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Public Communication to Repair Trust during Health Crises in the Age of Social Media

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PhD in Management, specialisation of Strategy and Entrepreneurship

Supervisor:
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BUSINESS SCHOOL

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RESUMO

A confiança pública é crucial na administração pública, especialmente em crises onde sua erosão afeta a capacidade dos setores públicos em fornecer serviços (Hvidman, 2019). Tomando as crises de saúde como contexto, esta dissertação oferece *insights* abrangentes sobre como reconstruir a confiança pública por meio da comunicação, especialmente no cenário contemporâneo das *media* sociais.

O primeiro estudo foi uma revisão sistemática da literatura que explorou as fontes de erosão da confiança pública em crises de saúde e as estratégias de comunicação disponíveis para reparar a confiança pública. Este estudo integrou cinco categorias de estratégias de comunicação para reparar a confiança e estabelece um *framework* abrangente discutindo os elementos de comunicação envolvidos nessas estratégias, bem como seus mecanismos de reparação da confiança.

O segundo estudo inclui dois estudos experimentais baseados em cenários para examinar o impacto do tipo de crise e os efeitos de diversas estratégias de resposta nas percepções de confiança. Descobrimos que transgressões graves precipitariam uma erosão substancial da confiança pública. Nesse contexto, a negação e o pedido de desculpas mostraram eficácia comparável, enquanto que a inclusão de um componente discursivo influenciou significativamente a dinâmica da confiança.

O terceiro estudo analisa postagens em *media* sociais de autoridades nos EUA, China e UE durante a pandemia de COVID-19, identificando 12 estratégias de comunicação para gerir a confiança pública e foi desenvolvida uma nova tipologia de estratégias com seis categorias. Além disso, uma análise comparativa entre UE, EUA e China discutiu os impactos institucionais na adoção de estratégias de comunicação.

Palavras-Chave: Reparação de confiança, Gestão de crises, Estratégia discursiva, Crise de saúde, Mídias sociais.

Sistema de Classificação JEL: H83, I18

ABSTRACT

Public trust emerges as a paramount concern in public administration, especially pronounced amidst public crises wherein the erosion of trust diminishes capacity of public sectors to provide public services (Hvidman, 2019). Taking health crises as the context, this dissertation provide comprehensive insights into how public trust can be rebuilt through communication, particularly within the contemporary milieu of social media.

The first study was a systematic literature review which explored the sources of erosion of public trust in health crises and available communication strategies for repairing public trust. This study integrates five categories of trust repair communication strategies and establishes a comprehensive framework by discussing the communication elements involved in these communication strategies as well as their trust-repairing mechanisms.

The second study includes two scenario-based experiments to examine the impact of crisis type and diverse response strategies' effects on trust perceptions. We found that egregious transgressions would precipitate a substantial erosion of public trust. In such a context, denial and apology made comparable efficacy while the inclusions of discursive component significantly impacted trust dynamics.

In the third study, through a qualitative analysis of social media posts from authorities in the U.S., China, and EU during the early stages of the COVID-19 pandemic, we identified 12 communication strategies adopted by authorities' discourse to manage public trust and developed a novel typology of strategy with six categories. Moreover, through a comparative analysis across EU, U.S., and China, we have discussed the institutional impacts on the adoption of communication strategies.

Keywords: Trust repair, Crisis management, Discursive strategy, Health crisis, Social media
JEL Classification system: H83, I18

Table of Contents

ACKNOWLEDGEMENT *3*

RESUMO ..... *ii*

ABSTRACT ..... *iii*

GENERAL INTRODUCTION *1*

CHAPTER 1 ..... *6*

1. General Literature Review *6*

1.1 Epistemology and Definition of Trust **6**

1.2 Multiple Levels of Trust - Choosing the Main Concept **7**

1.3 Public Trust During Health Crisis **8**

1.4 Definition and Theoretical Principles of Trust Repair **10**

1.5 Communication Approaches for Trust Repair **12**

1.6 Communication during Health Crises **15**

1.7 Summary **16**

CHAPTER 2 ..... *19*

2. STUDY 1: Repairing Public Trust through Communication in Health Crises: A Systematic Review of the Literature *19*

2.1 Introduction **19**

2.2 Theoretical Background **20**

2.2.1 Public Trust in Health System 20

2.2.2 Mechanisms and Communication Strategies for Trust Repair 21

2.2.3 Health Crisis Communication for Public Administration 22

2.3 Methodology **23**

2.3.1 Selection criteria for inclusion of studies 23

2.3.2 Data collection 24

2.4 Results **25**

2.4.1 General Characteristics 25

2.4.2 Communication Strategies for Trust Repair 28

2.4.3 Conclusion 36

2.5. Discussion **37**

CHAPTER 3 ..... *40*

3. STUDY 2: Public Trust during Health Crises: Crisis Situations and Communication *40*

3.1 Introduction **40**

3.2 Theoretical Background **41**

3.2.1 Public Trust during Health crisis 41

3.2.2 Crisis Responsibility and Trust 42

3.3 Sub-study 1 ..... **43**

3.3.1 Hypotheses and Research Question 43

3.3.2 Method 46

3.3.3 Result 47

3.3.4 Discussion 54

3.4 Sub-study 2 ..... **55**
3.4.1 Hypotheses 55
3.4.2 Method 56
3.4.3 Result 58
3.4.4 Discussion 60

3.5 Conclusion **60**
3.5.1 Post-crisis Trust 61
3.5.2 Effect of Response Strategy 62
3.5.3 Limitations 63

CHAPTER 4 ..... ***64***

4. STUDY 3: Repairing Public Trust in Crisis Communication: Looking to Social Media Posts during the Early Stage of COVID-19 Pandemic **64**

4.1 Introduction **64**

4.2 Theoretical Background **65**
4.2.1 Trust and Trust Repair 65
4.2.2 Communication Strategies for Managing Public Perceptions 66
4.2.3 Institutional Effects on Covid-19 Communication 68

4.3 Methods **69**
4.3.1 Data Collection 69
4.3.2 Data Analysis 70

4.4 Result **72**
4.4.1 Communication Strategies for Trust Repair 72
4.4.2 Cross-agency Comparison of Communication Strategy 76
4.4.3 Cross-region Comparison of Strategy Adoption 78

4.5 Conclusion and Discussion **82**

CHAPTER 5 ..... ***85***

5. General Conclusion ***85***

5.1 Contributions **85**
5.1.1 Challenges to Public Trust During Health Crises 85
5.1.2 Efficacy of the Dominant Trust-repairing Communication Strategies 87
5.1.3 A Novel Typology of Trust-repairing Communication Strategies 89

5.2 Theoretical Implications and Future Research **92**

5.3 Implications for Practice **94**

REFFERENCE **97**

APPENDIX ***92***

Appendix A. STUDY 1: Characteristics of 37 publications included in the review ***92***

Appendix B. STUDY 1: Summary of 37 publications included in the review. ***98***

Appendix C. STUDY 2: Stimuli of Sub-study 1 ..... ***110***

Appendix D. STUDY 2: Stimuli of Sub-study 2 ..... ***112***

Appendix E. STUDY 2: Measures ***115***

Appendix F. STUDY 3: Representative quotes for 12 strategies and analysis ***117***

TABLES INDEX

Table 1.1 Core Concepts of Bachmann, Gillespie, and Priem's (2015) Six Trust Management Mechanism 12
Table 2.1 Studies by Public Health Crisis 25
Table 2.2 Studies by Country & Region 26
Table 2.3 Studies by Research Approach 27
Table 2.4 Studies by Context of Trust Erosion 28
Table 2.5 Messengers in the Studies Included in the Review 30
Table 2.6 Strategies and Mechanism of Studies Included in the Review 35
Table 3.1 Sub-study 1: Response Validity 47
Table 3.2 Sub-study 1: Means and Standard Deviations among the Variables 48
Table 3.3 Sub-study 1: Pairwise Comparisons in Responsibility across Victim, Accidental, and Preventable Crises 49
Table 3.4 Sub-study 1: Pairwise Comparisons in Ability, Benevolence, and Integrity across Victim, Accidental, and Preventable Crises 50
Table 3.5 Sub-study 1: Multiple comparisons of Responsibility between The Control Group and Three Crisis Scenarios 51
Table 3.6 Sub-study 1: Multiple comparisons of Ability, Benevolence, and Integrity between The Control Group and Three Crisis Scenarios 52
Table 3.7 Sub-study 1: Paired T-test of Responsibility, Ability, Benevolence, and Pre- and Post-Implementation of the Strategy 53
Table 3.8 Sub-study 2: Response Validity 57
Table 3.9 Sub-study 2: Univariate Analysis for Ability, Benevolence, and Integrity by Response Account and Discursive Component 59
Table 3.10 Sub-study 2: Pairwise Comparisons in Ability, Benevolence, and Integrity 60
Table 4.1 Selected Social Media Accounts of Authorities 69
Table 4.2 Six Initial 2nd Cycle Codes 71
Table 4.3 Strategy Adoptions of Authorities in Three Regions 77
Table 4.4 Frequency of Strategy Adoption in the Three Regions 79

FIGURES INDEX

Figure 2.1 Trust Repair through Health Crisis Communication 37
Figure 4.1 Concepts and Themes 72

GENERAL INTRODUCTION

Public trust toward government is a core concern for democratic governance and public administration (Tolbert & Mossberger, 2006). However, during the public crises, especially the recent health crisis, governmental institutions have faced enduring trust deficits (Robinson et al., 2021; Zhang, Li, & Yang, 2021). This loss of trust diminishes resource potential, performance, and the capacity of health sectors to provide public services, which impedes citizens' collaboration with organizations' policies for crisis management (Christensen & Lægreid, 2020a, Hvidman, 2019). Without active public participation and cooperation, controlling crises is virtually impossible (Nolte & Lindenmeier, 2023).

Despite the imperative of upholding public trust in governmental institutions during health crises, it is only with the onset of the recent pandemic that a heightened scrutiny of public trust dynamics in such contexts has emerged, eliciting substantial attention within societal discourse and scholarly investigation alike. Consequently, a considerable lacuna exists in academic exploration regarding the genesis of public trust deficit and strategies for its amelioration within this volatile milieu. Put differently, extant theories of trust rehabilitation confront impediments in elucidating the intricacies of public trust dynamics and the subsequent trust restoration endeavors amid health crises, thereby warranting validation and development within the context of health crises.

The principal challenge impeding extant theoretical frameworks in elucidating the process of trust restoration during a health crisis stems primarily from the nuanced contextual intricacies inherent in trust erosion amidst such exigencies, which often transcend the purview of conventional trust restoration paradigms. Extant literature predominantly delves into trust repair following violations and transgressions, wherein the trustee is perceived to have " betrayed" the trustor in some capacity, thus inflicting harm upon the trustor (e.g., Dirks et al., 2009; Ren & Gray, 2009; Sitkin & Roth, 1993; Tomlinson & Mayer, 2009). Nevertheless, the challenges engendered by health crises to public trust are markedly intricate, since health crises cannot be construed as explicit violations or transgressions, while the ramifications of governmental shortcomings on public trust remain undeniable (Arkorful et al., 2021; Busemeyer, 2022; Zhai & Han, 2023). Furthermore, within the discourse of health crises—a public exigency exerting profound ramifications across all spheres—the influence of the socio-environmental milieu necessitates acknowledgment. The multifaceted nature of the health crisis milieu contributes to a lack of definitive and coherent comprehension among scholars regarding the dynamics of public trust during such crises, impeding the establishment of a clear and cohesive theoretical

framework of the factors influencing trust dynamics during health crises, as well as hindering the development of effective strategies and interventions for policymakers and practitioners in crisis management.

The extant scholarly discourse pertaining to trust restoration significantly underscores the pivotal role of communication in the process of trust repair. Particularly in a volatile context, contrary to substantive measures that require considerable time to implement, communication has an immediate impact on public perceptions to meet the exigencies of an emergency (Gillespie & Dietz, 2009). Within the context of health crises, however, the efficacy of communication strategies posited in existing scholarly discourse for trust restoration amid instances of violations warrants scrutiny.

Scholars have proposed various communication approaches to repair trust, primarily focusing on verbal accounts, such as apology, denial, excuse, which primarily involve social accounts achieved through verbal means for managing attributions of violations (Kim et al., 2004; Schlenker & Darby, 1981). In essence, those strategies acknowledge varying levels of culpability for incidents, hereby attenuating the nexus between fiduciaries and adverse outcomes or/and mitigating the trustor's anticipation of recurrent occurrences in the future.

Considerable endeavors were undertaken to authenticate which strategy, namely the extent to which assuming responsibility for the incident, would engender the highest level of trust. Nonetheless, investigations into the efficacy of these strategies have yielded heterogeneous results, underscoring the nuanced understanding that the effectiveness of communication strategies is context-bound (e.g., Kim et al., 2004; Utz, Matzat, & Snijders, 2009). It is noteworthy that extant literature affords scant attention to trust restoration amidst public emergencies, particularly those of a health-related nature, where the cause of the crisis is less attributed to authorities and the key to repairing trust could be shaping the perception of the authorities' behavior or intent to control health crises rather than changing the public's causal attributions (Coombs, 2007; Stanica et al., 2022). Hence, it is imperative to empirically ascertain the ramifications of employing these strategies on trust dynamics within the precise milieu of a health crisis.

Moreover, the prevailing paradigms of verbal accounts engenders impediments to the systematic analysis of communication behaviors pertinent to trust restoration amidst health crises. Within those frameworks, classifications of strategies have traditionally been predicated upon attribution theory, wherein the degree of acknowledging responsibility for adverse events serves as the primary criterion for categorizing strategy types, thereby relegating non-attributional strategies to secondary status or as ancillary discursive components. However, it

is imperative to recognize that trust repair mechanisms extend beyond the confines of the attributional perspective (Bachmann, Gillespie, & Priem, 2015). Particularly in the context of health crises, the applicability of attributional mechanisms may be constrained, while alternative mechanisms beyond the attributional perspective wield significant influence on trust dynamics.

Consequently, the existing typology of communication strategies presents dual challenges: on one hand, scholars may narrowly construe the influence of communication on trust solely through the lens of responsibility recognition, thus disregarding the contributory role of secondary strategies or discursive components, potentially fueling debates concerning the efficacy of communication strategies; on the other hand, the scant attention afforded to these secondary strategies and discursive components engenders a notable dearth of explication regarding the mechanisms underlying those strategies intended to repair trust. Hence, an exhaustive examination of the role of communication in the public trust restoration during health crises necessitates a systematic reconfiguration of communication strategies grounded in a comprehensive trust restoration framework beyond attributional perspective.

Given the above gaps in the literature, it becomes imperative to corroborate and refine prevailing theories of trust rehabilitation within the intricate and tumultuous milieu of a health crisis. The imperative lies in a threefold approach: a) discerning the roots of trust erosion amidst health crises, akin to a "diagnosing" process; b) corroborating the efficacy of communication tactics grounded in an attributional framework, akin to an appraisal of extant "therapies"; c) amalgamate both efforts into a unified framework, explicating and systematizing communicative behaviors through the prism of an integrated trust-restoration mechanism, thereby engendering a novel "treatment plan". These undertakings are expected to synergistically converge, underpinning a thorough and nuanced elucidation of the revitalization of public trust during health crises, which also constitute the primary research objectives of this thesis:

1) *To discern the impact of health crises on public trust, with a specific focus on delineating which facets of the health crisis precipitate challenges to public trust.*
2) *To evaluate the efficacy of the dominate trust-repairing communication strategies underpinned by the attributional perspective—acknowledging varying degrees of culpability for the crisis.*
3) *To systematize the communication strategies for repairing public trust during a health crisis by employing a comprehensive framework of trust repair mechanisms that extend beyond attributional perspectives.*

The research objectives delineated above are achieved through the execution of three independent investigations employing different methodologies. It is imperative to explain that this thesis is structured as a series of three standalone studies with the intent of subsequent publication. Preceding the finalization of this thesis, Study 1 (expounded in Chapter 2) has been disseminated in *Public Management Review* and is integrated herein in an accepted form. Concurrently, Study 2 (expounded in Chapter 3) is undergoing preparation for submission, and Study 3 (expounded in Chapter 4) is currently undergoing revision following the peer-review. Additionally, it is noteworthy that the general literature review in Chapter 1 is deliberately concise to avoid redundancy with subsequent chapters dedicated to the presentation of the aforementioned studies.

The first study was a systematic literature review, meticulously scrutinizing extant scholarship to furnish a nuanced comprehension of the avenues for rebuilding public trust via communication modalities. Within this endeavor, we discerned three principal factors catalyzing the erosion of public trust during health crises: information confusion, inadequate performance of the public sector, and negative crisis experiences. By synthesizing the communication behaviors proposed in the literature for repairing public trust, we identified five categories of trust-repairing communication strategies and integrated a framework by discussing the communication elements those strategies involved. Additionally, we explicate the processes by which these strategies can repair trust with a framework based on the six trust repair mechanisms of Bachmann, Gillespie, and Priem (2015). We contend that trust-repairing communication is a systematic process that employs multiple communication elements, and our findings develop a framework to better understand the various segments of trust-repairing communication.

The second study includes two scenario-based experiments within the context of specific health crisis incidents, meticulously exploring the influence of crisis type on trust dynamics, as well as assessing the differential impacts of various response strategies on trust perceptions. Our findings indicate that a discernible trust deficit is absent in the prevailing state of a health crisis, while egregious transgressions, typified by instances of corruption, would precipitate a substantial erosion of public trust. Moreover, our findings suggest comparable efficacy in both acknowledging and repudiating responsibility of corruption, which implies a certain degree of malfunctioning of the attribution mechanism. Conversely, the inclusion of discursive components engaging alternative mechanisms significantly impacts trust dynamics.

In the third study, through a qualitative analysis of social media posts from authorities in the U.S., China, and EU during the early stages of the COVID-19 pandemic, we identified 12

communication strategies in six categories adopted by authorities to repair public trust, thereby developed a novel typology of communication strategy based on Bachmann, Gillespie, and Priem's (2015) framework of trust repair mechanisms. Moreover, through a comparative analysis across EU, U.S., and China, we have discussed the institutional impacts on the adoption of communication strategies. Our findings suggest that the degree of institutional authority, the scope of institutional functions, the administrative system, and the political ecology correspond to the distinctive strategies employments in three regions.

This research endeavors to provide insights for public administrators and policymakers in navigating the intricate dynamics of contemporary governance, particularly in harnessing the pivotal social capital of public trust. As the contemporary paradigm of public management evolves, there is a discernible shift towards accentuating the significance of cooperative governance, with trust serving as its linchpin. Particularly during public emergencies, the efficacy of governance is profoundly contingent upon the level of public trust, wielding significant influence over the government's capacity to execute coercive measures and ensure compliance. This study holds promise in furnishing public administrators with a nuanced comprehension of trust erosion dynamics and avenues for restoration, notably elucidating strategies for fostering robust government-citizen relationships through proactive public communication within the prevailing social media milieu.

Furthermore, this study contributes to theoretical advancements within the field of organizational trust repair. Extant literature predominantly centers on instances of violation or transgression, accentuating the modulation of attributions concerning adverse events through verbal interventions to mitigate culpability (e.g., Dirks et al., 2009; Ren & Gray, 2009; Sitkin & Roth, 1993; Tomlinson & Mayer, 2009). However, the context of trust deficit in public crises, particularly exemplified by health emergencies, is intricately intertwined with complex natural and social environmental factors, surpassing the conventional focus on violations, which necessitates the emergence of a novel paradigm of trust-repairing communication in such a turbulent environment (Coombs, 2007; Stanica et al., 2022). This research broadens the scope of trust repair to shed light on the intricate dynamics of public trust during health crises and delves into the role of communication within a comprehensive trust repair framework, thus enriching the theoretical landscape within this domain.

CHAPTER 1

1. General Literature Review

1.1 Epistemology and Definition of Trust

Trust is a nuanced and multifaceted phenomenon that has garnered considerable attention across various academic disciplines, resulting in a plethora of conceptual frameworks. Within this discourse, two predominant epistemological perspectives have emerged: "trust as a behavioral manifestation" and "trust as a psychological state" (e.g., Rotter, 1967; Williamson, 1993; Zucker, 1986).

Certain scholars have conceptualized trust as a risk-taking endeavor devoid of precautionary measures, akin to placing a bet (Coleman, 1990; Fehr, 2009; Sztompka, 1999). This perspective evolved from the economics paradigm that underscores behavioral outcomes, asserting that discussions concerning trust and distrust lacks significance unless it encompasses actions or decisions (McEvily & Tortoriello, 2011; Reiersen, 2017; Whipple et al., 2013). Nonetheless, most organizational scholars refute this behavioral interpretation of trust, positing instead that such "trust-like" behaviors are outcomes arising from the perception of trust (Hardin, 2002; Mayer et al., 1995; Rousseau et al., 1998). As elucidated by Mayer et al. (1995), an employee may engage in cooperative behaviors and outwardly display trust in another employee due to control mechanisms, such as a powerful manager, and a lack of viable alternatives, thus underscoring that these behaviors do not necessarily denote the establishment of a genuine positive relationship. In this research, we align with this perspective since trust should be construed as elucidating the intrinsic motivations behind behavioral manifestations, rather than conflating it with behavioral expression, lest we render the subject of inquiry the explanation itself.

Approaching trust as a psychological state, scholars in organizational and management domains have advanced varied definitions of trust, and the field reached a significant convergence that one or both of following central elements form the concept of trust: 1) positive expectation (or confidence), referring to positive perceptions, beliefs, or expectations of the trustee's future behavior, and 2) intentions (or willing) to accept vulnerability, referring to willingness of the trustor to take risk and to depend on the trustee (e.g., Bozic, 2017; Lewicki & Brinsfield, 2017; Sharma et al., 2022). For instance, according to Moorman et al. (1993, p.82), trust is defined "as a willingness to rely on an exchange partner in whom one has

confidence", while Morgan and Hunt (1994, p.23) defined trust as an individual's "confidence in an exchange partner's reliability and integrity". Most scholars incorporated both aspects into the definitions, as evidenced by McAllister (1995, p.25) who defined trust as "the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another". Similarly, Mayer et al. (1995, p.712) defined trust as 'the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party'.

Rousseau et al. (1998) undertake a synthesis of antecedent trust definitions, proffering a cross-disciplinary conceptualization: "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another." The present study adopts the cross-disciplinary framework delineated by Rousseau et al. (1998) in order to afford a comprehensive understanding of trust.

1.2 Multiple Levels of Trust - Choosing the Main Concept

Although the discourse on trust has traditionally gravitated towards the interpersonal realm, scholars have recognized that trust operates at multiple levels. For instance, Pirson and Malhotra (2011, p.1089) argued that "interpersonal trust describes the extent to which individuals (origin) trust other individuals (referent) along relevant trustworthiness dimensions; organizational trust, in contrast, describes the extent to which individuals (origin) trust an organization (referent)". Ganesan and Hess (1997) suggested that trust could exists at four levels: interpersonal (trust between individuals); organizational (trust between individuals and organizations); intra-organizational (trust between employees and employers); and inter-organizational (trust between organizations). Fulmer and Gelfand (2012) took team into account as an intermediate level between individual and organizational levels and identified five types of trust based on referents: individual trust in interpersonal referents, individual trust in teams, individual trust in organizations, team trust (between team), and organizational trust (between organizations).

A more intricate manifestation of the multilevel construct of trust encompasses its interplay across levels (Fulmer and Gelfand, 2012). Specifically, within organizational frameworks characterized by multiple tiers, trust established at one echelon exerts influence upon trust dynamics both upward and downward within the hierarchical continuum, engendering a perpetual flux of trust throughout the organizational architecture. For instance, trust in the

overarching organization could impact trust in its subsidiaries, and conversely, faith in the individuals representing the organization invariably influences trust in the organization itself (Klein et al., 1994; Shamir & Lapidot, 2003). This phenomenon is especially pronounced in the context of public trust, which commonly denotes the populace's trust in governmental entities.

Public trust during health crises also operates on multiple levels. It hinges on the public's evaluation of health organizations' performance and qualities, while it also takes shape through open discourse within the public sphere between the public and various health care actors, such as the officials and experts in the organization (Gille et al., 2022; van der Schee et al, 2007). These two facets of public trust are intertwined, as these actors act as representatives of the organization, and public evaluations of them can influence the overall perception of the organization, leading to a transfer of trust between individual and organizational levels (Fulmer & Gelfand, 2012). This fact underscores the need to consider not only the organizational behaviors of the healthcare system but also how its representative actors engage with the public when discussing public trust and its restoration. Meanwhile, the health system operates as an open system, with ultimate responsibility lying with the government (Gille et al., 2022). Particularly during health crises, governments often play a predominant role in crisis management efforts. Therefore, it is essential to factor in government crisis responses when exploring public trust dynamics during health crises.

Considering the multilevel nature of trust, it is imperative to delineate the trust relation within the confines of this research. The conceptualization of trust in this research pertains to citizens inclination to embrace vulnerability based on optimistic expectations regarding the governmental organization's intentions or conduct. These positive anticipations may stem from the collective actions or intentions of the organization as a whole or its representatives, such as chief experts or officials, when they serve as embodiments of the organization (Gille et al., 2022; van der Schee et al, 2007). The trustor encompasses the general public as individuals or groups swayed by the government's management of health crises, excluding private entities such as media outlets or corporations.

1.3 Public Trust During Health Crisis

While the pivotal role of public trust in times of public crisis is well recognized, the impact of crises themselves on public trust in public sectors remains less explored. Studies on the recent health crisis have yielded divergent perspectives on the dynamics of public trust. Some scholars posit that the heightened uncertainty during a crisis induces substantial stress and fear, eroding

public trust towards public sectors (Busemeyer, 2022; Zhai & Han, 2023). Moreover, failures in crisis management by public sectors can also fuel widespread dissatisfaction, posing a formidable challenge to public trust (Arkorful et al., 2021; Liu & Duarte, 2023). Conversely, an opposing viewpoint contends that a health crisis fosters a sense of solidarity, thereby bolstering citizens' trust in government and the public sector (Goldfinch et al., 2021; Li et al., 2023; Skirbekk et al., 2023).

The divergence could stem from two factors. Primarily, trust dynamics during a crisis are bidirectional, shaped by the crisis itself and the organizational crisis response (Kim, Dirks, and Cooper 2009). Therefore, merely attributing the growth of public trust to the crisis overlooks the pivotal role played by the public sector's crisis response. As some scholars have suggested, the crisis could negatively impact public trust, and it is public sectors' successful crisis response, especially their effective crisis communication, that transforms this impact into a positive outcome (Christensen & Lægreid 2020b; Li et al., 2023; Skirbekk et al., 2023; Zhai & Han, 2023). Therefore, to gain a comprehensive understanding of the bidirectional dynamics of public trust amidst a crisis, it is imperative to distinguish the impact of the crisis and the role of public sectors' crisis response.

