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders.

Our focus will be on fulfilling our conflicting responsibilities and doing what is right for the victims, rather than solely concentrating on legalities. We pledge to keep our stakeholders informed of our progress and remain accountable throughout this process."

Appendix G. Excuse Strategy + Ethic of Care (High)

Title: Hexxa Addresses AI Gender Bias Controversy with Sensitivity

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"Hexxa acknowledges the report's findings but wants to clarify that the AI system's gender bias was an unintended consequence of its design, influenced by external data sources. This bias does not reflect our company values or hiring practices.

However, **we understand the feelings of our customers and remain sensitive to the potential harm that such issues can cause.** At Hexxa, **we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics.** We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders.

As part of our action plan, we will allocate an additional \$2 million to fulfill our ethical responsibilities and strengthen our commitment to diversity and inclusion. Furthermore, we are excited to announce a collaboration with the University of Pennsylvania to conduct in-depth research on ethical responsibilities in the field of AI and recruitment.

Our focus will be on fulfilling our conflicting responsibilities and doing what is right for the victims, rather than solely concentrating on legalities. We pledge to keep our stakeholders informed of our progress and remain accountable throughout this process."

Appendix H. Apology Strategy + Ethics of Care (No/Control)

Title: Hexxa Acknowledges AI Gender Bias and Commits to Change

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"We sincerely apologize for the shortcomings of our AI recruiting tool, and we acknowledge the concerns raised by the customers. We recognize the importance of addressing this issue and are taking immediate steps to remedy it. We have halted the use of the AI system and will engage external experts to help us identify and correct any biases in its algorithms. Furthermore, we will invest in additional training for our recruiters to ensure a fair and unbiased hiring process. Hexxa is dedicated to continuous improvement and will learn from this experience to better serve our employees, customers, and partners."

Appendix I. Apology Strategy + Ethic of Care (Low)

Title: Hexxa Acknowledges AI Gender Bias and Commits to Change with Care

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"We sincerely apologize for the shortcomings of our AI recruiting tool and acknowledge the concerns raised by the customers. We will halt the use of the AI system and engage external experts to help us identify and correct any biases in its algorithms.

We understand the feelings of our customers and remain sensitive to the potential harm that such issues can cause. At Hexxa, we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics. We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders.

Our focus will be on fulfilling our conflicting responsibilities and doing what is right for the victims rather than solely concentrating on legalities. We pledge to keep our stakeholders informed of our progress and remain accountable throughout this process."

Appendix J. Apology Strategy + Ethic of Care (High)

Title: Hexxa Acknowledges AI Gender Bias and Commits to Change with Care

A report emerged claiming that Hexxa's AI recruiting tool was found to have a gender bias in favor of male candidates. In response to the allegations, Hexxa issued the following statement:

"We sincerely apologize for the shortcomings of our AI recruiting tool and acknowledge the concerns raised by the customers. We will halt the use of the AI system and engage external experts to help us identify and correct any biases in its algorithms.

We understand the feelings of our customers and remain sensitive to the potential harm that such issues can cause. At Hexxa, **we are committed to fostering a diverse and inclusive work environment, and we understand the importance of nurturing relationships among our publics.** We will be sensitive and responsive to the feelings of those affected by this issue and consider the contextual complexities of our relationships with various stakeholders.

As part of our action plan, **we will allocate an additional \$2 million** to fulfill our ethical responsibilities and strengthen our commitment to diversity and inclusion. Furthermore, we are excited to announce a collaboration with the University of Pennsylvania to conduct in-depth research on ethical responsibilities in the field of AI and recruitment.

Our focus will be on fulfilling our conflicting responsibilities and doing what is right for the victims, rather than solely concentrating on legalities. We pledge to keep our stakeholders informed of our progress and remain accountable throughout this process."