Moreover, the current body of literature predominantly concentrates on analyzing public trust over the entirety of a health crisis or a crisis phase, providing insights into trust dynamics at a macro level. Yet, within a health crisis, specific crisis incidents wield considerable influence over public trust. Besides the crisis's natural threats, inadequate organizational performance in crisis management can also diminish public trust (Liu & Duarte 2023). Notably, extreme incidents like corruption leave a lasting and profound impact on public trust (Arkorful et al. 2021). Hence, to comprehensively comprehend the micro-dynamics of public trust, it is crucial to scrutinize the repercussions of different specific crisis incidents on public trust.

The Situational Crisis Communication Theory (SCCT) offers valuable insights conducive to a deeper understanding of trust dynamics amidst health crises, owing to its adaptable framework capable of encompassing diverse crisis types, spanning from natural occurrences to socio-environmental and anthropogenic incidents (Coombs, 2007, 2012; Coombs and Holladay, 1996). According to the level of crisis responsibility attribution, SCCT categorizes various crisis incidents into three clusters: victim, accidental, and preventable. Victim crises, such as natural disasters and product tampering, are ascribed to external factors beyond the organization's control. In such cases, the public perceives the organization as a victim and attributes the least responsibility to it. Accidental crises possess an internal locus but are not the result of intentional actions. Technical errors or machine breakdowns fall into this category.

Publics assign low levels of responsibility to organizations in accidental crises. Preventable crises, caused by the intentional actions of the organization, elicit the highest level of crisis responsibility attribution and inflict the greatest damage on the organization. Examples include organizational misdeeds and human-error accidents. In these cases, publics perceive organizations to have taken certain actions knowing that they could result in negative consequences for the public. Empirical studies have demonstrated that three types of crisis incidents yield varying level of post-crisis trust towards the organization (e.g., Kim 2019; Coombs & Holladay 1996; Lee, 2004). Specifically, incidents characterized by accidental clustering resulted in lower post-crisis trust than those within the victim cluster, and the preventable cluster exhibited even lower levels of post-crisis trust than accidental cluster.

The framework of crisis incident type offers theoretical backing to enhance comprehension of micro-dynamics in public trust during health crises. Firstly, considering the predictive effect of responsibility attribution on trust, the three types of crisis incidents could elicit varying degrees of public trust erosion. Secondly, SCCT asserts that one communication strategy will exhibit varying effectiveness in addressing the different types of crisis incidents, and divergent communication strategies are anticipated to yield disparate outcomes in reaction to identical crises. These perspectives facilitate the nuanced understanding on the impact of both health crisis itself and the crisis response on public trust.

1.4 Definition and Theoretical Principles of Trust Repair

As many studies noted, trust repair has lacked a coherent and consistent definition (Bozic, 2017; Gillespie & Siebert, 2018; Kramer & Lewicki, 2010; Sharma et al., 2022). Scholars have often taken the approach of defining trust repair with their definitions of trust as a baseline (e.g., Cianci et al., 2019; Dirks et al., 2009; Gillespie & Dietz, 2009; Kim et al., 2009). In essence, trust repair entails the restoration of the constituent elements that comprise trust. More precisely, drawing upon Rousseau et al.'s (1998) delineation of trust, trust repair can be construed as a process aimed at amending the trustor's impaired expectations of the counterparty, thereby reinstating a disposition towards vulnerability (Gillespie & Siebert, 2018; Kramer & Lewicki, 2010).

Numerous endeavors have been made to elucidate the mechanisms underpinning trust repair, involving three theoretical perspectives that expound on its intricacies: a) attributional (e.g., Kim et al., 2009; Tomlinson & Mayer, 2009), b) structural (e.g., Reb et al., 2006; Ren &

Gray, 2009), and c) social-equilibrium perspectives (Nakayachi & Watabe, 2005; Sitkin & Roth, 1993).

The attributional mechanism draws from the tenets of attribution theory (Weiner, 1985). According to this perspective, individuals' ascriptions of the cause of negative events along dimensions of external/internal, controllable/uncontrollable, and stable/fluctuating determine the genesis and extent of distrust. Hence, trust violators endeavor to reframe the understanding of transgressions and alter attributions to present themselves as more trustworthy (Dirks et al., 2009; Tomlinson & Mayer, 2009).

The social-equilibrium perspective regards trust violation as a breach that disrupts relational balance and societal norms, positing that trust repair transpires when restorative actions reaffirm trust norms and reinstate pre-transgression equilibrium. Specifically, trust repair necessitates the elimination of negative affect towards the transgressor and satisfaction with the sincerity of the remedial endeavors (Ren & Gray, 2009; Sharma et al., 2022).

From a structural standpoint, trust violation precipitates a breakdown in positive exchanges and an escalation of negative ones. Accordingly, effective trust repair entails the establishment of formal and/or informal structures, procedures, and norms that discourage negative exchanges and promote positive ones (Dirks et al., 2009; Sitkin & Roth, 1993). Structural mechanisms advocate for legalistic measures, such as rules, laws, policies, and contracts, as trust repair strategies.

Integrating these perspectives, Bachmann, Gillespie, and Priem (2015) proposed a comprehensive framework comprising six mechanisms for managing organizational trust: sense-making, relational, regulation and control, ethical culture, transparency, and transference. Specifically, ‘sense-making’, ‘relational’, and ‘regulation and control’ incorporate attributional, social-equilibrium, and structural mechanisms, respectively (Kähkönen et al., 2021), while ‘ethical culture’, ‘transparency’ and ‘transference’ are particularly pertinent for repair tactics at the organizational level. The core concepts of those mechanism are shown in Table 1.1.

Mechanism	Core concept
Sense-making	Establishing a shared understanding or accepted account of what happened, how and why
Relational	Resolving the negative emotions and help re-establishing the social order that governs the relationship
Regulation and control	Imposing of regulation and control on relevant actors to make explicit what is considered acceptable versus unacceptable conduct, and deter or constraining untrustworthy behaviors and/or incentivizing trustworthy behaviors
Ethical culture	Developing and communicating a strong ethical culture to signal trustworthiness
Transparency	The disclosure of relevant information about the decision-making processes, procedures, functioning and performance to the public
Transference	Transferring trust in a third parties to the organization

Table 1.1 Core Concepts of Bachmann, Gillespie, and Priem's (2015) Six Trust Management Mechanism

This framework signifies a notable advancement in extant literature through two ways. Primarily, while antecedent literature predominantly focused on interpersonal trust governance, this framework pivots towards organizational trust governance, thereby introducing three additional mechanisms: ethical culture, transparency, and transference. Secondly, the six mechanisms collectively constitute a synergistic system, thus furnishing a more comprehensive elucidation of the interconnected dynamics among trust repair methodologies. Consequently, in Study 1 and Study 3, we primarily adopted Bachmann et al.'s (2015) framework to elucidate the intricacies of trust restoration facilitated through communication within the milieu of health crises and to establish a novel typology of communication strategy.

1.5 Communication Approaches for Trust Repair

Scholars have proposed various approaches for trust repair, broadly categorized into three distinct avenues: verbal accounts (e.g., explanation, apology), substantive responses (e.g., penance, reparations) and organizational restructuring (e.g., removing manager, reforming policies and culture) (Bozic, 2017; Kähkönen et al., 2021; Kramer & Lewicki, 2010). The

communication approaches mentioned here refer to verbal accounts, which are the organization's responses without any tangible element (Bozic, 2017).

A plethora of scholarly works has advanced different verbal accounts strategies (e.g., Bies & Shapiro, 1987; Schlenker & Darby, 1981; Tomlinson & Mayer, 2009), which can be assimilated into three overarching strategies: apology, denial, and explanation, contingent upon the extent of culpability acknowledgment (Lewicki & Brinsfield, 2017). Apology and denial represent diametrically opposed approaches. Apology involves an organization's admission of responsibility coupled with an expression of remorse for inflicted harm (Tomlinson & Mayer, 2009, p. 98), thereby signifying complete acknowledgment of transgression. Conversely, denial entails an organization's refusal to acknowledge the occurrence of the event or its deviation from accepted norms (Brühl et al., 2018), thereby indicating a complete disavowal of transgression.

Explanation entails acknowledging the occurrence of a violation while diminishing the responsibility attribution, often considered a neutral strategy (Lewicki & Brinsfield, 2017). Explanations may serve as supplements to apologies or denials, furnishing additional information to enhance credibility (Lewicki & Brinsfield, 2017; Utz et al., 2009). Alternatively, explanations may attribute the event to non-human or accidental causes, thereby partially acknowledging transgression and mitigating culpability (Bozic, 2017). Other analogous accounts, such as excuses and justifications (Tomlinson & Mayer, 2009), similarly exonerate by offering varied modes of explanation.

Those verbal accounts have been acknowledged as potential tools for trust restoration, yet substantial ambiguity persists regarding their effectiveness (Kramer & Lewicki, 2010; Lewicki & Brinsfield, 2017). Looking to the most extensively researched accounts of denial and apology, a frequently cited finding suggests that denial, subsequent to integrity-based trust breaches, is more efficacious in restoring trust than apology, while the reverse holds true for ability-based violations (Kim et al., 2004; van Laer & de Ruyter, 2010). However, certain studies argue that apology outperforms denial across all trust violation types (e.g., Brühl et al., 2018; Knight et al., 2015; Mattila, 2009; Mehta et al., 2020; Utz et al., 2009).

This disparity in findings may emanate from contextual disparities (Dirks et al., 2011; Lewicki & Brinsfield, 2017). For example, Tomlinson et al. (2004) observed that apologies wield greater efficacy in situations where parties have cultivated a strong rapport and the transgression appears isolated rather than habitual. Fehr and Gelfand (2010) contend that individuals' perception, processing, and subsequent response to information constitute pivotal factors in determining the efficacy of apologies. Matzat and Snijders (2012) discovered that

denial lacks efficacy in online environments. Hence, it is imperative to acknowledge the efficacy of verbal narratives within the realms of health crises, particularly when contextual nuances are duly considered.

The exploration of verbal accounts serves as an insightful starting point for delving into trust-repairing communication, elucidating the mechanisms through which communication facilitates trust repair from an attributional perspective. However, this framework faces substantial challenges. Primarily, the attributional perspective upon which verbal accounts hinge inadequately explicates trust repair in health crises, where the crisis's causation is less ascribed to authorities (Coombs, 2007). Consequently, repairing trust in such contexts may necessitate shaping perceptions of authorities' behaviors or intent to manage health crises rather than altering public causal attributions (Stanica et al., 2022). This implies that the process of repairing trust entails more than mere passive elimination of existing or potential adverse effects; rather, it encompasses proactive self-promotional endeavors, such as touting past successes, praising supporters, and emphasizing own sacrifices, with the objective of crafting a favorable image, thus ameliorating the trust deficit by infusing "funds" (e.g., Coombs, 2007; Hu and Zhong, 2023).

Furthermore, the conceptualization of verbal accounts for trust repair has primarily stemmed from the social accounts paradigm, rather than trust repair theory. Consequently, scholars have had to devise additional delineations when identifying verbal accounts for trust repair. For instance, in addition to the core account of denying or admitting transgressions, Tomlinson and Mayer (2009) have further posited that denial attributes negative outcomes to external factors, while apology attributes them to internal ones. Conversely, Kim et al. (2004) argues that even when negative outcomes are denied internal attribution, it can still be considered an apology if the discourse acknowledges responsibility and expresses regret. Such discrepancies in defining verbal accounts may also contribute to discord in the literature concerning the role of apology and denial in trust repair (e.g., Kim et al., 2004; Utz et al., 2009).

Moreover, the 'borrowing' of verbal accounts from social accounts theory complicates the systematization of discursive behaviors for trust repair. For instance, Tomlinson and Mayer (2009) advocate for treating excuses as a distinct category since they play a specific role in altering attributional dimensions by elucidating why violations occurred and mitigating penalties. However, Lewicki et al. (2016) argue that excuses should be considered part of apologies since they inherently acknowledge violations. The above scholarly dispute accentuates the imperative of systematizing communication behaviors into a novel framework

of communication strategies predicated on comprehensive trust repair mechanisms, rather than adhering strictly to the constructs of the social account's paradigm.

1.6 Communication during Health Crises

Communication is a significant component of crisis management, which involves the exchange of information "to prevent or lessen the negative outcomes of a crisis and thereby protect the organization, stakeholders, and/or industry from damage" (Coombs, 1999, p.4). In a health crisis, the unprecedented stressor (e.g., threats to personal safety, feelings of being out of control, loneliness, exhaustion) (Mattioli et al., 2020; Restauri & Sheridan, 2020) as well as anxiety and anticipatory fears exacerbated by economic and social problems, such as unemployment and economic collapse, tend to provoke public mistrust and rebellion against health authorities (Gasparro et al., 2020; Paredes et al., 2021). In such a turbulent environment, communication if considered indispensable for alleviating fear and uncertainty while fostering collective action in response to public threats, thus serving as a dynamic representation of good governance (Han & Baird, 2022). Moreover, communication works towards bridging the perceptual distance and information gap between citizens and their government, thereby enhancing perceived transparency and accountability (Park et al., 2015).

Besides providing sufficiently precise information to affected communities, crisis communication during health crises also seeks to explain the specific event and to strategically manage and frame public perceptions of an event (Reynolds & Seeger, 2005). Among the common strategies are translating scientific information to messages appropriate for lay audiences, denying the existence of the crisis or diminishing its severity, telling the public about the government's good deeds and achievements, and praising the public or stakeholders for their efforts and contributions (e.g., Coombs, 2007; Hu & Zhong; Witte et al., 2000). Those strategies have been demonstrated to initiate and enhance recovery, manage image and perceptions of blame and responsibility, repair legitimacy, generate support and assistance, explain and justify actions, and promote healing, learning, and change (Seeger et al., 2003).

We believe it is essential to reconsider the role of health crisis communication in terms of public trust, since the concept of trust emphasizes willingness to take risks, which has important implications in the context of public crises. Besides, trust is more intrinsically associated with cooperation and collaboration (Fledderus et al., 2013), therefore should be considered an essential cornerstone of collaborative governance and democratic citizen-government relations (Nolte and Lindenmeier, 2023).

A recurring issue highlighted in discussions surrounding the recent health crisis pertains to the social media, presenting both challenges and opportunities for the health crisis communication. Predating the onset of COVID-19, the propensity of social media to propagate misinformation was acknowledged, particularly within the sphere of health campaigns addressing topics such as tobacco, drug usage, and recreational substances (Suárez-Lledó & Álvarez-Gálvez, 2021). However, it was during the COVID-19 pandemic, a global phenomenon impacting economy, politics, international relations, and society at large, that a distressing surge in political and scientific misinformation and disinformation on social media was observed. Consequently, the World Health Organization (WHO) formally expressed apprehension regarding an "infodemic," as social media amplify and exacerbate the spread of misinformation and uncertainty that “leads to mistrust in health authorities and undermines the public health response” (WHO, 2020). Thus, within this contemporary milieu, the impediments posed by social media to effective communication and public trust are undeniable, necessitating a more strategic and adept approach by authorities to counter rumors and misinformation.

Simultaneously, however, social media is acknowledged as an efficacious instrument for crisis management, facilitating situational awareness, information acquisition, self-organized peer-to-peer aid initiatives, and feedback reception from the public by crisis management agencies (Zhang et al., 2019). Leveraging its active user base and cost-effectiveness, social media can prove advantageous for emergency responders during health crises, affording benefits such as direct communication, efficient information dissemination, provision of emotional support, enhancement of public engagement, and establishment of a supportive community (Crowe, 2011; Syn, 2021).

In summary, amidst the escalating digitization of contemporary society, social media has inevitably emerged as a double-edged sword for health crisis communication. As underscored by the WHO, while social media can expedite the dissemination of information to fill voids, it also has the capacity to amplify deleterious messages. Thus, it is imperative to consider the intricacies of health communication dynamics on social media platforms.

1.7 Summary

This chapter elucidates the core concepts pertinent to this research, including pertinent studies and their inherent challenges, which are succinctly summarized herein.

Trust, a multifaceted construct, exhibits varied definitions and interpretations across disciplinary boundaries. Our research adopts a managerial and organizational epistemological stance on trust, conceiving it as a psychological state that involves the trustor's willingness to accept vulnerability due to positive expectations of the trustee. Moreover, trust operates within a multi-level framework, engendering interactions and cascading effects across levels, which underscores our delineation of trust relationships' frame of reference and level in this research. The trustees in the sphere of public trust herein pertain primarily to the general populace as individuals or groups, excluding private entities such as media and corporations. Government agencies, inclusive of the health sector, or the governmental apparatus as a whole, serve as trustees, contingent on the distribution of health crisis management functions. This conceptualization guides our formulation of screening criteria for review articles in Study 1, adaptation of an experimental trust measure in Study 2, and exploration of organizational hierarchy and institutional factors' impacts on trust repair in Study 3.

The literature review also delineates the constraints inherent in prevailing trust repair theories within the context of a health crisis. Prevailing scholarship on trust repair predominantly scrutinizes violations as the contextual backdrop, emphasizing communication strategies with varying degrees of acknowledgment concerning adverse occurrences in responses. Consequently, an attributional perspective is adopted to explicate trust-repairing communication and to formulate communication strategy frameworks. However, the intricate milieu of a health crisis suggests that the dearth of public trust emanates not solely from governmental lapses and transgressions but is also influenced by natural and socio-environmental factors. Public communication during a health crisis extends beyond the discussion of culpability for adverse events, with a heightened focus on organizational self-promotion. Therefore, trust-repairing communication in the context of a health crisis necessitates reinterpretation based on a comphrehensive framework of trust repair mechanisms. This, in turn, calls for a re-systematization of communication strategies.

The three studies in this thesis employ diverse methodologies to address these lacunae in the existing literature. Study 1 identifies and integrates the origins of challenges to public trust during health crises and communication strategies for trust repair via a systematic review of the literature. It furnishes an initial theoretical elucidation of these communication approaches grounded in an integrated trust repair framework, thereby laying the groundwork for subsequent research. Study 2 empirically investigates the impact of specific events within a health crisis, encompassing different crisis elements, on public trust. It also corroborates the effects of primary communication strategies involving full acknowledgment and denial of responsibility

for the crisis, alongside sub-strategies and discursive components, on public trust. Through this, it furnishes empirical evidence concerning trust erosion contexts and the efficacy of communication strategies. Building upon the findings of these two studies, Study 3 devises a novel typology of communication strategies based on the integrated mechanisms framework through qualitative analysis of discourse material derived from real cases. Thus, this research advances a new theoretical paradigm for communication approaches to trust repair.

Moreover, while the role of social media in trust repair was explicitly discussed solely in Study 1, social media served as both the situational context for the experiment and the source of analytical material in the subsequent two studies. This serves to illustrate, to a certain extent, the characteristics and status of trust repair communication in the social media era. It is worth emphasizing that social media platforms have emerged as pivotal social and political agents, intricately intertwined with both domestic governance and international affairs. Social media platforms have supplanted traditional modes of public communication, facilitating a flattened communicative landscape wherein governmental entities can directly engage with citizens and the global populace. This underscores the exigency for the continual refinement of communication strategies.

CHAPTER 2

2. STUDY 1: Repairing Public Trust through Communication in Health Crises: A Systematic Review of the Literature[1]

2.1 Introduction

Critics of New Public Management (NPM) reforms argue that citizens should be seen as active co-producers of public service, and public trust is essential for that type of collaborative governance (e.g., Fledderus et al., 2013; Goodsell, 2006; Liu, 2022). Trust is a critical issue for public administration, particularly during public crises when public trust in the public sectors typically erodes. This loss of trust diminishes resource potential, performance, and the capacity of public sectors to provide public services, which impedes citizens' collaboration with organizations' policies (Hvidman, 2019). Without active public participation and cooperation, controlling crises is virtually impossible (Nolte and Lindenmeier, 2023).

In this volatile context, substantive measures typically employed by public administration to repair public trust, such as performance improvement (e.g., Mizrahi et al., 2010) and institutional reform (e.g., Kang & Van Ryzin, 2019), may be insufficient to produce timely results that meet the exigencies of an emergency. Communication, possessing significant potential as a complement to substantive measures in the restoration of public trust, is considered indispensable for alleviating fear and uncertainty while fostering collective action in response to public threats, thus serving as a dynamic representation of good governance (Han & Baird, 2022). Moreover, communication works towards bridging the perceptual distance and information gap between citizens and their government, thereby enhancing perceived transparency and accountability (Park et al., 2015).

Despite the literature showcasing the paramount role of communication in repairing public trust, notable research gaps remain. First, limited research on public administration has focused on public crises (e.g., Mizrahi et al., 2022; Yang & Lu, 2021), resulting in a lack of substantial investigation into restoring public trust during such times, particularly through communication that serves as a pivotal component of crisis management. Second, although public administration literature has argued that various communication elements, such as media (Kim et al., 2013), sender (Park et al., 2015), and emotional appeal (Han & Baird, 2022), have an

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impact on public trust, there is no systematization of these trust repair behaviors involving the use of different communication elements. Moreover, there exists a notable absence of cohesive integration between empirical discoveries and theoretical frameworks to elucidate the mechanisms that underpin communication strategies aimed at restoring trust.

To contribute towards gaps in the literature, we conducted a systematic review of research on trust-repairing communication during health crises. Health crises were chosen as the vivid examples of public crises since they encapsulate attributes from both sudden and creeping calamities, thus offering a representative snapshot of the diverse crises landscape (Nolte & Lindenmeier, 2023). Among public crises, health crises affect larger populations, introduce elevated unpredictability, uncertainty, and life-threatening risks, exacerbating latent biases towards the public sector (Ansell et al., 2020; Han & Baird, 2022). Consequently, they pose significantly formidable challenges for public administration and necessitate a more intricate and pivotal role for communication (Glik, 2007; Mizrahi et al., 2022). Accordingly, the research questions of this review were finalized as follows:

(1) what communication strategies did governments and health authorities adopt to repair trust during health crises?

(2) what communication elements are involved in those strategies?

(3) how do those strategies repair public trust through the trust repair mechanisms?

By synthesizing the communication behaviors proposed in the literature for repairing public trust, we identified five categories of trust-repairing communication strategies and integrated a framework by discussing the communication elements those strategies involved. Additionally, we explicate the processes by which these strategies can repair trust with a framework based on the six trust repair mechanisms of Bachmann, Gillespie, and Priem (2015).

2.2 Theoretical Background

2.2.1 Public Trust in Health System

Scholars has recognized that one or both of the following elements form the main concept of trust: 1) positive expectation, referring to positive perceptions or confidence in the trustee's future behavior, and 2) intentions to accept vulnerability, referring to the trustor's willingness to take a risk and to depend on the trustee (Lewicki & Brinsfield, 2017; Sharma et al., 2022). In this study, we adopted the cross-disciplinary definition of trust proposed by Rousseau et al. (1998, p.395): 'a psychological state comprising the intention to accept vulnerability based

upon positive expectations of the intentions or behavior of another', since it is widely accepted as providing a comprehensive understanding of trust.

Public trust in health system operates on multiple levels. It hinges on the public's evaluation of health organizations' performance and qualities, while it also takes shape through open discourse within the public sphere between the public and various health care actors, such as the officials and experts in the organization (Gille et al., 2022; van der Schee et al, 2007). These two facets of public trust are intertwined, as these actors act as representatives of the organization, and public evaluations of them can influence the overall perception of the organization, leading to a transfer of trust between individual and organizational levels (Fulmer & Gelfand, 2012). However, the distinction between these two aspects underscores the need to consider not only the organizational behaviors of the healthcare system but also how its representative actors engage with the public when discussing public trust and its restoration.

Meanwhile, the health system operates as an open system, with ultimate responsibility lying with the government (Gille et al., 2022). Particularly during health crises, governments often play a predominant role in crisis management efforts. Therefore, it is essential to factor in government crisis responses when exploring public trust dynamics during health crises.

2.2.2 Mechanisms and Communication Strategies for Trust Repair

Many attempts have been made to illustrate the mechanisms of organizational trust repair (e.g., Dirks et al., 2009; Ren & Gray, 2009; Sitkin & Roth, 1993; Tomlinson and Mayer, 2009). Integrating the previous models, Bachmann, Gillespie, and Priem (2015) proposed an integrated framework of six trust-repairing mechanisms: sense-making, relational, regulation and control, ethical culture, transparency, and transference. The core concepts of these mechanisms are shown in Table 1.1. In section 2.4.2, we illustrated how each of them is reflected in health crisis communication.

Scholars have proposed communication approaches to repair trust that mainly involve verbal accounts such as apology, denial, excuse. These verbal accounts, known as verbal forms of social accounts, serve to manage attributions of trust violations (Kim et al., 2004). Specifically, after a trust violation, individuals' attribution of the cause of the negative outcome decides whether distrust will be generated and to what extent. Verbal accounts facilitate changing attributions of the violation to present violators as more trustworthy (Dirks et al., 2009; Tomlinson & Mayer, 2009).

While verbal accounts provide some simple paradigms of 'what to say' when trust violation happens, public administration literature has argued that various communication elements, such

as media (Kim et al., 2013), sender (Park et al., 2015), and emotional appeal (Han & Baird, 2022), also have an impact on public trust. Therefore, it is necessary to emphasize the role played by various communication elements when developing a framework for trust-repairing communication.

Furthermore, applying verbal account theories provides a way to analyze trust- repairing communication. Specifically, it aids in understanding the role of communication strategies through the perspective of trust repair mechanisms. However, this aspect is often overlooked in existing public administration research. Therefore, we adopt Bachmann, Gillespie, and Priem's (2015) trust repair mechanism framework to explain how identified strategies repair public trust.

2.2.3 Health Crisis Communication for Public Administration

Scholars argue that communication represents a crucial component of public administration during public crises. Communicating crisis information shapes the public's perception of risk, mitigates fear and uncertainty, and narrows the perceptual distance and information gap between citizens and their governments, thereby enhancing perceived transparency and accountability and dynamically representing good governance (Han & Baird, 2022; Park et al., 2015, Phillips & Roehrich, 2021).

Compared to general public crises, health crises present unique and formidable challenges. They affect larger populations, come with significantly higher levels of unpredictability, uncertainty, and life-threatening risks, induce heightened public stress and anxiety, and have far-reaching impacts on society, the economy, and politics (Ansell et al., 2020). Consequently, public administration faces uphill challenges in managing these crises. Beyond the typical crisis communication tasks of disaster warning and messaging, health crisis communication must also focus on reassuring the public, instilling confidence, and bolstering societal resilience (Glik, 2007).

Moreover, health crises often exacerbate the unconscious biases that individuals hold toward the public sector (Han & Baird, 2022). These biases, which can take the form of a pervasive "public is bad" stereotype, become more pronounced in the high-turbulence context of health crises, hindering the capacity of public organizations to respond effectively and mitigate the crisis's impact (Hvidman, 2019). Consequently, health crisis communication takes on an additional responsibility of shaping the public's perception of the public sector, aiming to secure public compliance with policies and to foster collective actions (Han & Baird, 2022; Mizrahi et al., 2022).

Previous public administration literature has explored the role of communication in shaping perceptions of the public sector regarding, for example, reputation and satisfaction (e.g., Han & Baird, 2022; Wang & Niu, 2019). We believe it is essential to reconsider the role of health crisis communication in terms of public trust, since the concept of trust emphasizes willingness to take risks, which has important implications in the context of public crises. Besides, trust is more intrinsically associated with cooperation and collaboration (Fledderus et al., 2013), therefore should be considered an essential cornerstone of collaborative governance and democratic citizen-government relations (Nolte & Lindenmeier, 2023).

2.3 Methodology

To generate a reliable store of knowledge about the influence of health crisis communication on organizational trust, we apply the orthodox systematic literature review method based on the five-step approach: question formulation, locating studies, study selection and evaluation, analysis and synthesis, and reporting and using the results (Denyer & Tranfield, 2009).

To cover a comprehensive range of relevant papers for this study, data were collected using two of the dominant and most generally accepted databases in scientific research: Web of Science and Scopus. These are best suited for our purpose since they are the most comprehensive databases of peer-reviewed journals in the social sciences, covering a great number of studies on multiple disciplines,

Following the analytical methods of systematic review in the domain of public management (Boselie et al., 2019; Gil-Garcia et al., 2018), we conducted descriptive statistics and text analysis to comprehensively examine the general characteristics of every article and systematically theories the communication strategies employed within the targeted articles.

2.3.1 Selection criteria for inclusion of studies

Studies were included in the systematic literature review if they met the following criteria:

(1) All studies must be empirical works published in English in peer-reviewed journals because English is the dominant language for scientific research. Those articles are considered validated knowledge and are likely to have the highest impact in the field.

(2) Research needs to be conducted within the context of health crises or emergencies since health crisis communication is significantly different from general public

communication in terms of operation mode, public psychological state and social environment.

(3) The studies must have explored public trust in the organization, and its service and policies. Studies not illustrating such a trust relation, such as research on employee-manager trust within the health system, inter-organizational trust, physician-patient trust, media trust, or trust in science, are excluded.

(4) Considering the widespread adoption of health communication in public health services and substantial momentum of associated research since the 1990s (Freimuth & Quinn, 2004), the publication timeframe for articles was set to span from January 1st, 1990 to March 31st, 2022.

2.3.2 Data collection

The literature search began with the basic terms ('health crisis' OR 'health emergency' OR 'pandemic' OR 'epidemic' OR 'outbreak' OR 'covid' OR 'Ebola' OR 'Zika' OR 'SARS' OR 'AIDS' OR 'h1n1' OR 'flu') AND ('communication' OR 'media' OR 'television' OR 'press' OR 'posters' OR 'billboards' OR 'newspapers' OR 'radio' OR 'blog') AND ('trust' OR 'trustworthiness' OR 'credibility' OR 'reliability'); document types 'article'; language 'English'. Given the cross-disciplinary topic of this study, the search did not specify area and considered research from various disciplines such as media studies, management, public relations, and medicine.

The terms were searched in the titles, keywords, and abstracts of the articles in two databases, resulting in an initial sample of 7,181 papers after removing duplication. Selection was refined further by screening titles and abstracts to remove papers that did not address the research topic or meet the inclusion criteria, resulting in a short list of 67 papers. The full texts of those articles were then read, and it was found that some papers were no-empirical works without specific description of methodology. Those papers were considered to be of limited value for this study and thus excluded. Cross-referencing was also conducted in this process to ensure that valuable articles were not missed at the abstract reading stage. This procedure resulted in a final selection of 37 publications.

2.4 Results

In this section, we analyze the general characteristics of research, integrate trust-repairing communication strategies during health crises, and discuss the mechanisms by which each strategy repairs public trust.

2.4.1 General Characteristics

A descriptive statistical analysis of the publication years revealed a noteworthy trend. Although journal articles from the last 30 years were considered, the earliest publication addressing the influence of communication on trust during health crises appeared in 2015 (1 article), and the number of studies presented intense growth from 2020, reaching a peak so far in 2021, with an overwhelming majority of the studies (29 articles) having been published during this period. This growth largely coincided with the outbreak and the global spread of Covid-19 in the same timeframe.

Furthermore, the distribution of studies across various health crises showed that a significant majority (27 articles) of the studies centered around the context of Covid-19 (See Table 2.1). This observation, coupled with the analysis of publication years, suggested that despite the not-too-short development of health communication in practice and scholarship, it was only during the recent health crisis that scholars began to focus on trust erosion and how to repair trust through communication.

Health Crisis	**No. papers**	**Percentage**
Covid-19	26	70.3%
General Public Health Crisis	6	16.2%
Covid-19 & MERS	1	2.7%
Ebola	1	2.7%
H1N1	1	2.7%
MERS	1	2.7%
SARS & H7N9	1	2.7%

Table 2.1 Studies by Public Health Crisis

The findings reveal the distribution of papers across countries and regions, as presented in Table 2.2. 45.9% of the studies focused on Asian countries, and 29.7% centred on North American countries. European countries accounted for 13.5% of the studies, and African countries constituted 5.4%. One study investigates Germany and Brazil, and one scenario-based experimental studies did not specify a specific country context.

Country & Region		**No. papers**	**Percentage**
North America	US	8	21.6%
	Canada	3	8.1%
	Total	**11**	**29.7%**
Asia	Mainland China	4	10.8%
	India	3	8.1%
	South Korea	3	8.1%
	Pakistan	2	5.4%
	Philippine	1	2.7%
	Hongkong	1	2.7%
	Indonesia	1	2.7%
	Malaysia	1	2.7%
	Vietnam	1	2.7%
	Total	**17**	**45.9%**
Europe	Germany	2	5.4%
	Portugal	2	5.4%
	Norway	1	2.7%
	Total	**5**	**13.5%**
Africa	Sub-Saharan Africa	1	2.7%
	West Africa	1	2.7%
	Total	**2**	**5.4%**
Cross-Continent	Germany and Brazil	1	2.7%
	Unspecified	1	2.7%

Table 2.2 Studies by Country & Region

The descriptive analysis on research methods of reviewed studies shows a relative predominance of the quantitative methods, with 21 studies adopting quantitative methods, 13

studies adopting quantitative methods, and three studies adopting mixed methods (see Table 2.3). Survey and archival data served as the primary sources for quantitative and qualitative research, respectively, and both of them were utilized as the principal data sources in mixed-method research.

Methodology		**No. papers**	**Percentage**
Quantitative	Survey	10	27%
	Experiment	7	18.9%
	Secondary quantitative study	3	8.1%
	Archival Data	1	2.7%
Qualitative	Archival Data	7	18.9%
	Interview	3	8.1%
	Secondary Analysis of Interview	1	2.7%
	Interview, Archival Data, Observation	1	2.7%
	Questionnaire, Archival data	1	2.7%
Mixed	Archival Data	2	5.4%
	Survey	1	2.7%

Table 2.3 Studies by Research Approach

To explore the particularity of trust repair during public crises, a statistical analysis was conducted to examine the contexts of trust erosion within the reviewed papers (see Table 2.4). Three overarching themes emerged: a) information confusion, stemming from misinformation, conflicting opinions, and high uncertainty during crises, as the driver of trust erosion, b) inadequate performance of the public sector, involving failure in controlling the crisis particularly the failure to effectively communicate crisis-related information, and c) negative

crisis experiences, involving various psychological and substantive harms caused by the crisis environment, which intensified the pre-existing negative view of the public sectors.

Contexts of trust erosion	No. papers	Percentage (n=37)
Information Confusion	25 (6)	67.6%
Inadequate performance of public sectors	16 (5)	43.2%
Negative crisis experience	13 (4)	35.1%

Table 2.4 Studies by Context of Trust Erosion

Note: one paper could involve multiple contexts of trust erosion. The number in () refers to the number of papers that mention both this and other contexts of trust erosion.

These three contexts of trust erosion illustrate the general characteristics of trust repair in the context of public crises. Existing research on trust repair has predominantly centered on trust violations, emphasizing the negative outcomes of trustee transgressions (e.g., Ren & Gray, 2009; Sitkin & Roth, 1993; Tomlinson & Mayer, 2009). However, in contrast to the context that trust repair studies conventionally focus on, while inadequate performance is the consequence of trust violations by trustees, neither information confusion nor negative crisis experiences are. Consequently, it becomes imperative to broaden the scope of trust repair within the context of public crises. In other words, during public crises, trust erosion can result from trust violations committed by trustees as well as natural and environmental factors, and any efforts aimed at restoring trust should be considered as trust repair. The findings also reveal the particular importance of communication for repairing trust during public crises, particularly in the context of health crises, as effective communication is an integral component of crisis management and serves as an indicator of public sector performance.

2.4.2 Communication Strategies for Trust Repair

In the studies reviewed, several communication behaviors to repair trust were proposed. These communication behaviors can be integrated into five categories of strategies: (a) credible information source, (b) verbal account, (c) emotional appeal, (d) discourse construction, (e) use of social media.

Credible information source

One important element of crisis communication that influences public trust is the information source, or, precisely, ‘who communicates to the public’. In public health crises, the government

and health authorities are usually the main senders of information. However, studies have shown that the developers and implementers of health policies – officials and politicians - are often perceived as being dishonest, unreliable, less warm and less competent (König & Breves, 2021; Latkin et al., 2021), while sources with professional backgrounds - experts, scientists and academic institutions – are more trusted even if they have government-related titles (Sheen et al., 2021). Therefore, health authorities need to cooperate with professionals in crisis communication. This cooperation involves flanking government with scientific advisors to back their claims and selecting officials and politicians with professional backgrounds as speakers. By employing such strategies, health authorities show that their policies follow the lead of science, which could go a long way to repair public trust.

Besides choosing information sources with professional backgrounds, cooperation with the media should not be neglected. Engaging with the media is unavoidable as the news media is the necessary intermediary for relaying information released to the public. Although the news media is not always considered a very credible information source and can even be accused of rumor mongering (Driedger et al., 2021), when it reports health authorities' information releases, the perceived trustworthiness of crisis communication is significantly enhanced (Sheen et al., 2021). Hence, adequately handling media relations helps repair public trust (Driedger et al., 2021).

While not explicitly delineated in the studies, our analysis uncovered a diverse array of actors participating as messengers in public health crisis communication (See Table 2.5). These actors encompass various facets of society, including public administration entities (e.g., governmental tiers, official media), components of the healthcare system (e.g., health agencies, hospitals), authoritative individuals (e.g., expert advisors, politicians, heads of state, political leaders), and non-official individuals (e.g., citizen journalists). Collectively, they play pivotal roles in disseminating information aimed at rebuilding trust in government and the healthcare system. Consequently, when selecting sources of information for credible communication, it becomes imperative to consider not only the crisis communication roles of public institutions but also the personal authority wielded by representative figures acting as spokespersons, and to foster collaboration within the administrative system as well as public-private cooperation.

Messenger		No. papers
Public Administration Entities	Government	16 (4)
	Community	1
	Official news media	1
Components of Health system	Health sector	11 (3)
	Hospital	2
Private Organization	News media	3 (2)
Authoritative Individuals	Politicians	6 (2)
	Expert Advisor	2 (2)
Non-official Individual	Expert	2 (2)
	Citizen journalist	1 (1)

Table 2.5 Messengers in the Studies Included in the Review

Note: one paper could involve multiple types of messengers. The number in () refers to the number of papers that contain both this and other types of messengers.

The credible information source strategy repairs trust through two mechanisms. First, employing expert advisors and influential officials as spokespersons essentially transfers public trust in personal figures to the organization, therefore engaging the 'transference' mechanism. Second, collaboration within the administration system and public-private cooperation facilitates consistent information, which creates collective learning and shared understanding, therefore engaging the 'sense-making' mechanism.

Verbal account

Another crucial issue for trust-repairing communication concerns 'what to communicate'. Verbal response, which involves the use of different social accounts, is one of the main strategies for trust repair. In the studies reviewed, the main accounts involved in health crisis communication were denial, apology, explanation, and information sharing.

Denial and apology both serve to minimize blame, punishment, and damage to trust, with different degrees of admitting the transgression. The literature reviewed did not provide new insights into the implementation of these two accounts but offered assertions about their effectiveness in the context of health crises. Previous research on trust repair found that apology is more effective than denial, regardless of the type of trust violation (e.g., Brühl et al., 2018; Mehta et al., 2020). Two of the studies reviewed, however, yielded that denial aroused more

positive public sentiment and trust than apology during health crises (DiStaso et al. 2015; Masngut & Mohamad, 2021). The reason for this disagreement may be that much of the criticism of public organizations during health crises may be evidence-poor, and therefore an apology is counterproductive as it amounts to an admission of responsibility.

Explanation usually concerns acknowledging how a violation occurred and attributing ownership and responsibility for the violation (Lewicki & Brinsfield, 2017). Three examples are provided in a case study from the beginning of the Covid-19 pandemic in China (Su et al., 2021). Local governments tried to attribute their slow response to a technical error or high uncertainty of the pandemic, claiming that the local CDC (Chinese Center for Disease Control) should be held mainly responsible. They also pointed out that according to the statute, they were required to perform further validation and report it to higher-level government for authorization. In these examples, the explanation supplemented the trustee's denial of blame.

Information sharing refers to sharing, disclosing, and demonstrating evidence, updating news, and clarifying facts to a trustor (Xie & Peng, 2009). In the context of health crises, providing accessible, quality, timely, and interactive messaging to make citizens aware of risk would demonstrate the responsiveness of the health authorities, and thereby enhance public trust (e.g., DiStaso et al., 2015; Gonçalves et al., 2021; Hall & Wolf, 2019; Hartanto & Siregar, 2021; Sheen et al., 2021). Specifically, complete, clear and concise instructions (Holroyd et al., 2020; Mansoor, 2021a), easy-to-access information (Mansoor, 2021b; Vu, 2021), rapid response after an emergency (Frostl et al., 2019; Huang & DiStaso, 2020; Mansoor, 2021b), frequent and regular message disclosure (Bickham & Francis, 2021; Flores & Asuncion, 2020; Sarker et al., 2021) all have a positive effect on public trust by influencing perceived information credibility and citizens' awareness of risk. An open atmosphere of speech (Ryan et al., 2019; Yang, 2018) help achieve the mutual confirmation of values that lead to wider concern and care and enhance public trust.

The verbal account strategy repairs trust through four mechanisms. First, denial and explanation serve to highlight responsibility for failure and negative consequences, therefore engaging the 'sense-making' mechanism. Second, explanation demonstrates the ethical purpose of organizational behaviors, therefore engaging the 'ethical culture' mechanism. Third, apology conveys remorse for the victims of a violation and expresses a strong desire to mend the relationship with the public, thus engaging the 'relational' mechanism. Lastly, information sharing conducts rapid and accurate informing, frequent and regular messaging, and continual two-way information exchange, which empowers the public with knowledge and enhances

public understanding of the decision-making process, thus engaging the 'transparency' mechanism.

Emotional appeal

It has been found that, compared to rational appeals providing objective information, emotional expressions lead to significantly greater trust (Huang & DiStaso, 2020; Jain et al., 2021; MacKay et al., 2021). Trust repair during health crises confronts the unprecedented stress caused by high uncertainty, and emotional appeal can help overcome anxiety, stress, behavioral and emotional difficulties among the public during health crises (Mansoor, 2021b).

There are four types of emotional appeal identified in health crisis communication (Jain et al., 2021; Kaur & Mishra, 2020): a) empathy, which denotes an acknowledgment of the pain, hardships, and difficulties being endured by people due to the pandemic; b) morale-boosting, which seeks to boost morale or raise the spirits, and generate hope and trust that with the ongoing efforts the pandemic will be overcome; c) followers' worth, which denotes gratefulness, appreciation, and has positive affirmations for specific individuals or groups; and d) collective focus, which refers to collective unity and the need to fight the pandemic together. Regrettably, although emotional appeal could alleviate public anxiety, reinforce confidence, and enhance public trust, only a small number of messages were found to use this type of appeal (MacKay et al., 2021).

The strategy of emotional appeal repairs trust through 'relational' mechanism. Distinct from apology, which balances the public-government relationship through a social ritual action, emotional appeal uses emotional expression to eliminate negative emotions and stimulate positive ones, thereby repairing the emotional component of the relationship.

Discourse construction

Discourse construction, which involves organizing discourse in a manner that is more compelling, plays a crucial role in enhancing persuasive communication. Scholars have investigated various strategies of discourse construction, ranging from the micro-level, involving discourse segments, to the macro-level, encompassing narratives comprising a series of discourses.

At the micro-level, Kjeldsen et al. (2021) explore three rhetorical strategies to build expert ethos of the authority, including: a) open, invitational rhetoric, b) plain language to anchor expertise in everyday contexts; and (c) citation of expert allies and networks. These strategies reinforce the public's perception of the authority's professionalism, thereby repairing public trust.

Likewise, Leschzyk (2021) examines three discursive strategies - authorization, moral evaluation, and rationalization - employed by Brazilian President Jair Bolsonaro in tweets that undermined the trustworthiness of the media and repair public trust in the government's Covid-19 policy. Specifically, ‘Authorization’ invokes personal or institutional authority to support statements made and to refute media criticism; ‘moral evaluation’ emphasizes the ethics of the organization and questions the integrity of the media; ‘rationalization’ argues the soundness of decisions and explains the irrationality of criticisms.

Moving to the macro-level, two studies explored how narratives contribute to trust repair in the context of health crises. Liu et al. (2020) investigated the effectiveness of five crisis narratives in repairing trust. These crisis narratives - blame narratives, renewal narratives, victim narratives, hero narratives, and memorial narratives - are used to develop a holistic image of the crisis. The study found that, in the context of health crises, narrative information had a stronger impact on perceived credibility than non-narrative information. Among the five types of narratives, renewal narratives had the most positive impact on trust, as they conveyed more positive and future-oriented information, provided effective emotional support, and fostered stronger relationships between organizations and communities.

Another study conducted by da Silva (2021) examined educational narratives adopted by local governments in border regions of Portugal during their communications regarding Covid-19. The study identified five further types of narrative: past and memory, place, voicing and wisdom, recognition and solidarity, and participation and learning. These narratives focused on providing emotional support, knowledge sharing, and strengthening solidarity to establish strong and positive connections with the public during health crisis communication.

The strategy of discourse construction repairs trust through five mechanisms. First, blame narrative assigns responsibility to an ‘evil party’, then rationalization and victim narrative illustrate the need for a policy. These strategies shape explanations of event attribution and organizational behaviors, therefore engaging the ‘sense-making’ mechanism. Second, renewal, memory, and educational narratives create shared memories, common values and culture, and positive future expectation, which heal pain and enhance solidarity, therefore engaging the ‘relational’ mechanism. Third, ‘moral evaluation’ emphasizes that the organization puts the public interest first, therefore engaging the ‘ethical culture’ mechanism. Finally, rhetoric and personal authorization emphasize the authority's identity as an expert and show support from experts to utilize people's trust in scientists to repair public trust. Hero and educational narratives utilize people's trust in role models and traditions to repair public trust, therefore engaging the ‘transference’ mechanism.

Use of social media

The medium used to disseminate crisis messages might affect how people evaluate organizational trust and could even be more important than the message itself (DiStaso et al., 2015). Nowadays, individuals are turning more and more to social media for information in public emergencies (Flores & Asuncion, 2020), and social media-based information used to promote trust was noticeable during the pandemic (DiStaso et al., 2015; da Silva, 2021).

Compared to traditional media, social media provides fast and widespread message delivery as well as easier access to information. It can also simultaneously display multiple file types (e.g., text, picture, graphs, video), and thus respond in a timely and comprehensive manner (e.g., Kaur et al., 2021; Mansoor, 2021a). Furthermore, social media has a powerful interactive function, so governments and health authorities are able to establish a two-way information exchange with the public, leading to greater engagement and closer relationships. (Flores & Asuncion, 2020; Khan et al., 2019; Mansoor, 2021b). Moreover, social media enables health authorities to call on followers to participate in campaigns, donate and support policies (Flores & Asuncion, 2020).

It is important to emphasize that the use of social media does not necessarily generate trust, since it only serves as an amplifier of public beliefs, whether they be positive or negative (Lee et al., 2021). However, social media does provide a powerful channel for the communication of other strategies. The downside is that in recent years, social media has increasingly become a breeding ground for misinformation, especially during public crises, and has thus inevitably become a key battleground in the war to influence public opinion.

Descriptive statistics of strategies and mechanisms within the reviewed papers

We conducted descriptive statistical analyses regarding the utilization of both strategies and mechanisms (see Table 2.6) within the reviewed papers. Given the intricate correspondence between these strategies and mechanisms, and the likelihood that a single article might incorporate multiple strategies and mechanisms, we opted for an analysis based on the frequency of occurrence rather than counting the number of papers.

	verbal account (28)	use of social media (10)	discourse construction (9)	emotional appeal (7)	credible information source (6)
Transparency (22)	22				
Relational (11)	2		2	7	
Transference (9)			4		5
Sense-making (5)	3		1		1
Regulation and control (2)	1		1		
Ethical culture (1)			1		
Support for other mechanisms (10)		10			

Table 2.6 Strategies and Mechanism of Studies Included in the Review

Note: Numbers presented in this table refers to the frequency of occurrence.

Our findings show that there exists a total of 60 combinations of (strategy × mechanism) in 37 articles. The strategy and mechanism explored in the majority of articles are verbal account and transparency respectively, and that a combination of the two is also the path most employed to repair trust. This suggests that, despite the array of strategies and mechanisms available for mending public trust during health crises, scholarly attention remains predominantly fixated on information dissemination to enhance organizational transparency. This focus comes at the expense of exploring how other communication components can be effectively leveraged to convey trustworthiness, thereby warranting further research attention in this domain.

Regulation and control, and ethical culture are the least utilized mechanisms. This could be because these two mechanisms have traditionally been implemented through substantive means, and thus few studies have discussed the implementation of these two mechanisms in communication.

2.4.3 Conclusion

Various communication strategies have been adopted to repair public trust during health crises. Those strategies mainly involve the use of five communication elements: sender, message, encoding, noise elimination and channel.

(1) Sender: the strategy of "credible information source" emphasizes the importance of using sources that are considered trustworthy, such as experts and the media, as senders of information.

(2) Message: the strategy of "verbal account" emphasizes the main information to be conveyed to the public, which involves the social accounts in the message content that should be communicated.

(3) Encoding: 'emotional appeal' involves an expressive style of messaging to evoke certain emotions in the audience; 'discourse construction' becomes a defense against any counterarguments and shapes characters to create compelling stories. Those strategies explain how to produce messages that are more convincing and impressive.

(4) Noise elimination: the strategy of "credible information source" involves collaborating with multiple sources of information to ensure the consistency of communication; 'discourse construction' facilitates competition with opponents to eliminate any environmental noise that may disrupt communication.

(5) Channel: the strategy of "use of social media" advocates the use of robust media channels to implement other communication strategies.

We found that those communication strategies are essentially materializations of the way trust repair mechanisms in the use of communication elements. For example, when a health authority tries to transfer the public's trust in scientists to itself (transference), it can either employ scientists as spokespersons (sender) or cite scientists in its speeches (encoding); when it tries to counteract negative public sentiment and rebuild the public-government relation (relational), it can either apologize to show remorse (message), or employ emotional expression in discourse (encoding).

Therefore, while communication strategies vary in their presentation, they all repair trust through at least one of Bachmann, Gillespie, and Priem's (2015) six mechanisms. In contrast,

strategies that do not engage the mechanisms, such as the use of social media, only reinforce the effects of the other strategies to repair trust. A synthesis of the aforementioned results is visually illustrated in Figure 2.1.

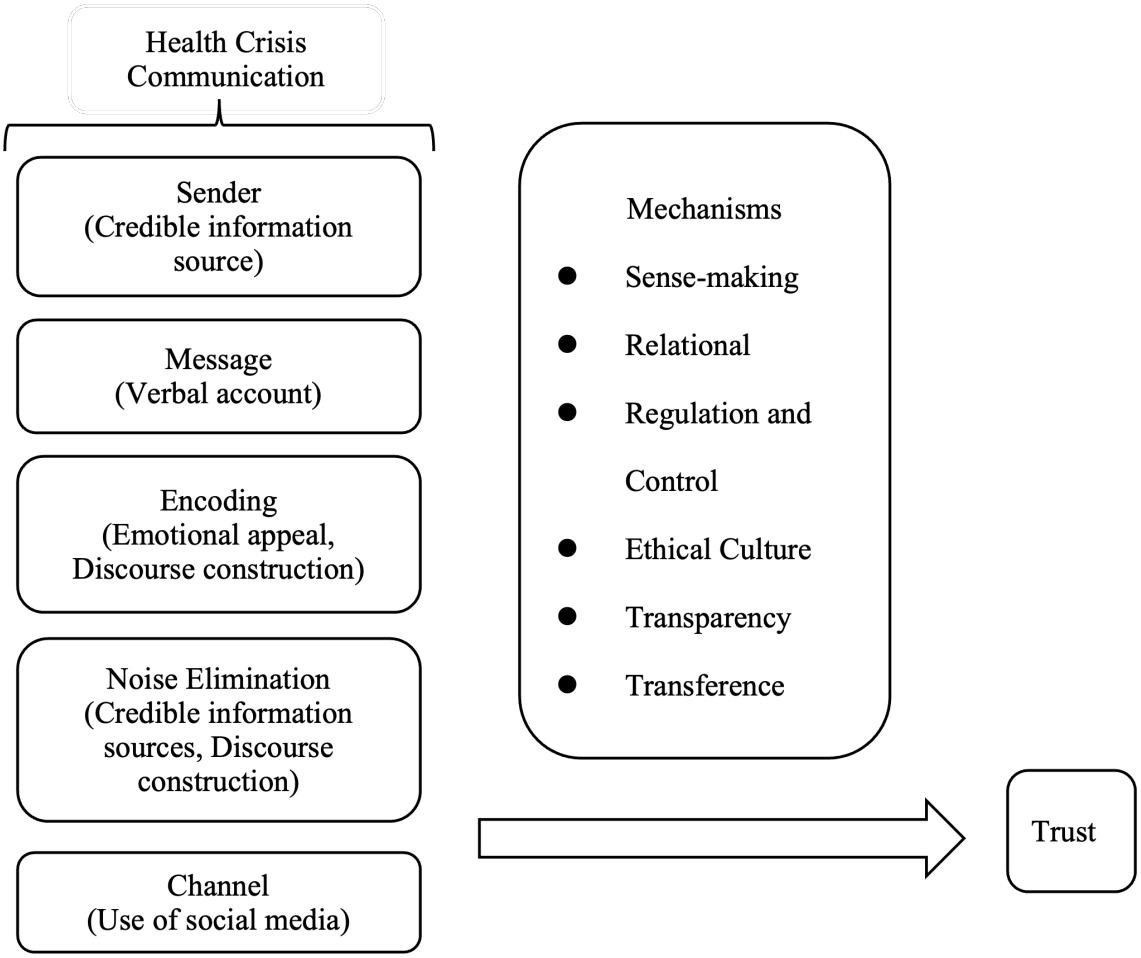


Figure 2.1 Trust Repair through Health Crisis Communication

Note: trust repair mechanisms are based on Bachmann, Gillespie, and Priem's (2015) framework.

2.5. Discussion

From extensive examination of the current literature, this paper reviews and synthesizes theories and research on trust-repairing communication during health crises to provide some insights into public administration during public crises.

First, we identified five categories of communication strategies adopted by health authorities during health crises (answers to Question 1), which then led to practical approaches to repairing public trust in turbulent contexts. The health crisis, being complex, exhibits both suddenness and chronicity, and the trust erosions during health crises are caused by human,

natural, and environmental factors. The communication strategies identified are, therefore, applicable across a wide spectrum of public crises. There are many real-life examples of the way these strategies are used in a variety of public crises. Examples include: Dr. Fauci's appointment as the public health spokesperson during the Covid-19 pandemic (credible information source); Japanese officials' disclosure, apology and explanation following the Fukushima nuclear disaster, along with their denial of improperly discharging nuclear wastewater (verbal accounts); President Bush's inclusion of prayers in his public speech to commemorate the victims of the 9/11 terrorist attacks (emotional appeal); the narrative framing of the 2008 financial crisis, portraying Wall Street financiers as the villains and Washington policymakers as heroes (discourse construction); and President Erdogan's utilization of social media to mobilize people in thwarting a coup in Turkey (the use of social media). We recommend further research to explore the role of these strategies in trust repair within diverse crisis contexts.

Second, we discuss the communication elements - sender, message, encoding, noise elimination and channel - used in those strategies (answers to Question 2). We contend that trust-repairing communication is a systematic process that employs multiple communication elements, and our findings develop a framework to better understand the various segments of trust-repairing communication.

Third, our analysis draws on the framework of Bachmann, Gillespie, and Priem (2015), to elucidate how the identified strategies repair trust through the six trust-repair mechanisms: sense-making, relational, regulation and control, ethical culture, transparency, and transference (answers to Question 3). We argue that trust-repairing communication are essentially the materializations of the trust repair mechanisms in the use of communication elements. This finding provides a more nuanced and in-depth understanding of the process of trust repair through communication.

Furthermore, the findings suggest that public trust repair in health crises is a collective endeavor involving administrative bodies and individuals, as well as external stakeholders. It entails utilizing the personal authority of representative figures such as officials and experts, extending beyond the roles of government and the health sector in crisis communication. Simultaneously, it underscores the significance of public-private collaboration in order to leverage social capital.

This study has limitations that should be acknowledged. This paper endeavors to systematize intricate communication behaviors for restoring trust in diverse health crisis contexts, and our primary objective is to construct a comprehensive framework of

communication strategies, underpinned by the theory of trust repair mechanisms. While we have striven to illuminate the effects of strategies by summarizing reviewed articles in Appendix B, rigorous comparisons of strategy effectiveness were hindered by data limitations. Consequently, we emphasize the need for further empirical research to evaluate the effectiveness of these strategies. Moreover, it is crucial to recognize that, as a sudden and creeping crisis, the health crisis has different phases and the crisis management is a dynamic process, which may necessitate the different implementation of communication strategies, each with varying specific employment during these phases. We, therefore, urge future research endeavors to delve into the evolving communication practices within the same health authority during various crisis phases. Finally, to ensure that our review included high quality publications, we only reviewed articles from peer-reviewed journals, and we may have omitted some valuable grey literature such as seminars, workshop papers and PhD theses. We recommend that future reviews on relevant topics expand the scope of data collection.

CHAPTER 3

3. STUDY 2: Public Trust during Health Crises: Crisis Situations and Communication

3.1 Introduction

Ensuring public trust is a core concern of public administration, acknowledged for its pivotal role in fostering robust public-private relationships, civic engagement, and collaboration with government policies (Bentzen & Bringselius, 2023; Cai, 2023; Fledderus et al., 2013). Particularly in times of public crises, without public trust, policies makers are unable to obtain citizen compliance or commit resources needed for collective actions against public crisis (Hvidman, 2019; Liu & Duarte, 2023).

Research on public trust during the recent health crisis has yielded conflicting perspectives. On one hand, scholars argue that the uncertain crisis environment and government failures has posed formidable challenges to public trust (Arkorful et al., 2021; Busemeyer, 2022; Zhai & Han, 2023). Conversely, an opposing stance asserts that trust did not erode but has increased during the health crisis, since the crisis environments promote solidarity across society (e.g., Goldfinch et al., 2021; Li et al., 2023; Skirbekk et al., 2023). The divergent views make it difficult for researchers to establish a clear and cohesive theoretical framework of the factors influencing trust dynamics during public crises, as well as hindering the development of effective strategies and interventions for policymakers and practitioners in crisis management.

This divergence could be attributed to two reasons. Firstly, studies suggesting trust enhancement tend to overlook the bidirectional nature of trust dynamics, conflating the impact of crises on public trust with the effects of authorities' trust management efforts (Kim et al., 2009). As some scholars have suggested, the crisis could negatively impact public trust, and it is public sectors' successful crisis response, especially their effective crisis communication, that transforms this impact into a positive outcome (Christensen & Lægreid 2020b; Li et al., 2023; Skirbekk et al., 2023; Zhai & Han, 2023), since communication significantly shapes public perceptions of the crisis situation and the performance of the government, as well as promoting solidarity and collective action in response to public threats (Christensen & Lægreid 2020a; Liu & Duarte 2023). Thus, to comprehend the bilateral dynamics of public trust during health crises,

it is imperative to respectively assess the impact of the crisis on public trust and the role of public sector efforts in trust management.

Secondly, research has commonly neglected the micro dynamic of post-crisis trust following specific crisis incidents. Yet specific organizational failures often have a dramatic impact on public trust, therefore the exploration of public trust in the aftermath of specific crisis events is necessary to grasp the micro dynamics of public trust during the crisis.

Addressing literature gaps, we undertake an investigation into the dynamics of public trust amidst a health crisis from a dual perspective. Primarily, our inquiry delves into the state of public trust within distinct crisis incident scenarios. Concurrently, we scrutinize the efficacy of crisis response, involving various communication strategies, in influencing public trust within these delineated crisis contexts.

To achieve our objectives, we execute two scenario-based experiments. The initial experiment elucidates the influence of three distinct crisis types on public trust dynamics. Furthermore, it examines how the bolstering strategy, which involves fostering enhanced public confidence and fostering social solidarity, can be leveraged to enhance public trust. Subsequently, the second experiment narrows its focus exclusively on a scenario of severe violation, probing into the effects of trust restoration through denial and apology—two fundamental verbal accounts for trust management.

3.2 Theoretical Background

3.2.1 Public Trust during Health crisis

Despite divergences over the specifics of trust cross disciplinaries, the field reached a significant convergence that one or both of following elements form the main concept of trust: 1) positive expectation, referring to positive perceptions or confidence of the trustee's future behaviors, and 2) intentions to accept vulnerability, referring to willingness of the trustor to take risk and to depend on the trustee (e.g., Mayer et al., 1995; Rousseau et al., 1998).

While the pivotal role of public trust in times of public crisis is well recognized, the impact of crises themselves on public trust in public sectors remains less explored. Studies on the recent health crisis have yielded divergent perspectives on the dynamics of public trust. Some scholars posit that the heightened uncertainty during a crisis induces substantial stress and fear, eroding public trust towards public sectors (Busemeyer, 2022; Zhai & Han, 2023). Moreover, failures in crisis management by public sectors can also fuel widespread dissatisfaction, posing a

formidable challenge to public trust (Arkorful et al., 2021; Liu & Duarte, 2023). Conversely, an opposing viewpoint contends that a health crisis fosters a sense of solidarity, thereby bolstering citizens' trust in government and the public sector (Goldfinch et al., 2021; Li et al., 2023; Skirbekk et al., 2023).

The divergence could stem from two factors. Primarily, trust dynamics during a crisis are bidirectional, shaped by the crisis itself and the organizational crisis response (Kim, Dirks, and Cooper 2009). Therefore, merely attributing the growth of public trust to the crisis overlooks the pivotal role played by the public sector's crisis response. As some scholars have suggested, the crisis could negatively impact public trust, and it is public sectors' successful crisis response, especially their effective crisis communication, that transforms this impact into a positive outcome (Christensen & Lægreid 2020b; Li et al., 2023; Skirbekk et al., 2023; Zhai & Han, 2023). Therefore, to gain a comprehensive understanding of the bidirectional dynamics of public trust amidst a crisis, it is imperative to distinguish the impact of the crisis and the role of public sectors' crisis response.

Moreover, the current body of literature predominantly concentrates on analyzing public trust over the entirety of a health crisis or a crisis phase, providing insights into trust dynamics at a macro level. Yet, within a health crisis, specific crisis incidents wield considerable influence over public trust. Besides the crisis's natural threats, inadequate organizational performance in crisis management can also diminish public trust (Liu & Duarte 2023). Notably, extreme incidents like corruption leave a lasting and profound impact on public trust (Arkorful et al. 2021). Hence, to comprehensively comprehend the micro-dynamics of public trust, it is crucial to scrutinize the repercussions of different specific crisis incidents on public trust.

3.2.2 Crisis Responsibility and Trust

The literature on trust research draws heavily on Weiner's (1985) attributional theory to explain the impact of crisis on trust. According to this theory, the trustor's attribution of the negative events determines the level of trust they place in the trustee (Dirks et al., 2009, Tomlinson and Mayer, 2009). Thus, the inherent variability in the attribution of responsibility for diverse crisis incidents gives rise to fluctuating levels of trust erosion. This, in turn, results in varying levels of complexity in trust management.

For instance, Klackl et al. (2013) found that perceiving a trust violation as intentional significantly influences the perceived severity of the violation and subsequent trust management. Generally, if a trust failure is perceived as intentional, the perpetrator is deemed more responsible, resulting in a more negative impact on perceived trustworthiness and making

trust management more challenging. Kim, Dirks, and Cooper (2009) also argues that different types of trust transgressions result in varying levels of responsibility and trust erosion. They propose a three-level attribution of guilt for the transgression. At the first level, no definitive evidence of trust transgression exists, leaving the trustor innocent and blameless. At the second level, the trustee is considered guilty, but the guilt is attributed to situational factors, indicating that the trustee did not intentionally commit the transgression. Finally, at the third level, the trustee is considered guilty, and the guilt is attributed to intentional transgression. With each ascending level, the severity of trust transgressions, the level of responsibility attribution, the damage to trust, and the difficulty of trust management progressively increase.

Similarly, drawing from attribution theory, Situational Crisis Communication Theory (SCCT) (Coombs, 2007, 2012; Coombs and Holladay, 1996) posits that crises ought to be categorically classified based on the organizational attribution of responsibility, thereby facilitating a nuanced exploration of crisis response strategies within each distinct cluster. This paradigm offers theoretical backing to enhance comprehension of micro-dynamics in public trust during health crises. Firstly, considering the predictive effect of responsibility attribution on trust, different clusters of crisis incidents could elicit varying degrees of public trust erosion. Secondly, SCCT asserts that one communication strategy will exhibit varying effectiveness in addressing the different types of crisis incidents, and divergent communication strategies are anticipated to yield disparate outcomes in reaction to identical crises. These perspectives facilitate the nuanced understanding on the impact of both crisis itself and the crisis response on public trust.

3.3 Sub-study 1

Sub-study 1 was conducted to elucidates the influence of three crisis types on public trust dynamics. Furthermore, it examines the efficacy of the bolstering strategy on enhancing public trust across the crisis conditions.

3.3.1 Hypotheses and Research Question

According to the level of crisis responsibility attribution, Situational Crisis Communication Theory (SCCT) (Coombs, 2007, 2012; Coombs and Holladay, 1996) categorizes various crisis incidents into three clusters: victim, accidental, and preventable.

Victim crises, such as natural disasters and product tampering, are ascribed to external factors beyond the organization's control. In such cases, the public perceives the organization

as a victim and attributes the least responsibility to it. Accidental crises possess an internal locus but are not the result of intentional actions. Technical errors or machine breakdowns fall into this category. Publics assign low levels of responsibility to organizations in accidental crises. Preventable crises, caused by the intentional actions of the organization, elicit the highest level of crisis responsibility attribution and inflict the greatest damage on the organization. Examples include organizational misdeeds and human-error accidents. In these cases, publics perceive organizations to have taken certain actions knowing that they could result in negative consequences for the public.

Empirical studies have demonstrated that three types of crisis incidents yield varying level of post-crisis trust towards the organization (e.g., Kim 2019; Coombs & Holladay 1996; Lee, 2004). Specifically, incidents characterized by accidental clustering resulted in lower post-crisis trust than those within the victim cluster, and the preventable cluster exhibited even lower levels of post-crisis trust than accidental cluster. Thus, it is reasonable to hypothesize that the crisis type will yield analogous impacts on trust within the context of a health emergency.

Moreover, it is noteworthy that three key dimensions collectively shape individuals' evaluations of an organization's trustworthiness: ability, benevolence, and integrity (Mayer et al., 1995). Ability involves skills and expertise that enable the trustee to have influence in a special domain. Benevolence refers to the trustee's care and goodwill to the trustor that enable trustee to act in the best interest of the trustor. Integrity refers to the trustee's moral and ethical values that enable trustee to adhere to an acceptable set of principles. Consequently, we refined the above assertions about the influence of crisis type on public trust into three sets of hypotheses:

H1: Preventable crises will lead to lower levels of post-crisis trust (perceived ability, benevolence, and integrity) than accidental crises.

H2: Accidental crises will lead to lower levels of post-crisis trust (perceived ability, benevolence, and integrity) than victim crises.

H3: Preventable crises will lead to lower levels of post-crisis trust (perceived ability, benevolence, and integrity) than victim crises.

It is imperative to highlight that the overarching condition of health crises lacks explicit positioning within the framework of SCCT theory. Typically, crises entail a connotation of organizational failures, manifested through organizational impairment or missteps, thereby disrupting the organization's usual operations and engendering unfavorable perceptions from stakeholders (Coombs, 2007, 2012; Coombs & Holladay, 1996). However, the generic scenario of a health crisis, characterized by patient fatalities stemming from naturally occurring factors,

does not inherently denote a failure within the health sector, while it possesses the potential to evoke adverse expectations from the public, as stakeholders, towards the pertinent authorities tasked with managing the health crisis. Thus, there exists a pressing need to delve into the public trust dynamics within this overarching condition of health crises and juxtapose it with the three crisis types as a comparative benchmark. Accordingly, we propose the following research question:

RQ1: In the absence of organizational failure, what impact does a health crisis have on post-crisis trust levels (encompassing perceived ability, benevolence, and integrity) compared to preventable, accidental, and victim crises?

The SCCT theory posits three primary crisis response strategies: deny, diminish, and rebuild strategies (Coombs, 2007, 2012). These strategies are designed to construct various distinct "crisis realities" through communicative efforts, thus manipulating public perception of crisis responsibility attribution. However, the relentless pursuit of "optimal strategies," which primarily focuses on selecting the most advantageous reality for the organization, may result in a disregard for the fundamental ethical imperative in crisis response. Instead of basing the extent of responsibility admission solely on the perceived effectiveness of the response, organizations should prioritize transparently disclosing the truth about the crisis to the public. Failure to adhere to this principle transforms crisis communication into a perilous exercise in sophistry.

In addition to the primary strategies, Coombs (2007) suggests a bolster strategy aimed at mitigating the impact of adverse events by positioning the organization as a valuable asset for stakeholders. This involves reminding people of the organization's former good deeds and praising those that helped during crisis, rather than directly interpreting crisis responsibilities. Remarkably, the bolster strategy is the most frequently employed approach by crisis communicators in practice across various crises (Kim et al., 2009), garnering recognition for its efficacy in attenuating levels of crisis attribution and enhancing trust (Brown and White, 2011; Park, 2017). However, the bolster strategy is often considered a secondary approach and receives limited discussion. There is a notable gap in our understanding of how its effects extend to post-crisis trust in addressing various types of crisis incidents. Thus, we have formulated the following hypothesis to guide our investigation:

H4: The bolster strategy will decrease the crisis responsibility attribution across preventable, accidental, and victim crises.

H5: The bolster strategy will increase the post-crisis trust (perceived ability, benevolence, and integrity) across preventable, accidental, and victim crises.

3.3.2 Method

Participants

A total of 208 Chinese adults were recruited on the largest Chinese micblog platform, Sina Weibo, for Sub-study 1. Due to China's unique media environment, the dissemination of adverse information concerning health crises tends to manifest predominantly on social media platforms rather than conventional news media outlets, and this phenomenon is particularly conspicuous in the context of the Covid-19 pandemic (Wang and Shi, 2022). Consequently, social media users would possess a heightened degree of acumen in responding to crisis incident scenarios.

The sample was 63% female (n = 131) and 37% male (n = 77). Participants ranged in age from 18 to 37 years (M= 23.48, SD= 3.51). The majority of them (89.4%, n = 186) have at least university or equivalent education. The demographic attributes of the participants conformed to the main images of Sina Weibo users (Sina Weibo, 2020) and aligned with those observed in analogous studies that have employed Sina Weibo as a recruitment platform. (e.g., Luo et al. 2020; Wang et al. 2016; Zhao et al. 2022).

Stimuli

All crisis scenarios stem from a shared backdrop characterized by five fatalities within the quarantine facility managed by the local health sector of a fictitious City amidst an epidemic. Crisis scenarios were delineated based on distinct causes of these fatalities informed by the social media, encompassing patients experiencing exacerbated post-infection symptoms (the prevailing state of health crises), resource scarcity precipitated by the epidemic (natural disaster), equipment malfunction (technical-error accidents), and the utilization of substandard medical apparatus procured through illicit means (organizational misdeed with injuries). These delineations served to establish the control group, the victim crisis scenario, the accidental crisis scenario, and the preventable crisis scenario, respectively (see Appendix C).

The same response post using the bolstering strategy was used to response each of the crisis scenarios, with two paragraphs: the first paragraph described past good behaviors in the health sector, the second paragraph praised the dedication of health workers, volunteers, and the general public.

In pursuit of a nuanced examination regarding the impact of crises and the response strategy on trust dynamics, we adopted a sequential approach. This involved administering assessments subsequent to both the crisis incident and its ensuing response phase. To elucidate, participants were exposed to one of four predetermined scenarios, following which their perceptions

regarding blame attribution and trust were gauged. Subsequently, participants were presented with the response post, whereupon their evaluations of blame attribution and trust were once again solicited.

The 208 participants were randomly assigned to one of four experimental conditions, with 52 for each scenario. Among these respondents, 161 provided valid data, comprising 33 from the control group, 46 from the victim scenario, 40 from the accidental scenario, and 41 from the preventable scenario). Notably, 48 participants failed to pass the attention test, signifying an inability to accurately identify the cause of the incident. This lapse suggests a potential memory deficit regarding crucial scenario details, thus casting doubt on the reliability of their responses. The details of the responses' validity rate are shown in Table 3.1.

	Control	**Victim**	**Accidental**	**Preventable**	**Total**
Valid	33	46	40	41	160
Invalid	19	6	12	11	48
Total	52	52	52	52	208
Validity Rate	63.5%	88.5%	76.9%	78.8%	76.9%

Table 3.1 Sub-study 1: Response Validity

Measures

The respondent's perception regarding crisis responsibility attribution was assessed using a two-item scale adapted for the attribution of blame (Griffin et al., 1992). Each of the three dimensions of trust (ability, benevolence, and integrity) was measured with two items adapted from Mayer and Davis's (1999) organizational trust instrument.

For each measure, participants were asked to rate their agreement with each statement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Items for each measure were averaged to form an index. In addition, one attention check was set by asking participants to choose the correct cause of the five deaths to complete the lacuna within the original textual content of the assigned reading material. Finally, the survey randomly presented questions to eliminate ordering effect.

3.3.3 Result

Descriptive Statistics

Table 3.2 shows means and standard deviations among the variables employed to test hypotheses and answer research the question.

Variable	Control (n = 33)		Victim (n = 46)		Accidental (n = 40)		Preventable (n = 41)		Total (160)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Post-Crisis										
Responsibility	2.48	1.00	2.73	.85	3.30	.73	3.77	.85	3.09	.98
Ability	3.12	.83	2.96	.92	2.70	.78	2.33	.92	2.77	.91
Benevolence	3.52	.86	3.67	.71	3.35	.69	2.85	1.02	3.35	.88
Integrity	3.27	.74	3.13	0.60	2.70	.76	2.17	.94	2.81	.87
After bolstering strategy										
Responsibility	2.27	.93	2.07	.90	3.01	.74	3.30	.81	2.82	.92
Ability	3.65	.73	3.35	.91	3.49	.79	3.01	.93	3.36	.87
Benevolence	3.94	.69	3.85	.74	3.76	.72	3.35	.90	3.72	.79
Integrity	3.74	.75	3.68	.66	3.66	.72	3.04	.92	3.52	.81

Table 3.2 Sub-study 1: Means and Standard Deviations among the Variables

Reliability and Manipulation Check

To assess the reliability of the scales, we employed split-half reliability utilizing the Spearman-Brown formula. Eisinga et al. (2013) argue that, for two-item scales, Cronbach's alpha coefficient almost always underestimates true reliability, and the most appropriate reliability statistic is the Spearman-Brown coefficient.

The measures were employed on two occasions, and our reliability analyses were exclusively conducted upon the data following the presentation of the crisis scenarios, thereby circumventing redundancy. The reliability analysis of the crisis responsibility attribution, ability, benevolence, and integrity items respectively produced a coefficient of 0.873, 0.780, 0.800, and 0.831 (Spearman-Brown). All reliability scores fell within acceptable range.

A one-way ANOVA test was performed to determine differences in the perceived crisis responsibility attribution between the preventable, accidental, and victim crisis scenarios. Results of manipulation check reveals a significant difference of crisis responsibility attribution ($F\ [2,\ 124] = 17.802,\ p < 0.001$) across the scenarios. The results of consequent pairwise comparisons are shown in table 3.3.

Variable	Sample 1-Sample 2	Mean Difference	Std. Error	Sig.
Responsibility (Bonferroni)	Victim-Accidental	-.57174*	.17613	.005
	Victim-Preventable	-1.04003*	.17498	<.001
	Accidental-Preventable	-.46829*	.18106	.033

Table 3.3 Sub-study 1: Pairwise Comparisons in Responsibility across Victim, Accidental, and Preventable Crises

The results of pairwise comparisons between three crisis scenarios showed statistically significant differences in crisis responsibility between scenarios. Responsibility scores increased from the victim crisis (M = 2.73, SD = 0.85) to accident (M = 3.30, SD = 0.73), and preventable (M = 3.77, SD = 0.85), in that order. The results were in expected directions, and the manipulations of crisis type were successful.

Effects of Crisis Type

A one-way ANOVA on perceived ability and two Welch's ANOVAs on benevolence and integrity were performed to determine the differences between the preventable, accidental, and victim crisis scenarios. The differences in the perceived ability ($F\ [2, 124] = 5.558$, $p < 0.001$), benevolence ($F\ [2, 79.564] = 9.341$, $p < 0.001$), and integrity scores ($F\ [2, 77.290] = 13.966$, $p < 0.001$) between groups were statistically significant. The results of consequent pairwise comparisons are shown in table 3.4.

Variable	Sample 1-Sample 2	Mean Difference	Std. Error	Sig.
Ability (Bonferroni)	Victim-Accidental	.25652	.18984	.537
	Victim-Preventable	.62725*	.18860	.003
	Accidental-Preventable	.37073	.19515	.179
Benevolence (Games-Howell)	Victim-Accidental	.32391	.15115	.087
	Victim-Preventable	.82025*	.19053	<.001
	Accidental-Preventable	.49634*	.19314	.033
Integrity (Games-Howell)	Victim-Accidental	.43043*	.14897	.014
	Victim-Preventable	.95970*	.17135	<.001
	Accidental-Preventable	.52927*	.18944	.018

Table 3.4 Sub-study 1: Pairwise Comparisons in Ability, Benevolence, and Integrity across Victim, Accidental, and Preventable Crises

The results of pairwise comparisons between three crisis scenarios showed significant differences in 1) the integrity across three crisis scenarios, 2) the benevolence within victim and preventable scenarios, as well as between accidental and preventable scenarios, and 3) the ability within victim and preventable scenarios. Integrity scores increased from the victim crisis (M = 3.13, SD = 0.84) to accident (M = 2.70, SD = 0.76), and preventable (M = 2.17, SD = 0.94) crises, in that order. Both victim (M = 3.67, SD = 0.71) and accidental (M = 3.35, SD = 0.69) scenarios exhibited significant higher levels of benevolence compared to the preventable scenario (M = 2.85, SD = 1.02). The victim scenario (M = 2.96, SD = 0.92) also showed significant higher level of ability than the preventable scenario (M = 2.33, SD = 0.92). Therefore, H1 and H2 were partially supported and H3 was completely supported.

Effect of the Prevailing State of Health Crises

Multiple comparisons using Dunnett's test were conducted to determine the difference between the control group and each of the three crisis scenarios in the crisis responsibility. The results are shown in table 3.5.

Variable	Sample 1-Sample 2	Mean Difference	Std. Error	Sig.
Responsibility (Dunnett)	Victim-Control	.24341	.19505	.442
	Accidental-Control	.81515*	.20107	<.001
	Preventable-Control	1.28344*	.19996	<.001

Table 3.5 Sub-study 1: Multiple comparisons of Responsibility between The Control Group and Three Crisis Scenarios

The results of Dunnett's test showed a significantly decrease in the responsibility score within the control group (M = 2.48, SD = 1.00) compared to both the accidental and preventable groups. However, this discrepancy did not reach statistical significance when compared to the victim group. Thus, the prevailing state of a health crisis could be construed as a manifestation of the victim crisis, delineated by the attribute of responsibility degree.

Multiple comparisons using Dunnett and Dunnett T3 were conducted to determine the difference between the control group and each of the three crisis scenarios in the perceived ability, benevolence, and integrity (see table 3.6).

Variable	Sample 1-Sample 2	Mean Difference	Std. Error	Sig.
Ability (Dunnett)	Victim-Control	-.16469	.19810	.727
	Accidental-Control	-.42121	.20421	.100
	Preventable-Control	-.79194*	.20308	<.001
Benevolence (Dunnett T3)	Victim-Control	.15876	.18277	.944
	Accidental-Control	-.16515	.18549	.937
	Preventable-Control	-.66149*	.21878	.020
Integrity (Dunnett T3)	Victim-Control	-.14229	.15636	.931
	Accidental-Control	-.57273*	.17599	.010
	Preventable-Control	-1.10200*	.19530	<.001

Table 3.6 Sub-study 1: Multiple comparisons of Ability, Benevolence, and Integrity between The Control Group and Three Crisis Scenarios

The results of pairwise comparisons between control group and each of the three crisis scenarios showed a significantly increase in perceived ability, benevolence, and integrity within the control group (ability: M = 3.12, SD = 0.83; benevolence: M = 3.52, SD = 0.86; integrity: M = 3.27, SD = 0.74) compared to the preventable group. However, those discrepancies did not reach statistical significance when compared to the victim group. The results also showed a significantly increase in perceived integrity within the control group compared to the accidental group. Nonetheless, no statistically significant disparities emerged between these two groups regarding ability and benevolence.

Effects of Bolstering Strategy

A series of paired t-tests was systematically employed to ascertain the variances in levels of responsibility, as well as the perceived ability, benevolence, and integrity, pre- and post-implementation of the strategy, both in aggregate and delineated across the four distinct experimental conditions. The results are shown in Table 3.7.

Variable	Mean (Pre – Post)	SD	t	df	Sig. (Two-sides)
Total					
Responsibility	.26875	.74159	4.584	159	<.001
Ability	-.59375	.85265	-8.808	159	<.001
Benevolence	-.36875	.72790	-6.408	159	<.001
Integrity	-.71875	.73478	-12.373	159	<.001
Control Group					
Responsibility	.21212	.62538	1.948	32	.060
Ability	-.53030	.72822	-4.183	32	<.001
Benevolence	-.42424	.61392	-3.970	32	<.001
Integrity	-.46970	.73887	-3.652	32	<.001

Victim Group					
Responsibility	.11957	.56945	1.424	45	.161
Ability	-.39130	.74471	-3.564	45	<.001
Benevolence	-.17391	.50791	-2.322	45	.025
Integrity	-.55435	.51885	-7.246	45	<.001
Accidental Group					
Responsibility	.28750	.89075	2.041	39	.048
Ability	-.78750	.87624	-5.684	39	<.001
Benevolence	-.41250	.78354	-3.330	39	.002
Integrity	-.96250	.75437	-8.070	39	<.001
Preventable Group					
Responsibility	.46341	.81693	3.632	40	<.001
Ability	-.68293	.99847	-4.380	40	<.001
Benevolence	-.50000	.92195	-3.473	40	.001
Integrity	-.86585	.82934	-6.685	40	<.001

Table 3.7 Sub-study 1: Paired T-test of Responsibility, Ability, Benevolence, and Pre- and Post-Implementation of the Strategy

The results of the paired T-test revealed that, there was a significant decrease in the level of responsibility attribution within both the accidental and preventable groups. However, the implementation of the strategy failed to yield a substantial decrease in the level of responsibility attribution within both the control and victim groups. The results also showed a significant increase across all dimensions of trust (ability, benevolence, and integrity) observed subsequent to the implementation of the bolstering strategy in all four experimental conditions. Therefore, H4 was partially supported and H5 was completely supported.

3.3.4 Discussion

The Study 1 findings offer valuable insights into the intricate dynamics of public trust amidst health crises.

Firstly, our analysis indicates that, in instances devoid of organizational failures, a discernible trust deficit is absent in the prevailing state of a health crisis, and little responsibility for patient deaths is attributed to the health sector. This aligns with the observations made by Liu and Duarte (2023), who assert that the heightened levels of uncertainty, stress, and fear during a health crisis influence public trust only by exacerbating pre-existing biases against public institutions.

Secondly, during a victim crisis precipitated by environmental factors leading to organizational failure, the variance in levels of responsibility attribution and post-crisis trust from the general health crisis paradigm is minimal, albeit marginally sub-threshold concerning perceived ability. This implies that the prevailing state of a health crisis could be construed as a manifestation of the victim crisis.

Thirdly, a discernible variance across all the victim, accidental, and preventable groups emerged solely in the perceived integrity, signifying that the impact of the crisis type on trust manifests with greater salience in the integrity dimension. The perceived ability exhibited a noteworthy disparity solely between the victim crisis and the preventable crisis, indicating a similarity across most crisis scenarios in this dimension. Plausible explication for this phenomenon is the health sector's obligation of treating outbreak patients, and the demise of patients, irrespective of the causal factors contributing to their demise, engenders repercussions on the perception of the organization's performance.

Moreover, only preventable crisis exhibited significantly diminished scores in perceived ability, benevolence, and integrity compared to the control group, all registering mean values below 3. This underscores that egregious transgressions, typified by instances of corruption amid a health crisis, would precipitate a substantial erosion of public trust.

Lastly, the implementation of the bolstering strategy has yielded notable enhancements in perceived ability, benevolence, and integrity across all experimental scenarios. This underscores the versatility of the bolstering strategy, which can serve not only as a supplementary tactic but also as an independent approach, exhibiting substantial applicability to foster public trust across diverse health crisis contexts. Notably, the application of this strategy resulted in a marked reduction in the responsibility attribution within the accidental

and preventable groups, in spite of demonstrating no significant impact within the control and victim groups due to their pre-existing low levels of crisis responsibility attribution.

3.4 Sub-study 2

Considering that preventable crises was found to engender the most profound erosion of trust across all three dimensions, sub-study 2 endeavors to scrutinize instances of preventable crises. This investigation delves into two most prominent strategies—denial and apology—exploring their efficacy and mechanisms in restoring trust following a preventable crisis.

3.4.1 Hypotheses

Drawing upon diverse theoretical frameworks, scholars have posited a plethora of verbal response strategies aimed at ameliorating public perceptions of organizations, such as verbal accounts elucidated in trust repair theories (e.g., Gillespie & Siebert, 2014; Tomlinson & Mayer, 2009), image repair tactics (e.g., Benoit, 1995), and crisis response strategies within the SCCT paradigm (e.g., Coombs, 2007). Among these strategies, denial and apology emerge as focal points of extensive scholarly inquiry and discourse, traversing diverse theoretical perspectives.

The consensus conceptualization of these two strategies within various theoretical frameworks delineates denial as the categorical repudiation of accountability for a given occurrence, juxtaposed with an apology characterized by the unequivocal acceptance of responsibility. Extant scholarly discourse has underscored the efficacy of both approaches in enhancing an organization's image and recognized that apologies surpass denials in foreseeable crises wherein the organization bears a substantial burden of culpability (e.g., Coombs, 2007; Gillespie & Dietz, 2009; Kim et al., 2004).

Scholars have articulated three components leading to the superior efficacy of apologies vis-à-vis denials. Firstly, apologies manifest an acknowledgment of the crisis's causes, in stark contrast to denials, which lacks a comprehensive elucidation of the incidents transpiring, engendering diminished transparency (Gillespie et al., 2014). Secondly, apologies demonstrate a sense of compassion and empathy toward the affected populace, a facet conspicuously absent in denials (Coombs, 1999; Gillespie & Dietz, 2009). Lastly, apologies pledge proactive measures to prevent future transgressions, a commitment notably absent in denials, thereby instigating stakeholder apprehension (Ferrin et al., 2007; Kim et al., 2004).

In the milieu of a health crisis, however, those discursive components of "advantage" delineated above can also be incorporated into the account of denial. Even in instances where fatalities are extraneous to the authority, the healthcare sector, as the custodian of the health crisis, bears an imperative to explain the causes of the incident transparently (subsequently referred as explaining component), convey compassion and concern towards the affected populace (subsequently referred as soothing component), and commit to discharging its duties in a manner commensurate with safeguarding the welfare of the public (subsequently referred as committing component). This prompts an inquiry into the dynamics of the efficacy of denial and apology when imbued with identical components.

Fuoli et al. (2017) conducted a scenario-based experiment within a context of corporate corruption, initiating a preliminary inquiry into this regard. Their study scrutinized develop the stimuli of denial and apology both imbued with two components: the repudiation or acknowledgment of responsibility conjoined with assurances to avert future transgressions. The findings suggested that denials emerged as notably more efficacious than apologies. This observation underscores the advantage of denial over apology when both imbued with identical components. Hence, we posit the following hypothesis:

> H6: In a preventable crisis, denial would lead to higher level of trust (perceived ability, benevolence, and integrity) than apology when they both imbued with identical components.

In conjunction with the impact of verbal accounts, another inquiry meriting investigation pertains to the influence of discursive components on trust. A scenario-based experiment conducted by Lewicki et al. (2016) argued that the inclusion of additional components within an apology, such as elucidating the circumstances leading to the incident and pledging non-recurrence, enhances its effectiveness compared to the one with a single component. Consequently, we advance the following hypothesis:

> H7: In a preventable crisis, denials and apologies including supplementary components would lead to higher level of trust (perceived ability, benevolence, and integrity) than those comprising solely fundamental component (the acknowledgment or repudiation of crisis responsibility).

3.4.2 Method

Participants

A total of 336 Chinese adults were recruited on Sina Weibo for Study 2. The sample was 63.1% female (n = 212), 36.6% male (n = 123), and 0.3% “prefer not to say” (n = 1). Participants

ranged in age from 18 to 37 years (M= 23.43, SD= 3.51). The majority of them (89.3%, n = 300) have at least university or equivalent education.

Stimuli

To delineate the respective functions of the various components within the two strategies, we developed stimulus texts tailored to each of the four discursive components (fundamental, explanatory, soothing, and committing). In addition to the fundamental component for each strategy as the control groups, response scenarios are also constructed by integrating the fundamental component with each of the remaining three component, thereby generating four instances of each strategy, including denial and apology with fundamental component (subsequently labelled F), denial and apology with fundamental and explaining component (subsequently labelled FE), denial and apology with fundamental and soothing component (subsequently labelled FS), denial and apology with fundamental and committing components (subsequently labelled FC). This process resulted in a cumulative count of eight distinct scenarios (See Appendix D).

For this study, the identical text of preventable crisis scenario employed in Study 1 was utilized as the foundational crisis scenario. Following exposure to this crisis scenario, participants were assigned to one of eight distinct response scenarios. Their perceptions of the health sector after reading the posts, including perceived ability, benevolence, and integrity, were then evaluated to examine the hypotheses.

The 336 participants were randomly assigned to one of eight experimental conditions, with 42 for each scenario. Among those respondents, 284 provided valid data. The details of the responses' validity rate are shown in Table 3.8.

Account	**Denial**				**Apology**				**Total**
	F	FE	FS	FC	F	FE	FS	FC	
Valid	35	32	31	36	37	39	37	38	285
Invalid	7	10	11	6	5	3	5	4	52
Total	42	42	42	42	42	42	42	42	336
Validity Rate	83.3%	76.2%	73.8%	85.7%	88.1%	92.9%	88.1%	90.5%	84.8%

Table 3.8 Sub-study 2: Response Validity

Measures

Sub-study 2 used the same scales of perceived ability, benevolence, and integrity as sub-study 1. The survey also included one manipulation check concerning response account, operationalized through the question: "to what extent has the health sector acknowledged the presence of corruption in the procurement of medical equipment", ranging from 1 (completely denial) to 5 (completely acknowledged). In addition, one attention check was set by asking participants to choose the correct cause of the five deaths to complete the lacuna within the original textual content of the assigned reading material.

3.4.3 Result

Manipulation Check

An independent t-test was conducted to check the manipulation of response account. The result showed that, as expected, respondents in the apology condition perceived a significantly higher level of corruption acknowledgment by the health sector compared to those ones in the denial condition (apology: $M = 4.40$, $SD = 0.71$; denial: $M = 2.20$, $SD = 1.27$; $t = -17.662$, $df = 203.295$, $p < 0.001$), revealing that the experimental manipulations were successful.

Hypothesis Testing

H6 and H7 aimed to investigate the effects of the verbal account and the discursive component on ability, benevolence, and integrity. Consequently, a 2×4 factorial two-way ANOVA was conducted to test the two hypotheses (Table 3.9). The analysis revealed that the interaction effect between response account and discursive component on ability, benevolence, and integrity did not reach statistical significance. Additionally, the response account exhibited no statistically significant influence on any of these dimensions, while the discursive component displayed a notable statistical effect on ability ($F [3, 276] = 4.61$, $p < 0.005$), benevolence ($F [3, 276] = 6.61$, $p < 0.001$), and integrity ($F [3, 276] = 6.34$, $p < 0.001$). These findings suggested that, when including identical discursive components, denial and apology would not lead to distinct trust levels between. Therefore, H6 was not supported.

Source	Dependent variable	SS	df	MS	f	Sig.
Account	Ability	1.203	1	1.203	1.509	.220
	Benevolence	.340	1	.340	.379	.538
	Integrity	.028	1	.028	.032	.858

Component	Ability	11.081	3	3.694	4.631	.004
	Benevolence	17.849	3	5.950	6.630	<.001
	Integrity	16.466	3	5.489	6.259	<.001
Account × Component	Ability	.791	3	.264	.331	.803
	Benevolence	2.431	3	.810	.903	.440
	Integrity	1.536	3	.512	.584	.626

Table 3.9 Sub-study 2: Univariate Analysis for Ability, Benevolence, and Integrity by Response Account and Discursive Component

Since the discursive component is a variable with four categories, a Dunnett post-hoc analysis was conducted to determine the differences in ability, benevolence, and integrity across the discursive components (Table 3.10). The results indicated that FC components led to significantly higher ability (M = 2.68, SD = 0.86), benevolence (M = 3.30, SD = 0.86), and integrity (M = 3.02, SD = 1.00), FE components led to significantly higher ability (M = 2.63, SD = 0.99) and integrity (M = 2.84, SD = 0.99), FS components led to significantly higher ability(M = 2.55, SD = 0.88), than the F component (ability: M = 2.19, SD = 0.82; benevolence: M = 2.61, SD = 1.00; integrity: M = 2.40, SD = 0.86).

Variable	Sample 1-Sample 2	Mean Difference	Std. Error	Sig.
Ability (Bonferroni)	FE-F	.44107	.14950	.010
	FS-F	.36322	.15005	.043
	FC-F	.49493	.14744	.003
Benevolence (Bonferroni)	FE-F	.29603	.15874	.156
	FS-F	.35266	.15933	.072
	FC-F	.69294	.15655	<.001

Integrity (Bonferroni)	FE-F	.44008	.15656	.015
	FS-F	.16969	.15713	.570
	FC-F	.61749*	.15440	<.001

Table 3.10 Sub-study 2: Pairwise Comparisons in Ability, Benevolence, and Integrity

3.4.4 Discussion

The Study 2 findings offer valuable insights into the effects of verbal response on public trust wherein the organization bears a substantial burden of culpability.

The examination of ability, benevolence, and integrity reveals minimal disparity between denial and apology strategies, with no significant account-component interaction detected. This suggests a comparable efficacy in both acknowledging and repudiating responsibility, irrespective of the discursive component employed. Consequently, in cases of severe organizational transgressions like the corruption, organizations need not grapple too much with the extent to which responsibility ought to be acknowledged.

Conversely, the inclusion of discursive component significantly impacts trust dynamics. Particularly, when exclusively entailing denial or acknowledgment of crisis responsibility, both denial and apology resulted in scores of the ability, benevolence, and integrity falling below the threshold. However, when accompanied by assurances of future corruption prevention, trust across all dimensions have experienced augmentation, with benevolence and integrity showing a positive status; when accompanied by detailed explanations of the incident's genesis, perceived ability and integrity see enhancement; when accompanied by expressions of compassion and concern, only perceived ability experiences a significant enhancement. Hence, the integration of discursive components within communication towards the public emerges as pivotal in rebuilding public trust.

3.5 Conclusion

Scholars have engaged in contentious debates concerning the nuanced dynamics of trust amidst health crises. This contention may stem from a failure to adequately acknowledge the bidirectional nature of trust dynamics, wherein trust evolves in response to both the inherent nature of the crisis and the efficacy of governmental response measures. Additionally, scholarly discourse has often been constrained by an emphasis on the stabilizing tendencies of trust within

a certain crisis phase, neglecting the intricate impacts of specific crisis incidents on trust dynamics at the micro-level. To address these gaps, our research undertook two scenario-based experimental studies within the context of specific health crisis incidents, meticulously exploring the influence of crisis type on trust dynamics, as well as assessing the differential impacts of various response strategies on trust perceptions.

3.5.1 Post-crisis Trust

Our investigation into post-crisis trust yields significant theoretical contributions, elucidating the multifaceted dynamics inherent in trust amidst a crisis scenario. Firstly, a fundamental aspect in comprehending the bilateral interplay of trust amidst a health crisis necessitates a disentanglement of the crisis's inherent ramifications from the effects of the government's crisis response. Our research delves into the extent to which the populace places trust in governmental institutions in the aftermath of such turmoil. The response to this inquiry reveals that trust levels manifest under specific circumstances and undergo substantial diminution under others.

Four crisis conditions can be elucidated through a bifurcation into two discernible clusters. The first cluster encompasses the prevailing state of a health crisis and the victim crisis, attributing crises to external and uncontrollable factors. Within this cluster, perceptions of benevolence and integrity tend to maintain a positive orientation, while perceived ability exhibits marginal fluctuations around a certain threshold. The second cluster comprises accidental and preventable crises, which trace their origins to internal organizational deficiencies. In these instances, both perceived ability and integrity present in a negative status, with integrity bearing the brunt of the impact, whereas benevolence registers positively in accidental crises and negatively in preventable crises.

Therefore, the preventable crisis precipitates the most egregious erosion of trust across types of crises, impacting all dimensions of trust. This underscores the profound ramifications of organizational misconduct on public trust. Notably, preventable crises are controllable, thus underscoring the imperative of a transparent and ethically sound governmental apparatus as a bulwark against trust erosion amid health crises.

Secondly, it is worth noting that the prevailing state of a health crisis eludes explicit categorization within the confines of SCCT theory, since although there are citizen casualties, health authorities are neither directly harmed nor perpetrate errors or misconduct. Our analysis reveals a striking parallelism between the prevailing state of a health crisis and the victim crisis, both in terms of crisis responsibility attribution and trust levels. This suggests that the former

can be construed as a manifestation akin to the victim crisis, since casualties stemming from health crises pose certain challenges to the health sector's crisis management endeavors.

Finally, our findings provide deeper insight into the specific influence of crisis types on various dimensions of trust. Overall, perceived ability demonstrates the least divergence across crisis conditions, whereas integrity displays the most significant variation. Thus, the impact of crisis type on trust primarily manifests in terms of perceived integrity.

3.5.2 Effect of Response Strategy

Our examination of response strategies' effects yielded several divergent findings compared to extant literature. Initially, prior research in response strategies has predominantly concentrated on verbal accounts pertaining to the management of responsibility attributions (e.g., Benoit, 1995; Coombs, 2007; Tomlinson and Mayer, 2009), with a particular emphasis on discerning the superior efficacy between denial and apology. Scholars have posited that apologies possess inherent advantages over denials in addressing severe organizational transgressions due to their inclusion of certain advantageous components lacking in denials (e.g. Coombs, 1999; Ferrin et al., 2007; Gillespie, Dietz, and Lockey, 2014). Conversely, denial may surpass apology in effectiveness when incorporating analogous discursive component (Fuoli, Weijer, and Paradis, 2017). Nevertheless, our results indicate no significant discrepancy in effectiveness between apologies and denials, irrespective of the encompassed components. Rather, distinctions emerged among responses featuring divergent discursive components.

Secondly, the bolstering strategy, devoid of the discussion of responsibility attributions, has traditionally been relegated to a secondary position, recommended only as a complementary strategy. However, our findings demonstrate that when employed independently, the bolstering strategy markedly heightens perceived ability, benevolence, and integrity, with this augmentation consistently observed across various crisis scenarios.

These findings imply a requisite revision of the current response strategy framework. Existing typologies of response strategies are predicated upon attribution theory, wherein the acknowledgment of responsibility for a crisis serves as the primary determinant for categorizing strategy types, relegating non-attributional strategies to secondary status or as adjunct discursive components. However, these secondary strategies or discursive components wield a substantial and unaltered impact independent of shifts in the response account. This necessitates the systematization of these secondary strategies as a parallel category to verbal narratives.

Another inadequacy in the response account framework is its lack of adaptability across diverse crisis contexts. For instance, in natural calamities like earthquakes and tsunamis,

governmental apologies would be deemed puzzling, while denials regarding the causal relationship between natural disasters and governmental actions would be redundant. This underscores the inapplicability of attribution mechanisms under certain circumstances. Indeed, there exist numerous parallel mechanisms for trust repair, all able to be operationalized through communication (Liu & Duarte, 2023). For instance, the explaining component embodies the transparency mechanism; the soothing component embodies the relational mechanism; the committing component embodies the ethical culture mechanism and the regulation mechanism. Consequently, a typology of communication strategy structured around the comprehensive framework of trust repair mechanisms would offer greater generalizability and better reflect the underlying rationale of communication strategies for trust repair.

3.5.3 Limitations

This study has limitations that should be acknowledged. In the pursuit of comprehensively elucidating the intricate ramifications of health crises within the contemporary milieu of pervasive social media, our research methodology specifically targeted social media users as participants for the experiments, thereby including a cohort predominantly under the age of 40. Therefore, we suggest that future investigations incorporate a broader demographic spectrum encompassing middle-aged and elderly populations to ascertain potential variances attributable to age cohorts within the outcomes of the experiment.

Furthermore, recognizing the contextual limitations inherent in the employment of denial and apology across various crisis types, and circumventing undue complexity of the research, our study 2 exclusively scrutinized the efficacy of response strategies within the domain of preventable crises. We advocate for future inquiries to extend their purview to encompass diverse crisis contexts, and to explore the strategies beyond the attributional perspective to enrich the depth of inquiry into crisis response effectiveness.

CHAPTER 4

4. STUDY 3: Repairing Public Trust in Crisis Communication: Looking to Social Media Posts during the Early Stage of COVID-19 Pandemic

4.1 Introduction

Public trust toward government is a core concern for democratic governance and public administration (Tolbert and Mossberger 2006). Public trust shapes citizens' engagement with government policies, crucially impacting the performance and capacity of the public sector to deliver essential services (Hvidman, 2019). During the recent health crisis, however, despite a brief surge of public trust in some countries, many countries have faced enduring trust deficits (Robinson et al., 2021; Zhang et al., 2021). Multiple factors, including widespread information confusion, suboptimal public sector performance, and the deepening prejudice against the public sector due to negative psychological and emotional states, have contributed to this erosion of trust (Liu & Duarte. 2023).

In this volatile context, communication emerges as an indispensable tool for managing public trust (Liu & Duarte, 2023). As a crucial component of crisis management, communication plays a vital role in alleviating fear, uncertainty, and information gaps, thus serving as a dynamic embodiment of transparency and good governance (Grimmelikhuijsen et al., 2013; Han & Baird, 2022). Moreover, communication significantly shapes public perceptions of crisis situations and government performance, thereby fostering a broad common understanding and encouraging collective action in response to public threats (Christensen and Lægreid, 2020).

Drawing on crisis communication theory, scholars of public administration have proposed various frameworks for communication strategies to manage public perceptions of organizations (Castro et al., 2023; Hu & Zhong, 2023; Lee, 2022). These frameworks have contributed to integrating and systematizing communication strategies, but all of them also have shortcomings. At the same time, these frameworks do not establish a good theoretical link between communication strategies and trust. In addition, while scholars have argued that public trust is influenced by national contexts (Grimmelikhuijsen et al., 2013; Zhang et al., 2021), few studies have conducted cross-country comparisons to uncover the impact of institutional factors on the use of trust repair strategies.

Using the COVID-19 pandemic as a vivid example, this study analyses the social media posts from authorities in U.S., China, and EU during the early stages of COVID-19 pandemic to address the limitations in literature. We specifically strive to answer the following questions:

(1) What communication strategies did authorities adopt in social media posts to repair public trust?
(2) What dimensions of trust are intended to be repaired by these strategies?
(3) What institutional factors may influence the applications of these strategies in different regions?

Through a qualitative analysis of those social media posts, we aim to understand how authorities repair public trust through crisis communication, thus allowing us to establish a comprehensive typology of communication strategies. A cross-regional comparison among EU, U.S., and China was conducted to reveal the institutional effects on strategy adoption. These three regions were chosen due to their distinctive political structures and administrative system, which play crucial roles in shaping the narratives surrounding COVID-19.

While the EU, as a supranational entity, may lack the comprehensive administrative functions characteristic of a national government, relevant research with cross-regional comparative approaches has recognized the significant impact of European integration on health crisis management, such as comparisons across EU institutions and federal agencies in the U.S. and Canada regarding vaccine policies (Lythgoe & Middleton, 2021) and comparisons across EU, U.S. and China regarding digitized pandemic prevention (Wang et al., 2021). It is our contention that such cross-regional comparisons are indispensable for dissecting and understanding health crisis communication for trust repair.

4.2 Theoretical Background

4.2.1 Trust and Trust Repair

Trust is a special psychological status formed by two central concepts: 1) positive perceptions or beliefs of the trustee's future behaviors, and 2) willingness of the trustor to take risk and to depend on the trustee (e.g., Mayer et al., 1995; Rousseau et al. 1998). Mayer et al. (1995, p.712) define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party".

Mayer et al. (1995) also identified three key dimensions that determine the level of trust: ability, integrity, and benevolence. Ability involves skills and expertise that enable the trustee

to have influence in a special domain. Integrity refers to the trustee's moral and ethical values that enable trustee to adhere to an acceptable set of principles. Benevolence refers to the trustee's care and goodwill to the trustor that enable trustee to act in the best interest of the trustor. Collectively, these three dimensions form the trustor's evaluation of the trustee's trustworthiness.

Trust repair entails the mitigation of adverse perceptions of the trustee by the trustor, with the objective of transitioning towards favorable assessments across dimensions of trust. Based on the definition of trust proposed by Mayer et al. (1995), trust repair refers to influencing and controlling the perceptions of trustee's ability, integrity, and benevolence to eliminate negative expectations and establish positive expectations (Gillespie and Dietz 2009).

Existing research on trust repair has predominantly centered on trust violations, emphasizing eliminating the negative outcomes of trustee transgressions (e.g., Ren & Gray, 2009; Sitkin & Roth 1993; Tomlinson & Mayer 2009). However, amidst a health crisis, the challenges to public trust stem from various sources, including not only the violations committed by the organization but also the natural and environmental factors, such as information confusion and various psychological and substantive harms caused by the crisis environment. Accordingly, efforts for public trust restoration during health crises, particularly through communication approaches, entail not only addressing negative occurrences to counteract adverse perceptions towards the public sectors but also proactive self-promotion to foster public confidence and solidarity in the face of crisis threats (e.g., Christensen & Lægreid, 2020a; Liu & Duarte, 2023; Zhai & Han, 2023). To analogously elucidate, addressing the adverse effects of an incident resembles swatting wood-boring insects, while self-promotion functions as filler material for the resultant lacuna. A holistic trust repair process necessitates the integration of both approaches.

4.2.2 Communication Strategies for Managing Public Perceptions

Many efforts have been made to explore communication strategies for the management of government-citizen relations. Three recent studies in the realm of public administration stand out for their noteworthy contributions to systematizing these strategies.

Lee (2022) categorizes communication strategies into three types based on the nature of communicative behavior: accommodative response, defensive response, and silence. Accommodative responses involve acknowledging organizational responsibility for a crisis. Defensive responses seek to downplay the severity of the crisis. Silence, on the other hand, refers to organizations making statements without communicative intent or information. This

framework excels in its ability to intertwine the attributional mechanism and communication strategies, providing a comprehensive understanding of the diverse strategies at play. However, this framework predominantly functions as reactive responses to adverse events, neglecting to incorporate the organization's proactive endeavors aimed at trust rebuilding.

In a study by Castro et al. (2023) focused on reputation management, communication behaviors were categorized into four groups—performance, technical, moral, and legal procedures—aligned with different dimensions of reputation management. This framework links communication behaviors with the reputational dimensions they address, providing insights into the intended objectives of communication strategies. However, a limitation lies in its lack of specificity regarding the implementation of these communication behaviors, hindering the provision of practical guidance.

Hu and Zhong (2023) propose a crisis communication classification encompassing public-oriented and politics-oriented communication. The latter, directed at managing public perceptions, includes strategies of denial and justification, boasting, praising, blaming, and mortification. This framework broadens the spectrum of communication strategies, covering both reactive responses to adverse events and proactive self-promotion for trust restoration. However, it lacks in providing pertinent mechanisms to clarify how these communication behaviors impact government-citizen relations, and it also does not specify the objective that each strategy is intended to achieve.

Leveraging the strengths of previous communication strategy frameworks, we attempted to propose a new typology of communication strategies that: 1) encompasses a broader range of communication behaviors, 2) provides theoretical mechanisms to explain their workings, and 3) articulates the dimensions of trust they are intended to repair.

Remarkably, a recent study by Liu and Duarte (2023) applies Bachmann, Gillespie, and Priem's (2015) framework to elucidate the multifaceted endeavors of government and health authorities in repairing public trust through crisis communication during health crises. They assert that the communication approaches to trust repair are essentially the manifestations of the six mechanisms within communication behaviors. Therefore, in this study, we integrated Mayer et al.'s (1995) three-dimensional theory of trust with Bachmann, Gillespie, and Priem's (2015) framework of trust repair mechanisms to identify and integrate communication strategies.

4.2.3 Institutional Effects on Covid-19 Communication

Many studies have scrutinized the contrasting COVID-19 communication between China and the U.S. Primarily shaped by institutional factors such as pandemic control policies, media regulation, diplomatic stances, and political systems, China's communication strategy focuses on propagating positive messages, showcasing domestic unity, and underscoring its global ties, while the U.S. emphasizes negative messages, revealing domestic political discord, and projecting an isolationist stance (Chen & Liu, 2023; Ngai et al., 2022; Wirz et al. 2021). Moreover, examinations of EU institutions' COVID-19 communication strategies reveal that the limited role of EU in concrete implementation of health crisis management results in communications more geared toward bolstering the EU program's reputation than elucidating specific crisis management implementations (Alcarria & Navarro 2023). The frequency of communication of various EU institutions is found to be influenced by the scope of their functions (Müller & Fraussen 2023).

Building on existing literature, this study aims to delve deeper into the impact of institutional factors on trust-repairing communication, particularly by comparing the communication strategies of the EU, the U.S., and China in the context of COVID-19.

China's approach is characterized by a highly centralized system, where central authorities wield substantial power in formulating pandemic response strategies. In contrast, the United States operates under a decentralized federal model, with the federal government providing guidance and resources, while state authorities exercise autonomy in implementing and enforcing measures tailored to their specific circumstances. The EU, as a supernational body, serves as a coordinating and support mechanism for member states, and the EU agencies have had a significant impact on member states' response to the pandemic by facilitating information sharing, procurement and distribution of vaccines, cross-border pandemic-related issues, and offering medical and economic supports.

In summary, regarding their roles in health crisis management, China's centralized agencies function as the "supervisor"; the U.S. federal agencies as the "team leader"; and the EU agencies as the "coordinator". By comparing these distinct approaches, this research aims to discern the impact of institutional disparities on trust-repairing efforts in the context of the pandemic.

4.3 Methods

4.3.1 Data Collection

Due to its active user population and cost-effectiveness, social media can be beneficial for emergency responders during health crises. Data collection involved gathering posts from U.S. and EU authorities on Twitter, along with posts from Chinese authorities on Weibo, which serves as China's prominent social media platform extensively utilized by government agencies for public communication.

We collected posts from the social media accounts of nine authorities, with representation from each region—three each from the executive branch, the department accountable for health policies and services, and the agency of public health emergency response. These chosen authorities are deemed pivotal in the COVID-19 response efforts. The social media accounts of the selected authorities and their corresponding details are presented in table 4.1.

Region	**Authorities**	**Platform**	**Account**
EU	EU Commission	Twitter	@EU_Commission
EU	Directorate-General for Health and Food Safety (DG SANTE)	Twitter	@EU_Health
EU	European Centre for Disease Prevention and Control (ECDC)	Twitter	@ECDC_EU
US	The White House	Twitter	@WhiteHouse45
US	United States Department of Health and Human Services (HHS)	Twitter	@HHSGov
US	Centers for Disease Control and Prevention (CDC)	Twitter	@CDCgov
China	The State Council	Weibo	@中国政府网
China	National Health Commission (NHC)	Weibo	@健康中国
China	Chinese Center for Disease Control and Prevention (CCDC)	Weibo	@疾控科普

Table 4.1 Selected Social Media Accounts of Authorities

To enable comparisons across regions, we collected social media posts from the first 100 days after the first COVID-19 case was reported in each region:

- authorities in China: December 31, 2019, to April 8, 2020.
- authorities in US: January 21 to April 29, 2020.
- authorities in EU: January 24 to May 2, 2020.

We collected data retrospectively by using the advanced search web interface on the platforms and manually extracted text of the posts that contained the keywords (‘virus’ OR ‘coronavirus’ OR ‘Covid’ OR ‘epidemic’ OR ‘pandemic’) from the twitter accounts and the posts that contained the keywords ‘病毒’ (virus) OR ‘新冠’ (COVID-19 or coronavirus) OR ‘疫情’ (epidemic or pandemic) OR ‘肺炎’ (pneumonia) from the Weibo accounts.

4.3.2 Data Analysis

Employing six trust repair mechanisms outlined by Bachmann, Gillespie, and Priem (2015) and the three trust dimensions suggested by Mayer et al. (1995), our study identified two aspects that explains trust-repairing communication 1) strategy: systematized communication behaviors; (2) objective: perceived ability, integrity, and benevolence intended to be shaped by the strategy. In order to establish a typology of communication strategies and to analyze which dimension of trust each strategy is intended to contribute, we conduct a qualitative analysis of the data through Saldana’s (2013) two-cycle causation coding approach with a combination of deductive and inductive methods to generate and refine codes (Miles, Huberman, and Saldana 2019).

Simultaneous coding was chosen as the analytical method as it is appropriate when the data’s content suggests multiple meanings (Miles, Huberman, and Saldana 2019; Saldana 2013), with which we applied both “strategy” and “objective” codes to a single qualitative datum. A combination of deductive and inductive methods ensures structure and theoretical relevance from the start, while still enabling a closer inductive exploration of the deductive codes to ensures closeness to the data with the possibility of unfolding theory later (Linneberg & Korsgaard 2019).

We first developed a provisional ‘start list’ of 2nd-cycle codes based on previous frameworks. Rather than identifying dimensions of trust, the framework we expected to develop focuses on systematizing communication behaviors, and the coding therefore gives more prominence to the segment of strategy. We assume that each mechanism in Bachmann, Gillespie, and Priem’s (2015) framework generates communication strategy that is intended to

repair all ability, integrity, and benevolence. Therefore, an initial set of six 2nd-cycle codes was established (see table 4.2).

Strategy		**Objectives**
Sense-making	**&**	Ability + Integrity + Benevolence
Relational	**&**	Ability + Integrity + Benevolence
Regulation and control	**&**	Ability + Integrity + Benevolence
Ethical culture	**&**	Ability + Integrity + Benevolence
Transparency	**&**	Ability + Integrity + Benevolence
Transference	**&**	Ability + Integrity + Benevolence

Table 4.2 Six Initial 2nd Cycle Codes

Second, we connoted the conceptual trust-repairing behaviors in each post following the sequences of 'behavior & ability/integrity/benevolence', such as 'attributing negative outcomes to a third party & ability'. In this endeavor, we identified a total of 930 posts that engaged with trust-repairing strategies. Some identified communication behaviors had similar or overlapping concepts, and we merged them to ensure sufficient distinction among codes; some codes had too broad concepts, and we split them into more specific communication behaviors. In this process, we integrated communication behavior into strategies. Then, we aggregated the trust dimensions addressed by each strategy to form the 1st-cycle code.

Third, we tried to assign these 1st-cycle codes into the initially created 2nd-cycle codes. We initially matched the communication strategies identified in previous step with the six mechanisms. Some strategies fairly matched the concept of a certain mechanism, and we adopted this mechanism to present the category of those strategies; some strategies provide a plethora of new interpretations for a certain mechanism in the context of communication, and we consequently expanded the definition of this category. Then, we further aggregated the trust dimensions each category addressed in order to iterate over the 2nd-cycle codes. Altogether, we have located six themes, representing six categories of strategies and their corresponding trust dimensions (see Figure 4.1). In this way, we established a typology of communication strategies and revealed trust dimensions intended to be repaired by those strategies.

Finally, we conducted a descriptive statistical analysis to compare the adoption of strategies among EU, U.S., and China, focusing on which different communication strategies are

employed by the three countries/regions, and then analyzed the possible institutional influences underlying the differences in their trust-repairing communication.

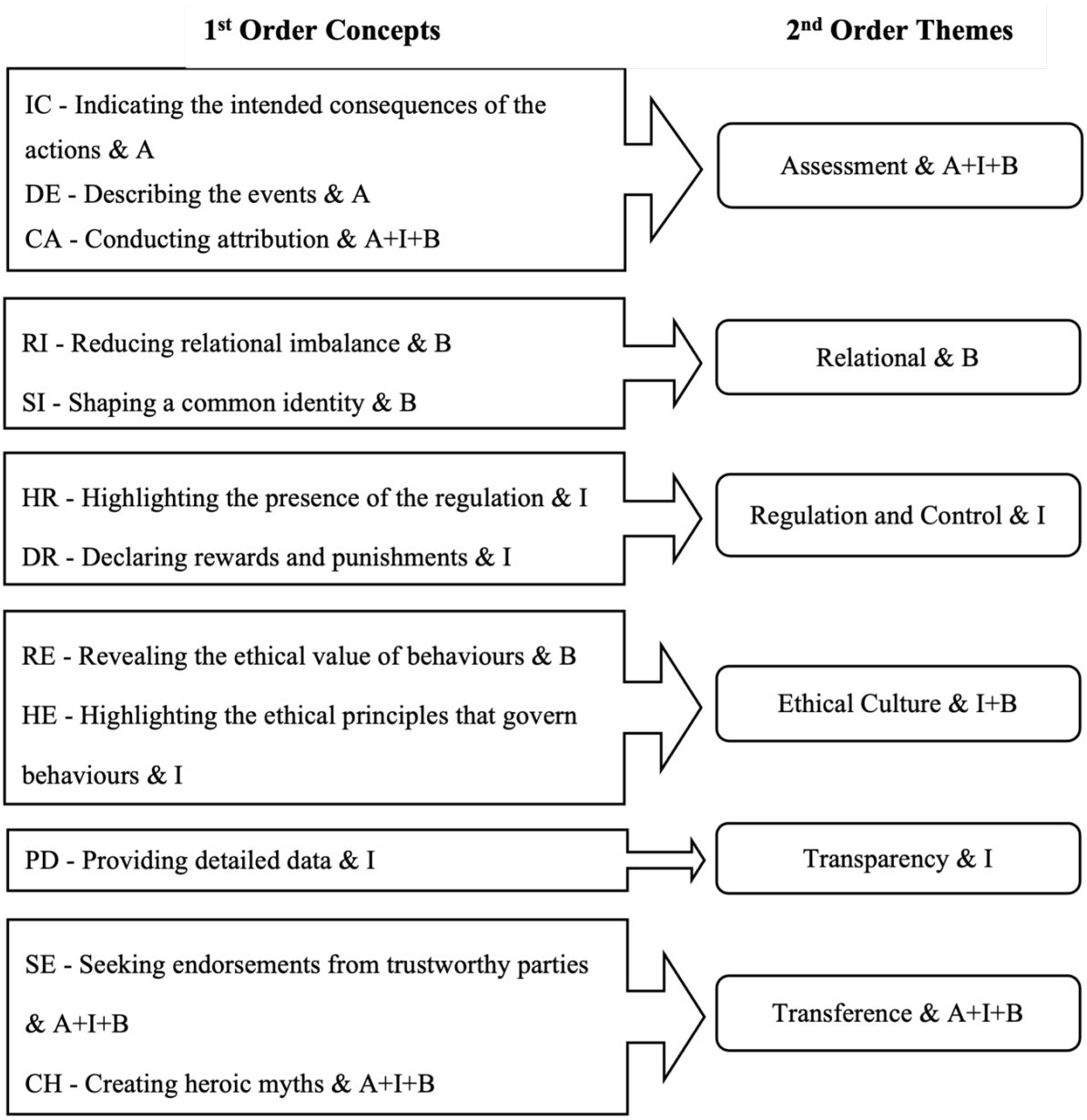


Figure 4.1 Concepts and Themes

4.4 Results

4.4.1 Communication Strategies for Trust Repair

We found that all six mechanisms proposed by Gillespie, and Priem's (2015) were applied in authorities' communication to repair public trust. Drawing on these mechanisms, we have

identified a total of 12 communication strategies in six categories by coding. In this section, we substantiate how we arrived at the framework presented in figure 1.

Due to spatial limitations, we regretfully cannot accompany the explanations with raw data. However, for clarity, we offer two illustrative examples for each strategy in appendix F, accompanied by corresponding analyses. Those examples are intended to facilitate a better understanding of the identified strategies.

Assessment

A general definition of sense-making is "the ongoing retrospective development of plausible images that rationalize what people are doing" (Weick et la., 2005, p.409). Bachmann, Gillespie, and Priem (2015) propose that the mechanism of sense-making entails an attributional process aimed at creating a mutually agreed-upon explanation for the cause of a trust violation. However, we argue that this approach only addresses one facet of sense-making, and the process of sense-making actually involves three components— explaining intended goals of action, describing crisis development, and attributing success or failure. As a result, we utilize the term 'assessment' to describe this category, with three communication strategies identified in this category.

The first strategy involves indicating the intended consequences of actions. This strategy outlines the organization's actions and decisions, highlighting the intended outcomes that can be achieved through the organizations' actions and decisions, or the adverse consequences that may arise if they are neglected. It aims to influence public perceptions of the organization's expertise and ability. The text may subtly suggest the potential consequences of actions without explicitly stating them. For instance, it might introduce a background information, which is then employed to justify the decision's necessity.

The second strategy involves describing events, including what is happening or has happened as well as the nature of the events. This strategy allows authorities to deny the occurrence of negative outcomes, to acknowledge a negative outcome while downplaying its negative nature, or to promote achievements with emphasizing their importance. This strategy focuses on explaining the objective impact of the event, that is, whether and to what extent, it fails or succeeds, attempting to shape shaping public perceptions of the organization's ability.

The last strategy involves conducting event attribution. Specifically, authorities can attribute negative outcomes to external, uncontrollable, fluctuating factors to demonstrate that the failure was not their fault, was unintentionally caused, and was a temporary situation, attempting to reject skepticism and to reduce negative expectations of the authority's ability, integrity, and benevolence. Alternatively, authorities can attribute an achievement to internal,

controllable, stable factors to show that they have made great contributions and that the achievement is a predictable result of the good qualities and virtues they have always possessed, attempting to reinforce positive expectations of the authority's ability, integrity, and benevolence.

Relational

The relational mechanism argues that the violation causes a state of "ritual disequilibrium or disgrace" (Goffman 1967, p.19), therefore a corrective process for restoring the expressive order is required to rebuild the relationship (Ren & Gray, 2009). We found that this mechanism can be achieved through a communication approach, involving two specific strategies.

The first strategy is reducing relational imbalance. Regardless of whether there is a violation, the power distance between the administrators and the public can cause a relational imbalance, which can be imagined as an unbalanced scale. To bring the scale back into balance, the weight of higher side needs to be reduced or the weight of the lower side needs to be increased. To redress this imbalance, authorities can provide emotional supports, such as expressing empathy, compassion, regret, mourning, and care to public for their suffering and demonstrating gratitude, appreciation, and remembrance for their dedications. Such social rituals enable authorities to concede to or elevate the public, thus reducing relational imbalance. In this way, the authorities try to communicate their benevolence by showing concern for the people.

The second strategy is shaping a common identity, which aims at weakening the perception of authorities as mere 'administrators' and establishing a sense of belonging with the public. This can be achieved by emphasizing a shared identity as victims of the pandemic or utilizing shared social and cultural affiliations, such as ethnicity, nationality, or religious beliefs. Such a common identity helps to convince the public that 'we' and 'you' share the same interests, attempting to build perceived benevolence.

Regulation and control

Regulation and control mechanism involves formal rules and controls to constrain untrustworthy behaviors, thereby preventing future organizational trust violations and establish positive expectations (Dirks, Lewicki, and Zaheer 2009; Gillespie and Dietz 2009). While communication cannot impose formal control, our findings show that it can highlight the organization's adherence to regulations that promote trustworthy conduct and deter untrustworthy actions.

The first strategy involved in this approach is highlighting the presence of the regulation. Authorities can cite the laws, rules, or procedures that guide their conduct or that they abide by,

and this signals to the public that the organization's decision-making and behaviors will not (and does not) violate the rules. Through the implementation of this strategy, authorities aim to address potential apprehensions regarding the misuse of administrative power and seek to repair perceptions of organizational integrity.

The second strategy involved is declaring rewards and punishments. Rewards and punishments are a typical means of formal control, and declaring rewards, and punishments provides a visual display of formal control, which imply the existence of regulation within the organization to encourage trustworthy behaviors and discourage untrustworthy behaviors.

Ethical culture. Organizational culture serves as informal controls in organizations. By developing and communicating a strong shared ethical culture, organizations can make unethical behaviors salient and counter-cultural to prevent violations (Gillespie and Dietz 2009). We found that, organizations accomplish the fundamental objective of this mechanism by highlighting the existence of internal ethical culture in communication, rather than developing one.

There are two strategies that authorities used to communicate an ethical culture. The first strategy is revealing the ethical value of behaviors. Authorities could elucidate that they are working towards protecting universally acknowledged ethical values, such as preserving lives, upholding racial equality, and promoting humanitarianism, thus imbuing their actions with ethical worth and attempting to shape their benevolent image. This approach should be distinguished from “indicating the intended consequences of actions” that emphasizes utilitarian goals and renders failed actions meaningless. In contrast, ethical actions have intrinsic value, regardless of their outcomes, and represent the right thing to do.

The second strategy is highlighting the ethical principles that govern the process of behaviors, which involves a self-evaluation of the processes of organizations’ actions. This strategy has similarities with "highlighting the presence of the regulation", but instead of emphasizing formal controls such as the law, it emphasizes good ethical conduct in one's work, such as dedication, honesty and adherence to democratic principles. This signals to public that the authorities will act in line with these stated ethical principles, attempting to communicate their integrity.

Transparency

Organizational transparency is facilitated with the disclosure of relevant information knowledgably to empower the public with the crisis situation and the organizations’ crisis management practices, showing that there is no room for cover-ups, lies, and malpractices. During health crises, all communication efforts undertaken by authorities are primarily

bolstering transparency, which could be achieved through various approach, such as consistent and punctual messaging as well as the establishment of diverse information dissemination channels. In this discussion, we only focus on how authorities showcase transparency through their information organization in the texts, which mainly involves providing detailed data.

In the early stages of the COVID-19 pandemic, authorities communicated critical data, such as positive or death case reports and technical reports, to the public. These data enabled the public to comprehend the evolving crisis, the risk level of equipment and measures, and the authorities' performance. By providing detailed data, the authorities try to convince the public that they are not being perfunctory or secretive, thus portraying an image of integrity.

Transference

A third parties can act as the ‘go-betweens’ in new relationships that enable new parties to transfer their expectations from the well-established relationship to unknown counterpart (Gillespie & Dietz, 2009). Hence, trust repair can be facilitated by transferring trust from credible party to the discredited party (Bachmann et al., 2015). We found that authorities attempted to transfer public trust in role models and authoritative figures to themselves through two strategies.

The first strategy is seeking endorsements from trustworthy parties. We found that authorities sought support for their policies, behaviors, or views from experts, role models, and influential individuals or entities in their tweets. These third-party endorsements communicate their assessment of the authority's ability, integrity, and benevolence, enabling the public to determine the organization’s trustworthiness.

The second strategy is creating heroic myths. We found that authorities highlighted the heroic deeds of some staff within the system, such as frontline health care workers and dedicated health system managers who exhibited professionality, bravery and selflessness. By doing so, authorities attempt to enhance the perceived ability, benevolence, and integrity of these employees, which is intended to transfer to the entire organization and system.

4.4.2 Cross-agency Comparison of Communication Strategy

The process of coding marked the 1087 occurrences of strategy adoption in the posts. A descriptive statistical analysis revealed differences in the adoption of communication strategies across the three regions (see table 4.3). It reveals a notable characteristic: among the three types of authorities analyzed, the CDCs in EU, U.S. and China employed the fewest communication strategies. This tendency may be attributed to the CDCs' primary role in providing scientific and technical support. Consequently, their approach to health communication is centered on the

dissemination of scientific knowledge and prevention measures, with a comparatively lower utilization of persuasive discourse. Furthermore, the limited scope of public services under the purview of CDCs, in comparison to the other two types of agencies, contributes to a more constrained communication content.

Region	Authority	IC	DE	CA	RI	SI	HR	DR	RE	HE	PD	SE	CH	Total
EU	EU Commission	61	11	1	3	19	3		15	9		9		131
	Health & Food Safety	19		1	2	6			3	1	1		1	34
	ECDC	5	1							1	4			11
	Total	85	12	2	5	25	3		18	11	5	9	1	176
US	The White House	23	17	21	11	16			13	11		19	1	132
	HHS	13	2		1	1			1					18
	CDC		1			1				3	8			13
	Total	36	20	21	12	18			14	14	8	19	1	163
China	The State Council	49	8	9	11	1		2	7	5	48	3	1	144
	NHC	55	70	56	19	12	5	4	34	24	118	20	174	591
	CCDC					1			1				11	13
	Total	104	78	65	30	14	5	6	42	29	166	23	186	748

Table 4.3 Strategy Adoptions of Authorities in Three Regions

Note: IC-Indicating the intended consequences of actions; DE-Describing the events; CA-Conducting attribution; RI-Reducing relational imbalance; SI-Shaping a common identity; HR-Highlighting the presence of regulations; DR-Declaring rewards and punishments; RE-Revealing the ethical value of behaviors; HE-Highlighting the ethical principles that govern behaviors; PD-Providing detailed data; SE-Seeking endorsements from trustworthy parties; CH-Creating heroic myths

Moreover, within the EU and the U.S., a notable distinction emerges when comparing the health department with the executive branch—revealing that the latter deploys a more extensive array of strategies, both in terms of variety and quantity. This underscores the significant impact of administrative jurisdiction on communication strategies: as the scope of public service widens, so does the complexity of communication, and at higher administrative levels, there is an augmented latitude in the utilization of communication strategies.

Contrastingly, a different trend is observed when comparing China's health department and executive branch. A possible explanation for this lies in the fact that the State Council has an official news organization directly under it—Xinhua News Agency—responsible for public opinion. Consequently, the State Council maintains a cautious and conservative communication style on social media. It prefers to introduce government resolutions and policies and retweet outbreak-related data, leaving the interpretation to official media outlets and subordinate units to uphold an inscrutable image. In contrast, NHC placed a greater inclination to engage with the public.

On the other hand, the functional reinforcement received by the NHC during the epidemic may contribute to its flexibility in adopting various communication strategies. To comprehensively address the national outbreak, the State Council, following the NHC's recommendation, established the "Joint Prevention and Control Mechanism of the State Council". With the NHC serving as the coordinator, a total of 32 central government departments collaborated under this mechanism (The State Council Information Office, 2020). This reinforced mandate is evident in the NHC's Covid-19 communication, where, in addition to information of pandemic prevention and control, the NHC also interpreted pandemic-related policies and decisions from various administrative branches on social media. This broadens the scope of communication content compared to DG SANTE and the HHS.

4.4.3 Cross-region Comparison of Strategy Adoption

In order to examine more visually the similarities and differences in the use of strategies by authorities in the EU, U.S., and China, we rank the frequency of use of each strategy in each region from highest to lowest in table 4.4.

EU		US		China	
IC	48%	IC	22.0%	CH	24.8%
SI	14%	CA	13%	PD	22.2%
RE	10%	DE	12%	IC	14%
DE	7%	SE	12%	DE	10%
HE	6%	SI	11%	CA	9%
SE	5%	RE	9%	RE	6%
RI	3%	HR	9%	RI	4%
PD	3%	RI	7%	HE	4%
HR	2%	PD	5%	SE	3%

CA	1%	CH	1%	SI	2%
CH	1%	HR	null	DR	1%
DR	null	DR	null	HR	1%

Table 4.4 Frequency of Strategy Adoption in the Three Regions

Note: IC-Indicating the intended consequences of actions; DE-Describing the events; CA-Conducting attribution; RI-Reducing relational imbalance; SI-Shaping a common identity; HR-Highlighting the presence of regulations; DR-Declaring rewards and punishments; RE-Revealing the ethical value of behaviors; HE-Highlighting the ethical principles that govern behaviors; PD-Providing detailed data; SE-Seeking endorsements from trustworthy parties; CH-Creating heroic myths

We found that authorities in the three regions showed some common preferences in terms of strategy adoption. The strategies of HR and DR, both of which employing the regulation and control mechanisms, are rarely observed across all three regions. Since highlighting the importance of regulation suggests that maintaining organizational integrity necessitates robust external controls instead of relying on intrinsic motivation as a guarantee, it could dissuade organizations from adopting these strategies proactively unless faced with an unequivocal level of concern and criticism from the public. Besides HR and DR, the strategies of DE, RE, HE, and RI are utilized with a moderate frequency across all three regions. In the following sections, we discuss the salient features of the EU, the U.S., and China's respective adoption of strategies.

EU agencies. EU institutions primarily wield authority for coordinating, collaborating, and supporting member states in addressing public health challenges, rather than engaging in direct interventions in national-level health crisis management. The principal health-related powers lie within individual member states. This characteristic of EU institutions may have contributed to a significant emphasis on IC strategy. Although the actions involved in the IC strategy—specifically, describing the policies and actions of institutions and their anticipated outcomes—are integral to the responsibilities of authorities in the U.S. and China, they represent only a portion of their overall tasks. In contrast, for the EU during a health crisis, this aspect takes centre stage, constituting the primary role played by the EU agencies in health crises.

In comparison to authorities of the U.S. and China, the EU agencies are less inclined to highlight negative events or achievements during the pandemic (DE strategy) since these occurrences are less directly pertinent to EU institutions. For the same reasons, the DR strategy has seldom employed by EU agencies, as they face challenges in attributing achievements of

pandemic management solely to their leadership and also lack the incentive to embark on a blame-shifting exercise for negative events.

U.S. federal authorities. It is noteworthy that U.S. authorities employ SE strategy more frequently than the EU and Chinese agencies. The underlying logic behind seeking third-party endorsements is crucial, as it suggests that the organization's inherent trustworthiness and legitimacy alone are insufficient to warrant its adequate development, which creates a level of dependency on external validation. The greater the need for endorsements, the more pronounced the organization's trust deficit and reliance on external validation.

EU agencies primarily use SE strategy to demonstrate support from influential public figures for the programs they promote. This reliance on endorsements stems from the EU's limited influence in the concrete implementation of crisis management; Chinese central authorities utilized this strategy mainly to showcase support for China's pandemic management model from foreign experts and officials, responding to controversies surrounding the "zero-covid" policy. In the contrary, U.S. federal authorities predominantly employed SE strategies to highlight praise for President Trump, aiming to bolster the president's trustworthiness rather than the federal government. The more frequent use of SE strategy in the U.S. may be attributed to the significant trust crisis that the president faced during his tenure.

This pattern extends to the use of CA strategy by U.S. federal agencies. While Chinese authorities also employed CA strategy to some extent, they primarily emphasized achievements, attributing them to effective leadership of entities representing the whole highest political authority, including the General Secretary, the Party, and the central government. In contrast, U.S. institutions tended to credit accomplishments to President Trump's personal intelligence, competence, and character. Concurrently, U.S. institutions attributed failures in pandemic prevention to the media, opposing parties, international competitors, and the World Health Organization (WHO). This pattern underscores the heightened partisan antagonism and isolationism prevalent during the Trump era.

Chinese central authorities. A distinctive aspect of China's central authorities' strategic communication during the pandemic is the extensive use of the "CH" strategy, which involves portraying heroic images of frontline health organizations and medical workers. This approach was notably less prevalent in the EU and the U.S., and the variance can be attributed to divergent narratives surrounding the severity of the pandemic. In China, COVID-19 is depicted as a grave, life-threatening menace to the entire nation, casting frontline healthcare workers as soldiers on the front lines facing constant risks of death. This portrayal aligns with a narrative of total war mobilization, necessitating the depiction of war heroes to bolster support and instill confidence.

Conversely, in the EU and the U.S., the gravity of the Covid-19 threat hasn't been emphasized as much. Given the absence of an "apocalyptic" crisis, the presentation of heroes has been deemed unnecessary.

Meanwhile, China's extensive and centralized health system creates a conducive environment for the CH strategy. The majority of Chinese healthcare workers operate within the public healthcare system, integrated into the government's administrative framework. During the outbreak, they were uniformly organized by the government to confront the "Wuhan battlefield". Therefore, enhancing trustworthiness of health workers helped to build public confidence in the entire health and administrative system.

This centralized healthcare system may also be related to the fact that PD strategies are heavily used in China. Indeed, the provision of outbreak-related data is an important task in health crisis management, but much less data publication on social media has taken place than expected in the EU and the U.S. It may be the case that in the EU and the U.S. these data are mainly published on websites or other platforms, yet daily data publication on social media in China has certainly enhanced the accessibility of information.

This centralized healthcare system also contributes to the prevalent use of the "PD" strategy in China. While the provision of outbreak-related data is a crucial aspect of health crisis management, the EU and the U.S. have published much less data on social media compared to China. Daily data publication on social media in China enhances the accessibility of information. Notably, the detailed nature of the data published in China, including almost thirty indicators at both national and local levels, significantly enhances the credibility of the information. This level of detail stems from daily data reporting to the National Health Commission by various local health agencies—a mechanism that poses challenges for EU and U.S. authorities lacking sufficient control over local agencies.

Moreover, we observed a significantly lesser prevalence of SI strategy in China compared to the EU and the U.S. The emphasis on a unified identity, such as EU citizens and Americans, plays a crucial role in binding together a decentralized system. While in Chinese political discourse, however, the concept of public power—embodied by the Party and the government—and the people are distinctly defined, with the government often portrayed as the leader and protector of the people.

It is crucial to recognize that Chinese authorities, while using SI strategies less frequently, heavily incorporate them into their deployment of the CH strategy. They placed emphasis on various social identities of healthcare workers, portraying them as children, parents, women, and Gen-Z. This approach aims to establish a connection that facilitates public trust in

healthcare workers. Importantly, this trust in healthcare workers is seamlessly transferred to the broader system due to their role as integral employees within the administrative structure. In this dual capacity, healthcare workers effectively become the "rhizome" of public trust in the whole administrative system.

4.5 Conclusion and Discussion

Ensuring public trust is a core concern of public administration, and the recent health crisis has posed significant challenges in this regard (Robinson et al., 2021; Tolbert & Mossberger, 2006; Zhang et al., 2021). In this volatile context, communication emerges as an indispensable tool for repairing public trust (Liu & Duarte, 2023). This study has investigated the communication strategies that authorities adopted to repair public trust during a health crisis and discussed the possible institutional effects on the strategy adoptions.

Through a qualitative analysis of social media posts from authorities in the U.S., China, and EU during the early stages of the COVID-19 pandemic, we have identified 12 communication strategies in six categories that were pertinent to trust repair (answer to Q1) and discussed the dimensions of trust (ability, benevolence, integrity) that each strategy is intended to repair (answer to Q2). Consequently, we have developed a typology of trust-repairing communication strategies that offers two advantages:

Firstly, this framework offers robust insights into the theory and practice of communication for trust repair. By leveraging the strengths of previous communication strategy frameworks (Castro et al., 2023; Hu & Zhong, 2023; Lee, 2022), our framework systematized communication behaviors into strategies by utilizing the trust repair mechanism as a criterion for categorization. In addition, the framework delves into the anticipated trust repair goals associated with each strategy. Through this approach, this framework coherently intertwines communication behaviors, trust repair mechanisms, and trust dimensions. As a result, it provides insights for scholars' comprehension of the process and rationale behind trust repair via communication and furnishes practical guidance for public administrators' crisis communication.

Second, this framework extends the horizon of trust restoration. Existing research on trust repair mechanisms and communication strategies has predominantly centered on trust restoration following violations and the organization's reactive handling of adverse events. However, this narrow focus fails to comprehensively capture the diverse initiatives employed in trust repair within the intricate contexts of health crises. Our communication strategy

framework includes both reactive organizational responses for eliminating negative perceptions and proactive measures for positive image cultivation. This broader perspective contributes to a more comprehensive understanding of trust repair and relevant strategies.

Furthermore, a comparative analysis encompassing EU, U.S., and China has revealed the differences on the adoption of communication strategies across these three regions and unraveled possible reasons for these divergences from the institutional perspective (answer to Q3). Our findings suggest that the degree of authority, the scope of institutional functions, the administrative system, and the political ecology correspond to the distinctive strategies employments in three regions. Specifically, the extent of institutional authority and the breadth of public services offered play pivotal roles in shaping the degree of autonomy in the employment of strategy by various agencies; the specific roles of EU agencies and China's central authorities in the realm of health crisis management, the dynamics of China's "zero-Covid" policy, and the intricate political ecology during the Trump era collectively influence the predisposition of authorities towards their adoption of strategies.

These insights serve as valuable supplements to address the absence of cross-region comparison in trust repair research. While overarching principles and approaches exist for trust repair, their implementation is intricately shaped by contextual factors. Thus, mere comprehension of applicable strategies is insufficient, and the pivotal consideration lies in the institutional factors that both enable and limit their implementation. These insights not only aid scholars in scrutinizing the intricacies of trust repair dynamics across locales but also empower administrators to apply these approaches judiciously in alignment with the unique characteristics of the local context.

This study has limitations that should be acknowledged. Firstly, while delineating the trust dimensions targeted by these communication strategies is vital for distinguishing them from other positive image-building behaviors, we have not been able to determine to what extent the strategies could actually achieve this in practice. Hence, in our analysis and discussion, we prudently considered trust dimensions as an "objective" rather than an "outcome" of the strategies. One of the main reasons for not examining the effectiveness of strategies in our study was the fact that Weibo allows account holders to filter or turn off comments, it is difficult to analyze genuine public responses to posts. Therefore, we recommend future experimental studies to verify the effectiveness of these strategies.

Secondly, the exploration of institutional factors that influencing trust-repairing communication in this paper requires further refinement and systematization. Our discussion of variations in Covid-19 communication across EU, U.S., and China, primarily focusing on the

frequency of communication strategy employment, falls short of capturing the nuanced aspects of communication. We suggest that future studies employ a comprehensive content analysis to delve into the micro-level intricacies of communication and to establish an integrated framework of institutional effects.

CHAPTER 5

5. General Conclusion

5.1 Contributions

Public trust forms the bedrock of effective public administration, acting as a lubricant that facilitates smooth interactions between the government and its citizens (Fledderus et al., 2013; Goodsell, 2006; Liu, 2022). During health crises, the importance of trust in public administration is magnified. Without the trust of the populace, administrative measures and policies aimed at mitigating crises struggle to garner citizen cooperation and adherence (Hvidman, 2019; Nolte and Lindenmeier, 2023). In such tumultuous circumstances, communication emerges as a pivotal avenue for restoring public trust and addressing exigencies of emergencies (Gillespie & Dietz, 2009; Han & Baird, 2022; Park et al., 2015).

This research has provided substantive insight to the understanding of trust-repairing communication during health crises, delineating three pivotal contributions: 1) an elucidation of the multifaceted nature of challenges to public trust during health crises, 2) an examination of the efficacy of the dominant trust-repairing communication strategies that acknowledge varying degrees of responsibility for the crisis, and 3) the development of a novel typology of communication strategies aimed at restoring public trust during health crises, drawn upon a comprehensive framework of trust repair mechanisms.

5.1.1 Challenges to Public Trust During Health Crises

The exigency of trust restoration amid health crises has emerged as a focal point within scholarly discourse only in recent times, yet it remains inadequately deliberated upon, precipitating a multitude of disparate scholarly conjectures regarding the ramifications of health crises on trust. Employing a systematic review of previous literature, Study 1 posits three pivotal challenges to public trust engendered by health crises: a) information confusion, stemming from misinformation, conflicting opinions, and high uncertainty during crises, as the driver of trust erosion, b) inadequate performance of the public sector, involving failure in controlling the crisis particularly the failure to effectively communicate crisis-related information, and c) negative crisis experiences, involving various psychological and substantive harms caused by the crisis environment, which intensified the pre-existing negative view of the public sectors.

These three challenges to public trust exemplify the unique dynamics of trust erosion amid health crises, extending beyond the predominant focus of trust-restoration scholarship. Conventional research on trust repair has primarily concentrated on instances of trust breaches, underscoring the adverse consequences stemming from trustee transgressions (e.g., Ren & Gray, 2009; Sitkin & Roth, 1993; Tomlinson & Mayer, 2009). However, diverging from the customary focus of trust repair inquiries, while subpar performance ensues from trust violations by trustees, neither information ambiguity nor adverse crisis experiences necessarily stem from such breaches. Thus, there arises a pressing need to broaden the purview of trust repair within the milieu of public crises. To elucidate, during periods of public crises, trust erosion may arise from both trustee misconduct and external factors such as misinformation dissemination and negative crisis encounters. Consequently, any endeavors directed at restoring such diminished trust should be acknowledged as components of trust repair.

Study 2 delved deeper into this finding of Study 1 by conducting a scenario-based experiment to investigate the impacts of inadequate organizational performance and negative crisis experiences on public trust. In this iteration, we refined the concept of inadequate organizational performance by delineating it into three distinct types of crisis incidents: victim crisis, accidental crisis, and preventable crisis. Each category delineated a specific form of organizational failure, with the victim crisis attributed to external environmental factors, the accidental crisis to uncontrollable internal factors, and the preventable crisis to deliberate malfeasance within the organization. Additionally, a prevalent health crisis scenario was devised as a control group, portraying a situation where patients succumb to natural causes subsequent to an infection, serving as an exemplar of the physical and psychological harm of a crisis.

The findings of Study 2 indicates that, in instances devoid of organizational failures, a discernible trust deficit is absent in the prevailing state of a health crisis, and little responsibility for patient deaths is attributed to the health sector. This aligns with the observations made by Study 1, which assert that the negative experience caused by health crisis influence public trust only by exacerbating pre-existing biases against public institutions.

However, following the onset of organizational failure, irrespective of its originating factors, there ensues an erosion in public trust. Specifically, in instances of the victim crisis instigated by organizational failures attributable to environmental factors, perceived ability experiences a slight decline below the threshold. In the accidental crisis stemming from organizational failures beyond the purview of its control, both perceived ability and integrity fall beneath the threshold. Moreover, in the preventable crisis resulting from deliberate

misconduct within the organization, perceived ability, integrity, and benevolence all descend below the threshold. Overall, as the level of responsibility attribution escalates from the victim crisis to accidental crisis to preventable crisis, trust exhibits diminishing levels, on more dimensions, compared to the prior type of crisis.

Furthermore, the tripartite facets of trust experience distinct impacts amidst a health crisis. The findings from Study 2 elucidate a discernible variance across all the victim, accidental, and preventable groups emerged solely in the perceived integrity, signifying that the impact of the crisis type on trust manifests with greater salience in the integrity dimension. The perceived ability exhibited a noteworthy disparity solely between the victim crisis and the preventable crisis, indicating a similarity across most crisis scenarios in this dimension. Plausible explication for this phenomenon is the health sector's obligation of treating outbreak patients, and the demise of patients, irrespective of the causal factors contributing to their demise, engenders repercussions on the perception of the organization's performance.

Our research offers initial insights into the influence of the intrinsic attributes of health crises on public trust. Nevertheless, it is imperative to acknowledge that the complexities surrounding public trust during a health crisis in practical contexts surpass those delineated within experimental scenarios. The case of Covid-19 underscores this point vividly, wherein the politicization of fundamental public health strategies, such as mask mandates, lockdown enforcement, and vaccination initiatives, became intertwined with partisan agendas, precipitating a decline in trust towards public health authorities. Furthermore, the multifaceted ramifications of health crises extend beyond public health realms to encompass economic dimensions, significantly impacting the financial stability of numerous individuals. This engenders a dual predicament wherein those experiencing financial strain may contest governmental emphasis on epidemic mitigation, while those susceptible to health risks may express discontent when governmental priorities lean towards sustaining economic growth. In sum, the challenges to public trust posed by the natural and societal factors during health crises likely exert a more profound and intricate influence than conventionally perceived.

5.1.2 Efficacy of the Dominant Trust-repairing Communication Strategies

In extant scholarly discourse, investigations into communication strategies for trust restoration primarily center on verbal articulations. These strategies aim to mitigate the trustor's adverse perception of the trustee's trustworthiness through varying degrees of acknowledgment of negative occurrences (cf. Bies & Shapiro, 1987; Schlenker & Darby, 1981; Tomlinson & Mayer, 2009). Within this realm, scholars have delineated a spectrum of associated tactics,

among which denial and apology emerge as paramount. Denial entails a categorical repudiation of responsibility for a given event, whereas apology represents a complete acknowledgment of culpability. These two strategies are encapsulated within diverse theoretical frameworks and have garnered substantial attention and engendered contentious debates (e.g., Brühl et al., 2018; Kim et al., 2004; Mattila, 2009; Mehta et al., 2020; van Laer & de Ruyter, 2010; Utz et al., 2009).

Previous research on trust repair found that apology is more effective than denial, especially in a context of severe trust violation (e.g., Brühl et al., 2018; Coombs, 2007; Gillespie & Dietz, 2009; Mehta et al., 2020). Two of the studies reviewed by Study 1, however, yielded that denial aroused more positive public sentiment and trust than apology during health crises (DiStaso et al. 2015; Masngut & Mohamad, 2021). Therefore, Study 2 delved deeper into this issue by conducting a scenario-based experiment to investigate the impacts of denial and apology on public trust after a severe violation during a health crisis.

Previous research provides hypothesis support for Study 2, wherein scholars have delineated three key components contributing to the superior efficacy of apologies vis-à-vis denials. These components include: 1) the explaining component, which involves transparently explaining the causes of the incident; 2) the soothing component, which entails conveying compassion and concern towards the affected populace; and 3) the committing component, which involves committing to fulfilling duties in a manner commensurate with safeguarding the welfare of the public (Coombs, 1999; Ferrin et al., 2007; Gillespie & Dietz, 2009; Gillespie et al., 2014; Kim et al., 2004). However, within the context of a health crisis, these discursive components of "advantage" attributed to apologies may also be integrated into the narrative of denial, potentially conferring an advantage to denial over apology when both are imbued with identical components (Fuoli et al., 2017). Moreover, the incorporation of additional components could enhance the effectiveness of both denial and apology compared to instances solely comprising denial or acknowledgment of crisis responsibility (Lewicki et al., 2016). Therefore, our investigation assessed the efficacy of denial and apology under two main conditions: one involving solely the acknowledgment of crisis responsibility and the other incorporating the same additional discursive components.

Our examination of the effects of the two predominant communication strategies has unveiled several disparate findings in comparison to existing scholarly literature. The analysis of attributes such as ability, benevolence, and integrity demonstrate minimal incongruity between denial and apology strategies, with no discernible account-component interaction of significance detected. This implies a commensurate efficacy in both acknowledging and

refuting responsibility, regardless of the discursive components employed. Consequently, in instances of grave organizational transgressions such as corruption, organizations need not excessively deliberate on the degree to which responsibility should be acknowledged.

Conversely, the incorporation of discursive elements significantly influences trust dynamics. Particularly, when exclusively entailing denial or acknowledgment of crisis responsibility, both denial and apology resulted in scores of the ability, benevolence, and integrity falling below the threshold. However, when accompanied by assurances of future corruption prevention, trust across all dimensions witnessed augmentation, with the perceived benevolence and integrity showing a positive status. Furthermore, when complemented by detailed elucidations of the incident's origins, the perceived ability and integrity experienced enhancement; and when coupled with expressions of compassion and concern, only perceived ability underwent significant enhancement. Hence, the integration of discursive components within public communication emerges as pivotal in the reconstruction of public trust.

The findings suggest that the prevailing paradigm of communication strategies exhibits constrained applicability within the context of health crises. Established taxonomies of coping strategies are rooted in attribution theory, wherein ascribing responsibility for the crisis serves as the principal criterion for categorizing strategy archetypes, relegating non-attributive strategies to a subordinate status or ancillary discursive element. Nevertheless, the influence of these ancillary strategies or discursive elements remains substantial and invariant, irrespective of variations in the degree of responsibility acknowledgement. Consequently, there arises a necessity to formalize these ancillary strategies as discrete categories analogous to verbal accounts.

An additional corroboration substantiating the above claim is gleaned from the analysis conducted in Study 2 regarding the efficacy of the bolstering strategy. Historically regarded as a supplementary approach not to be employed in isolation, this strategy eschews the discussion of explicit responsibility for the crisis, opting instead to cultivate a favorable perception by evoking the organization's prior commendable actions and commending its advocates. However, our findings demonstrate that when employed independently, the bolstering strategy markedly heightens perceived ability, benevolence, and integrity, with this augmentation consistently observed across various crisis scenarios.

5.1.3 A Novel Typology of Trust-repairing Communication Strategies

Collectively, Study 1 and Study 2 elucidate the bilateral dynamics inherent of public trust amidst a health crisis, underscoring the constraints inherent in the attributional perspective

commonly employed in traditional trust repair inquiries. On one hand, health crises engender a myriad of challenges to public trust that transcend the discrete transgressions focalized by the attributional perspective. On the other hand, the degree of responsibility acknowledgement amidst a health crisis fails to significantly impact the efficacy of communication in trust restoration, thereby exposing the inadequacies of the communication strategy typology delineated solely on the attributional perspective. Consequently, this research advocates for the application of Bachmann, Gillespie, and Priem's (2015) comprehensive trust repair mechanism framework to methodically formulate communication strategies tailored to the exigencies of trust repair during health crises.

Study 1 serves as an initial foray into the re-systematization of trust-repairing communication strategies. It identified five categories of communication strategies adopted by health authorities during health crises to repair public trust and discussed the communication elements - sender, message, encoding, noise elimination and channel - used in those strategies. Moreover, the analysis draws on the framework of Bachmann, Gillespie, and Priem (2015) elucidated how the identified strategies repair trust through the six trust-repair mechanisms: sense-making, relational, regulation and control, ethical culture, transparency, and transference.

These findings underscore the intrinsic of trust-restoration communication, that is, the materializations of the trust repair mechanisms in the use of communication elements, thereby mitigating adverse public perceptions regarding an organization's trustworthiness while fostering favorable perceptions. Moreover, Study 1 posits that the entirety of Bachmann, Gillespie, and Priem's (2015) framework's six mechanisms could operate via communication channels, thus establishing a theoretical groundwork for a novel typology of communication strategies. Nonetheless, Study 1's categorization of communication strategies, encompassing a diverse array of communicative elements, results in a lack of dimensional uniformity within the classifications. Furthermore, a singular strategy within this framework may engage multiple trust-restoration mechanisms, impeding a clear visualization of its functional role.

In Study 3, we developed of communication strategies, drawing from Bachmann, Gillespie, and Priem's (2015) framework, through a qualitative examination of social media posts disseminated by health authorities in China, the United States, and the European Union during the early stages of the Covid-19 pandemic. This novel typology concentrates on the message content rather than other facets of communication.

We have identified 12 communication strategies in six categories (assessment, relational, regulation and control, ethical culture, transparency, and transference) that were pertinent to trust repair and discussed the dimensions of trust (ability, benevolence, integrity) that each

strategy is intended to repair. Consequently, we have devised a typology of trust-repairing communication strategies, conferring two advantages.

Firstly, our framework proffers robust insights into both the theoretical underpinnings and practical applications of communication aimed at trust repair. By synthesizing extant communication strategy frameworks (Castro, Bustos, and Gonzatti 2023; Hu and Zhong 2023; Lee 2022), our model systematically organizes communication behaviors into strategies, utilizing trust repair mechanisms as a pivotal criterion for classification. Furthermore, the framework delineates the anticipated trust repair goals corresponding to each strategy. Through this methodological approach, our framework intricately intertwines communication behaviors, trust repair mechanisms, and trust dimensions, thereby enhancing scholarly comprehension of the underlying processes and rationales behind trust repair via communication, while concurrently furnishing pragmatic guidance for public administrators engaged in crisis communication.

Secondly, our framework extends the purview of trust restoration. Prevailing research on trust repair mechanisms and communication strategies has predominantly fixated on trust restoration subsequent to breaches and the reactive management of adverse events by organizations. However, this narrow focus fails to comprehensively encapsulate the diverse array of initiatives deployed in trust repair within the intricate contexts of health crises. Our communication strategy framework encompasses both reactive organizational responses aimed at mitigating negative perceptions and proactive measures geared towards fostering positive image cultivation. This broader perspective engenders a more comprehensive understanding of trust repair and its attendant strategies, thereby enriching the discourse on the subject.

Furthermore, a comparative analysis encompassing EU, U.S., and China has revealed the differences on the adoption of communication strategies across these three regions and unraveled possible reasons for these divergences from the institutional perspective. Our findings suggest that the degree of authority, the scope of institutional functions, the administrative system, and the political ecology correspond to the distinctive strategies employments in three regions. Specifically, the extent of institutional authority and the breadth of public services offered play pivotal roles in shaping the degree of autonomy in the employment of strategy by various agencies; the specific roles of EU agencies and China's central authorities in the realm of health crisis management, the dynamics of China's “zero-Covid” policy, and the intricate political ecology during the Trump era collectively influence the predisposition of authorities towards their adoption of strategies.

5.2 Theoretical Implications and Future Research

The theoretical significance of this research lies in its discernment of the limitations inherent in prevailing trust repair when adopted in the context of health crises. Specifically, it illuminates the inadequacies of the attributional perspective in comprehensively addressing the intricacies of trust erosion and repair during such crises. Moreover, it highlights the flawed nature of the existing categorization of trust repair communication strategies, which are primarily rooted in this perspective. Consequently, this study advances a novel typological framework for trust-repairing communication strategies, grounded in a comprehensive trust-repairing mechanism perspective.

Primarily, extant scholarly discourse predominantly centers on rectifying trust deficits stemming from breaches, thereby delineating a consensus around the paradigm of trust erosion—a conceptual framework wherein breaches by the trustee undermine the trustor's initial favorable expectations. However, the evaluation of trustees by trustors is influenced by multifaceted factors, a complexity magnified within the framework of health crises. This study discerns that alongside governmental inadequacies, public trust undergoes trials due to information disarray and adverse crisis experience.

Trustees assess their peers based on the information they are provided, yet amidst a health crisis, accessing comprehensive data regarding the crisis and governmental responses becomes challenging, necessitating reliance on secondary information channels. Consequently, an asymmetry in information arises, fostering an information deficit. Thus, the unfavorable appraisal of trustees by trustors may stem from distorted information, leading to a misinterpretation of realities. Furthermore, adverse physical and psychological encounters may trigger negative associations, akin to how past infidelity in a relationship can prompt heightened suspicion towards present behaviors of a partner, or how previous emotional wounds may hinder acceptance of new relationships.

It is imperative to elucidate that the vigilance regarding violations persists as a vital component in the context of health crises. This research delineates that transgressions, notably exemplified by instances of corruption, wield substantial potential to undermine trust, surpassing the impact of inadvertent lapses and those stemming from external influences. Consequently, the extant scholarly discourse on trust erosion has not been invalidated but rather augmented by these findings.

Secondly, extant literature predominantly frames the role of communication in trust restoration through the lens of the attributional perspective. This perspective posits that trust

remains intact if violations are not attributed to internal, stable, and controllable factors of the trustee, and communication is seen as the means by which the trustor's attributions of responsibility are managed, varying in the extent to which responsibility for the event is acknowledged.

However, this research highlights that organizational failure represents merely one facet of the threats to public trust, with natural and environmental factors exerting equally significant influences. Addressing these multifaceted challenges demands more than mere discussions of attributions of responsibility. On one hand, amidst confusing information, ensuring the acceptance of an organization's explanation of responsibility attribution becomes arduous. On the other hand, even in the absence of overt transgressions, negativity can still fester under high stress.

A scenario-based experiment conducted in this research provides emperical evidence for those arguments. The results reveal that the acknowledgment of responsibility in a transgression scenario does not necessarily impact public trust. Conversely, the absence of discussion regarding responsibility attribution within the message enhances communication effectiveness. Consequently, this research suggests that trust-repairing communication represents an amalgamation of communicative elements, transcending the traditional attributional framework, thereby enriching theoretical perspectives on the role of communication in trust repair.

A further constraint inherent in extant trust repair literature guided by the attributional perspective pertains to prevailing paradigms of communication strategies. Within these paradigms, strategies are delineated according to the extent of responsibility acknowledgment regarding an event, relegating those that eschew attribution of responsibility to subordinate status as secondary strategies or discursive components, precluding their independent utilization. However, our investigation unearthed a notable augmentation in trust engendered by the bolstering strategy, a secondary approach, when employed in isolation, a phenomenon observed across diverse crisis scenarios. Consequently, we formulated a novel typology of communication strategies predicated on a comprehensive framework of trust repair mechanisms to encompass a broader spectrum of communication behaviors geared towards trust rehabilitation and to explain the underlying logic by which they repair trust.

This framework dismantles the constraints of the attributional perspective and fosters a more expansive inquiry into communication strategies, transcending the narrow focus on responsibility attribution. Moreover, it facilitates the empirical validation of communication strategy efficacy. Conceiving the impact of a given message on trust solely within the realm of responsibility acknowledgment or denial neglects the efficacy of other mechanism-based

strategies inherent in the message, fostering discord regarding communication strategy effectiveness. Subsequent research endeavors could thus reassess communication strategy effectiveness within the framework advanced in this research.

It is necessary to acknowledge the inherent limitations of this research in addressing certain facets, thereby highlighting the necessity for more comprehensive investigations in subsequent endeavors to construct a robust theoretical framework. Primarily, within the realm of trust erosion during health crises, this study hints at the challenge posed by information confusion to public trust, yet falls short in delving into the myriad types of misinformation and rumors prevalent during such crises and their precise impact on public trust. Furthermore, while the study contends that adverse experiences during crises detrimentally affect public trust, the conducted experiment merely elucidates that trust remains relatively unscathed in the absence of prior unfavorable performance, leaving uncertainties regarding the nuanced interplay of historical organizational performance and public trust. Although extant literature in crisis communication delineates the repercussions of these factors on organizational reputation (e.g., Coombs, 2004; Nekmat & Kong, 2019), their precise effects on public trust necessitate validation through forthcoming empirical inquiries.

Secondly, notwithstanding the development of a novel typology of communication strategies, the efficacy of these strategies in ameliorating trust remains speculative pending empirical verification. Subsequent research endeavors should prioritize the application of this framework to analyze communication practices in previous public crisis cases, thereby facilitating continual refinement of its theoretical underpinnings. Moreover, the assessment of the effectiveness of these strategies across diverse contextual landscapes is imperative, particularly in light of socio-institutional dynamics that intricately shape the implementation and efficacy of trust repair (e.g., Bachmann, 2010; Ren & Gray, 2009; Ferrin & Gillespie, 2010). Subsequent investigations must navigate these complexities to elucidate the nuanced dynamics of trust repair in varying socio-institutional milieus.

5.3 Implications for Practice

This study also offers valuable practical insights for public managers and policymakers engaged in crisis management within the public sphere. Primarily, it underscores that transgressive behaviors, notably corruption, pose the most significant threat to public trust. Consequently, fostering a governance framework characterized by transparency and integrity emerges as paramount in safeguarding public trust. Within this context, the hesitancy over whether to

acknowledge transgressions and organizational responsibility holds limited significance, as our empirical findings demonstrate that such acknowledgments or denials bear no discernible impact on trust levels. Rather, the study advocates for redirecting focus towards alternative strategies, including the dissemination of candid information, commitment to future promises, provision of emotional support, publicizing exemplary performance, and fostering positive engagement with the populace. Moreover, it underscores the imperative for enhanced proficiency and professional acumen in public communication to establish a robust public relations apparatus and guiding principles.

Additionally, the communication strategy framework proposed in this research serves as a practical tool for public administrators to orchestrate discourse effectively. By accentuating the complementary nature of various discursive strategies in trust repair, the framework advocates for the synergistic integration of multiple strategy categories to address the dimensions of ability, integrity, and benevolence comprehensively. For instance, a controversial policy defended by the public sector could be restored through a combination of strategies such as highlighting the policy's feasibility and effectiveness as well as achieved successes by previous similar policies (assessment & ability), expressing regret and apologizing for negative effects and praising for public support and cooperation (relationship & benevolence), and ensuring transparency and public supervision (transparency & integrity). Employing this combination of approaches would firmly restore trust and foster public support for the organization and its policies.

Finally, a succinct summation and explication of the general conclusion of this research draw the discussion of entire thesis to a close. This research scrutinizes the bilateral dynamics of public trust amid a health crisis, delineating the repercussions of the crisis milieu and governmental responses on public trust. Our analysis discerns that the primary impediment to public trust during health crises persists in the transgressions of governmental entities, yet simultaneously underscores the pertinence of natural and social environmental factors on trust dynamics. Within this milieu, effective communication necessitates nuanced orchestration and strategic deployment to efficaciously restore trust, encompassing endeavors to delineate accountability for the crisis to mitigate deleterious repercussions on organizational trustworthiness and to engage in proactive self-promotion to fund the trust deficit. Notably, trust-repairing communication operates within a comprehensive framework encompassing six mechanisms: sense-making, relational strategies, regulation and control measures, cultivation of ethical culture, transparency initiatives, and transference tactics. Consequently, we have

formulated a novel framework of communication strategies poised to transcend the constraints of the attributional paradigm prevalent in extant trust repair literature, thereby facilitating broader inquiry into communication strategies for trust restoration.

In an age marked by unprecedented connectivity and rapid dissemination of information, the world finds itself confronting an array of complex health crises. From infectious diseases to ongoing challenges such as chronic health epidemics and humanitarian emergencies, the global community faces a myriad of challenges that demand swift and effective action. Amidst these trials, one constant emerges as paramount: the indispensable role of communication in building public trust and mitigating the impact of health crises. We believe that the imperative to remain vigilant and equipped to confront health-related exigencies and other communal crises persists both presently and prospectively. Hopefully, this research will make contribution to fortifying our resilience against the unpredictable vicissitudes.

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APPENDIX

Appendix A. STUDY 1: Characteristics of 37 publications included in the review

Authors Year	Health Crisis	Health Crisis	Country	Cause of Trust Erosion	Strategy>Mechanism	Messager	Method
Asubiaro et al. 2021	Covid-19 Early stage	Covid-19	Sub-Saharan Africa	information confusion, negative crisis experience	• verbal account>transparency • use of social media>support for other mechanisms	Health sector	Mixed–Archival Data
Batova 2021	Covid-19 Early stage	Covid-19	USA	inadequate performance of the public sector	• verbal account>transparency • use of social media>support for other mechanisms	CDC	Qualitative –Archival Data
Bickham and Francis 2021	Covid-19 Early stage	Covid-19	USA	negative crisis experience	• verbal account>transparency	Central government	Quantitative -Survey
da Silva 2021	Covid-19 Early stage	Covid-19	Portugal	negative crisis experience	• discourse construction>relational • discourse construction>transference	Municipal governments	Qualitative –Archival Data
Deslatte 2020	Covid-19 Second Wave	Covid-19	USA	inadequate performance of the public sector	• verbal account>transparency	CDC, President, State, Expert advisor	Quantitative -Experiment
DiStaso, Vafeiadis,	General Public	General Public	USA	information confusion	• verbal account>sense-making	Hospital	Quantitative -Experiment

and Amaral 2015	Health Crisis	Health Crisis			• verbal account>relational • verbal account>transparency • emotional appeal>relational • use of social media>support for other mechanisms		
Driedger et al. 2021	H1N1	H1N1	Canada	information confusion	• credible information source>sense-making • credible information source>transference	News media	Qualitative –Interview
Flores and Asuncion 2020	Covid-19 Early stage	Covid-19	Philippine	inadequate performance of the public sector	• credible information source>transference • verbal account>transparency • use of social media>support for other mechanisms	Local governments	Mixed-survey
Frost et al. 2019	SARS & H7N9	SARS & H7N9	Mainland China	information confusion	• verbal account>transparency	Health sector	Qualitative – Questionnaire, Archival data
Gonçalves, Piñeiro-Naval, and Toniolo 2021	Covid-19 Peak	Covid-19	Portugal	information confusion, inadequate performance of the public sector	• verbal account>transparency	Central government	Quantitative -Survey

Hall and Wolf 2019	General Public Health Crisis	General Public Health Crisis	Germany	information confusion	• verbal account>transparency	Central and local governments, Health sector, Expert advisor	Qualitative – Interview, Archival Data, Observation
Hartanto and Siregar 2021	Covid-19 Early stage	Covid-19	Indonesia	inadequate performance of the public sector	• verbal account>transparency	Local government	Quantitative – Secondary quantitative study
Holroyd et al. 2020	General Public Health Crisis	General Public Health Crisis	USA	inadequate performance of the public sector	• verbal account>transparency	Health sector	Qualitative –Interview
Huang and DiStaso 2020	General Public Health Crisis	General Public Health Crisis	Unspecified	negative crisis experience	• verbal account>transparency • emotional appeal>relational	Hospital	Quantitative -Experiment
Jain et al. 2021	Covid-19 Early stage	Covid-19	India	negative crisis experience	• emotional appeal>relational	political leaders	Qualitative –Archival Data
Kaur and Mishra 2020	Covid-19 Early stage	Covid-19	India	inadequate performance of the public sector, negative crisis experience	• emotional appeal>relational	Prime Minister	Qualitative –Archival Data
Kaur, Verma, and Ranjan 2021	Covid-19 Early stage	Covid-19	India	information confusion	• use of social media>support for other mechanisms	political leaders	Qualitative –Archival Data
Khan et al. 2019	General Public	General Public	Canada	information confusion,	• use of social media>support for other mechanisms	Health sector	Qualitative –Interview

	Health Crisis	Health Crisis		negative crisis experiences			
Kjeldsen et al. 2021	Covid-19 Early stage	Covid-19	Norway	information confusion	• discourse construction>transference	Health sector	Qualitative –Archival Data
König and Breves 2021	Covid-19 Not specifically mentioned	Covid-19	Germany	information confusion	• credible information source>transference	Expert, Politicians	Quantitative -Experiment
Latkin et al. 2021	Covid-19 Vaccine Promotion	Covid-19	USA	information confusion	• credible information source>transference	News media, Expert	Quantitative -Survey
Lee et al. 2021	Covid-19 Early stage	Covid-19	South Korea	information confusion	• use of social media>support for other mechanisms	Central Government	Quantitative – Secondary quantitative study
Leschzyk 2021	Covid-19 Early stage to Vaccine Promotion	Covid-19	Germany and Brazil	information confusion	• discourse construction>regulation and control • discourse construction>ethical culture • discourse construction>transference	Politicians	Qualitative-Archival Data
Liu et al 2020	General Public Health Crisis	General Public Health Crisis	USA	information confusion, inadequate performance of the public sector, negative crisis experience	• discourse construction>sense-making • discourse construction>relational	Central Government	Quantitative – Experiment

					• discourse construction>transference		
MacKay et al. 2021	Covid-19 Early stage	Covid-19	Canada	information confusion, inadequate performance of the public sector	• verbal account>transparency • emotional appeal>relational	Health sector, News media	Mixed – Archival Data
Mansoor 2021a	Covid-19 Not specifically mentioned	Covid-19	Pakistan	negative crisis experience	• verbal account>transparency • use of social media>support for other mechanisms	Official news media	Quantitative -Survey
Mansoor 2021b	Covid-19 Not specifically mentioned	Covid-19	Pakistan	inadequate performance of the public sector	• verbal account>transparency • emotional appeal>relational • use of social media>support for other mechanisms	Central Government	Quantitative -Survey
Masngut and Mohamad 2021	Covid-19 Early stage	Covid-19	Malaysia	inadequate performance of the public sector	• verbal account>sense-making • verbal account>relational		Mixed – Archival data
Park and Ha 2020	Covid-19 & MERS Early stage	Covid-19 & MERS	South Korea	inadequate performance of the public sector	• verbal account>transparency • emotional appeal>relational	Central government	Quantitative – Archival data
Ryan, Giles-Vernick,	Ebola	Ebola	West Africa	negative crisis experience	• verbal account>transparency	Community	Qualitative-secondary

and Graham 2019							analysis of interview
Sarker et al. 2021	Covid-19 Early stage	Covid-19	Mainland China	information confusion	• verbal account>transparency	Health sector	Quantitative -Survey
Schneider et al. 2021	Covid-19 Peak	Covid-19	USA	information confusion	• verbal account>transparency	Health sector	Quantitative -Experiment
Sheen, Tung, and Wu 2021	Covid-19 Early stage	Covid-19	Hongkong	inadequate performance of the public sector	• credible information source>transference • verbal account>transparency	Local governments, Citizen journalists	Quantitative -Experiment
Su, Su, and Zhou 2021	Covid-19 Early stage	Covid-19	Mainland China	negative crisis experience	• verbal account>sense-making • verbal account>regulation and control	Central government, local government	Quantitative -Survey
Vu 2021	Covid-19 Early stage to Peak	Covid-19	Vietnam	information confusion	• verbal account>transparency	Central government	Quantitative -Survey
Yang 2018	MERS	MERS	South Korea	information confusion, inadequate performance of the public sector	• verbal account>transparency	Central Government	Quantitative -Survey
Yuan 2021	Covid-19 Early stage	Covid-19	Mainland China	negative crisis experience	• use of social media>support for other mechanisms	Local, provincial, and central governments	Quantitative -Survey

Appendix B. STUDY 1: Summary of 37 publications included in the review.

Authors Year	Summary
Asubiaro et al. 2021	This study investigates the communication strategies employed by 23 anglophone Sub-Saharan African countries' national health ministries and infectious disease agencies in disseminating COVID-19-related information during the initial three months following the World Health Organization's declaration of the pandemic. The research uncovered that a substantial majority of African nations maintained a presence on social media platforms. The study revealed a marked shift towards purposeful information dissemination, which escalated significantly following the initial COVID-19 case announcements within the surveyed African countries. The disseminated information predominantly fell into three major categories: raising awareness, providing updates, and sharing news. Remarkably, these categories often manifested as derivative social media content before the official confirmation of the virus in the respective nations.
Batova 2021	This study investigates the factors that reflect mistrust in the public comments to the CDC tweets about mask-wearing during the 3 months after the first reported case of COVID19 in the U.S. The findings show that multiple factors representing mistrust were present in the public comments: the nature of evidence and disagreements among experts; lack of honesty and openness; failure to connect with the audience(s); dismissing possible dialogue; neglecting sensitive populations; lack of timeliness; and lack of carefully selected spokespeople and curated messaging. What is more, the feeling of anger was growing in the comments as the health crisis progressed, which also could have been trust-damaging.
Bickham and	This study examined whether the public's credibility perceptions and trust in government, along with message exposure, influenced their adherence to information from the government about (a) stay-at-home orders, (b) social distancing and (c) COVID-19 testing.

Francis 2021	Survey findings revealed that message exposure influenced respondents' perceived credibility of and trust in government officials during and after the stay-at-home order.
da Silva 2021	This article recounts how municipalities from border regions in mainland Portugal interacted with the population in the face of the new social order brought about by COVID-19. The findings manifested five educational narratives associated with community engagement and participation: past and memory; place; voicing and wisdom; recognition and solidarity; and participation and learning. Those narratives served as community resilience builders and enhanced public trust. The analysis also suggested that municipalities were more than timely information providers – they invested in connecting with the population, an investment possibly explained by the awareness that a health crisis could easily morph into a social crisis.
Deslatte 2020	This study tested how the framing of the pandemic can influence trust in various public messengers. The findings indicated that public health messaging—as opposed to pro-economic messaging—increases perceptions of the trustworthiness and knowledgeability of governmental messengers.
DiStaso, Vafeiadis, and Amaral 2015	This study evaluated the crisis response strategies communicated on Facebook and their impact on a hospital's reputation, credibility, as well as stakeholder trust and behavioural intentions. The findings indicate that public relations practitioners should avoid posting sympathetic Facebook posts during a health crisis since they might further damage the image of the affected organization. Conversely, undertaking a proactive approach by posting informative messages can prove more advantageous.
Driedger et al. 2021	Drawing on the Trust, Confidence, and Cooperation (TCC) Model, this study examined how citizens and health officers evaluated news coverage of the H1N1 pandemic in Canada and the impact it had on public trust in public health recommendations. The results highlighted the key role of news coverage in pandemic communication as the legacy news media continue to be important sources of health information as the world fights to control the COVID-19 pandemic. Authors recommend that health

	authorities complement their media engagement with direct communication with citizens; and increased training for public health officers to engage with news media and promote public trust.
Flores and Asuncion 2020	This study mainly explores the communication preferences of the public; their level of trust in the government; and the factors affecting their risk/crisis perception amidst the COVID-19 pandemic. The key findings — derived from the analysis using descriptive statistics, cross-tabulations, and Structural Equation Modeling (SEM), suggested that the use of social media platforms, like Facebook, and native/local language for effective risk/crisis communication may, consequently, foster trust building between the Local Government Units and the public.
Frost et al. 2019	This article describes tangible improvements in China's public health emergency risk communication capacity between the SARS and H7N9 outbreaks. The findings showed that China demonstrated significantly improved risk communication capacities of pre-event, during event and post event responses to H7N9 when compared to the SARS response. China NHC improved its response through preparedness, availability of dedicated staff and resources for risk communication, internal clearance mechanisms, standard operating procedures with national response parties external to NHC, rumour management, communication with international agencies and consistent messaging with healthcare and private sectors. Correspondingly, the perceived level of trust that the public had in the NHC following outbreaks rose between the SARS and H7N9 response.
Gonçalves, Piñeiro-Naval, and Toniolo 2021	This article researched the concrete case of the Portuguese government communication during the beginning of the second wave of the disease regarding the sources of information that inspire greater confidence among the Portuguese population and their opinion on the management of government communication. The study concluded a positive perception of government communication among respondents but that the Portuguese consider healthcare personnel to be more reliable sources of information than the media or government authorities. Regarding the gender issue, it was concluded that women trust the government more and have a better opinion about the authorities' communication.

	Regarding age, it was found that young people are the ones who trust more the authorities and the media, while at the same time being the most critical of the government's performance in managing the crisis. In general, respondents showed little confidence in digital social networks and digital influencers as a source of information about covid-19, and the higher the academic degree, the lesser confidence respondents have in influencers and digital social networks.
Hall and Wolf 2019	This study examined the projected expectations towards the behaviour of the audiences and the projected ways of information circulation informing public health communication strategies during a pandemic. The findings showed that the population would react towards an influenza pandemic with panic and fear due to a lack of information or a sensationalist media coverage and health communication strategies would have to target this affective register of the population. The analysis also suggested that public trust was largely interpreted in the sense of transparency. Transparency of procedures and the publishing of decision bases, as well as admitting limitations to knowledge, constituted public health authorities as accountable and addressed the public as citizenry.
Hartanto and Siregar 2021	This study investigated the relationship of perceived transparency, perceived accountability and perceived responsiveness with overall public trust in local government. Moreover, it addressed the "why" and "how" questions about the existence of this relationship by examining the underlying mechanism of the government response to COVID-19. Results revealed positive associations among the study variables. Also, the mediatory role of the government response to COVID-19 was supported by the results.
Holroyd et al. 2020	This study explored the importance of trust in and understanding of communication from public health authorities in improving adherence to public health recommendations, and how that communication can be improved to develop and maintain public trust, particularly in the context of public health emergencies. The findings showed that communication source and communication transparency, such as timeliness, completeness, and clarity of information, were critical constructs of trust in communication from public health authorities. It was also found that many

	participants misunderstood the flow of information from public health authorities to news media, and many were unaware that public health authorities provide the most reliable source of health information and recommendations during a public health emergency.
Huanga and DiStaso 2020	This study examined the effects of timing and message appeal of a crisis response on organizational perceptions and behavioural intentions on social media. It was found that a crisis response posted one day after the crisis on Facebook elicited greater trust towards the hospital in crisis compared to a response posted in one week. The one-hour response and one-day response did not show differential effects on trust towards the hospital. The effect of timing was mediated by perceived credibility of the crisis response. In addition, the emotional appeal triggered greater trust, perception of reputation, and intention to "like" the post.
Jain et al. 2021	This research explicated how political leaders responded to the COVID-19 crisis on Twitter during the first wave. Theoretical frameworks of discursive leadership and situational crisis communication theory have been used to analyse interactions based on the usage patterns, the content of communication, the extent of usage in relation to the severity of the crisis, and the possible role of leaders' position along with the status of their political party. It was found that the tweets had an overall positive sentiment, an important crisis management strategy. Four main themes emerged: crisis management information, strengthening followers' resilience and trust, reputation management, and leaders' proactiveness. By focusing on such discursive aspects of crisis management, the study comprehensively highlights how political interactions on twitter integrated with politics and governance to handle COVID-19 in India.
Kaur and Mishra 2020	This study explored how Prime Minister Narendra Modi briefed about the measures being taken to curb COVID-19 and to bring the situation under control in his speeches during the lockdown. The findings showed that the Prime Minister Narendra Modi has emotional appeals to address the calamitous pandemic, including boosting morale of the Corona Warriors by clapping, beating the thalis, announcement of support for the poor and needy up to

	Diwali/Chhath puja etc. Those acts showed PM‟s concern for the countrymen and therefore enhanced public trust in the covid-19 policies.
Kaur, Verma, and Ranjan 2021	This paper, using qualitative research design, analyses Indian political leaders' communication on Twitter to identify and extract subjective information in leaders' communication. The findings showed more than half of leaders had shared fact-based information, and Polarity scores indicated that almost 90% of leaders shared positive or neutral information thus leading to an inference that leaders share more of facts based and positive or neutral information rather than statements in form of opinions. These findings revealed that during pandemic, leaders should lay focus on fact-based information in communication on social media.
Khan et al. 2019	This study explored current uses and challenges for public health agencies using social media during health crisis incidents. The findings showed that social media served as a communication tool used to expand reach of messages, to engage in dialogue with the public, and to inform the scope of potential incidents. Barriers to its use include hesitancy to adapt, lack of trust and credibility, and organizational structure and capacity constraints. 19 key strategies proposed to promote social media use and address barriers resulted from participant discussions and are presented.
Kjeldsen et al. 2021	This study researched a negotiation for health promotion and for COVID-19 communication. Unpacking the rhetorical constitution of the expert ethos of the MD and of the health authorities, respectively, authors found that representatives of the authorities are more open to participation and better at connecting to everyday experiences than the MD, who primarily builds her expert ethos on mastery of scientific language and methods, combined with alarmist rhetoric. The analysis indicated that public health authorities might maintain high levels of trust by rhetorically cultivating their positions within institutional and (social) media networks of expertise.

König and Breves 2021	This study examined how professional background and message style influence source trustworthiness, message credibility and behavioural intentions. The results of a 2 × 2 between-subject experiment show that if a Tweet is written in lower-case letters, participants perceive the information source as more trustworthy. Furthermore, the information is perceived as more credible, and people are more willing to read the health information and share it via social media. Furthermore, scientists are perceived as possessing more expertise than politicians. However, politicians are perceived as possessing more integrity and benevolence than scientists.
Latkin et al. 2021	This study assessed trust in COVID-19 vaccine information from three types of sources: politically conservative sources (PCS), mainstream sources (MS), and Dr. Fauci. The findings showed that high trust in MS was associated with intention to encourage family members to get COVID-19 vaccines, high trust in PCS was associated with intention to discourage friends from getting vaccinated, higher trust in PCS was also associated with participants more likely to disagree that minorities with higher rates of COVID-19 deaths should have priority for a vaccine, and high trust in Dr. Fauci as a source of COVID-19 vaccine information was associated with factors similar to high trust in MS. The results also revealed that fair, equitable, and transparent access and distribution are essential to ensure trust in public health systems' abilities to serve the population.
Lee et al. 2021	This study investigated the role of online news and social media on people's preventive actions considering the role of trust in citizens and government. The results reveal that the perceived characteristics of online news and social media influence preventive actions through the trust in citizens or in government. In addition, while online news media enhances trust in both the citizens and the government, social media only influences trust in citizens. Based on our findings, the role of media in preventing the spread of COVID-19 is discussed.
Leschzyk 2021	This article deals with rhetorical techniques applied by Brazilian President Jair Messias Bolsonaro (2019–) and high-ranking politicians of the German party AfD (Alternative für Deutschland) during the COVID-19-pandemic.

	The findings showed that two politicians used strategies of authorization, moral evaluation, rationalization, mythopoesis to enhance public trust and delegitimize the opponents. Specifically, Bolsonaro, who was in charge during the crisis, attacks the media claiming they would spread panic and false information, AfD, an opposition party, concentrates its criticism on the federal and state governments.
Liu et al 2020	This study tested how the public responds to crisis narratives (blame, renewal, victim, hero, and memorial) about a hypothetical infectious disease crisis. Findings showed that narratives had a greater impact on perceptions of credibility than non-narrative information, and among the five narratives, renewal narrative have the strongest positive impact on information credibility.
MacKay et al. 2021	This study evaluated the quality and content of Canadian public health and news media crisis communication on Facebook to understand the use of key guiding principles of effective crisis communication, the focus of the communication, and subsequent public emotional response to included posts. The findings showed that the guiding principles for effective crisis communication were inconsistently applied and combined. A limited combination of guiding principles, especially those that demonstrate trustworthiness, was likely driving the negative sentiment uncovered in the comments. Public health and news media should use the guiding principles consistently to increase positive sentiment and build trust among followers.
Mansoor 2021a	This study investigated the impact of the government agency's provision of quality information on social media in establishing trust among citizens of Pakistan in a government agency with an underlying mechanism of citizens' perception about agency's transparency and responsiveness along with moderating role of perceived government response on COVID-19. Results revealed that the interactive effect of government response on COVID-19 and government agency's provision of quality information on social media strengthens the association of government presence on social media with citizens' perception of the agency's transparency and responsiveness and their trust in the agency.

Mansoor 2021b	This study empirically examined how good governance practices promote public trust with the underlying mechanism of perceived government response on COVID-19 (PGRC) and moderating role of government agency's provision of quality information on social media (GQS). The results revealed a direct and indirect association of good governance practices with the public's trust in government via PGRC as mediator. Likewise, results showed that GQS interacts with PGRC and augments public trust in government.
Masngut and Mohamad 2021	This study identified types of image repair strategies utilized by the Malaysian government in their communication about COVID-19 in the media and analyzed public responses to these messages on social media. The findings showed that the Malaysian government employed all 5 Image Repair Theory strategies (Denial, Evade responsibility, Reduce offensiveness, Corrective action, and Mortification) in their communications in newspapers. The strategy most utilized was reducing offensiveness, followed by corrective action, evading responsibilities, denial, and mortification. This study also found multiple sub strategies in government media statements including denial, shifting blame, provocation, defeasibility, accident, good intention, bolstering, minimization, differentiation, transcendence, attacking accuser, resolve problem, prevent recurrence, admit wrongdoing, and apologize. This study also revealed a significant positive association between image repair strategies utilized by the Malaysian government and public opinion.
Park and Ha 2020	This study explored the focus of Korean public service advertisements (PSAs) in response to the MERS and COVID-19 outbreaks, along with the differences between them. The findings showed that, during the MERS outbreak, the Korean government failed to gain the public's trust through its PSAs. Despite its best efforts, it provided opaque and selective information on the crisis. Conversely, in the case of COVID-19, the Korean government has successfully worked to strengthen community awareness by supporting and encouraging the public.
Ryan, Giles-	Focusing on communities' trust during the epidemic, this study identifies and explores social techniques for effective emergency response.

Vernick, and Graham 2019	It was found that trust was fostered through open, transparent, and reflexive communication that was adaptive and accountable to community-led response efforts and to real-time priorities. Authors expanded on these findings to identify 'technologies of trust' that can be used to promote actively legitimate trustworthy relationships. Responders engaged the social technologies of openness (a willingness and genuine effort to incorporate multiple perspectives), reflexivity (flexibly responsive to context and ongoing dialogue) and accountability (taking responsibility for local contexts and consequences) to facilitate relations of trust. Technologies of trust contribute to the development of a framework of practical techniques to improve the acceptance and effectiveness of future emergency response strategies.
Sarker et al. 2021	This study assessed the preventive, supportive and awareness-building steps taken during the COVID-19 pandemic for international students in China, that will be useful for planning such a behavioral change campaign in the potential pandemic situation in other parts of the world. The findings revealed that a strong and significant relationship between preventive and supportive measures taken by students and/or provided by the respective institutions or authorities lead to trust over authorities. Chinese government as well as educational institutions regularly updated and monitor the pandemic situation and responded appropriately like restriction of mobility, prohibition of mass gatherings, shutdown school, encouraging work from home, which virtually increased awareness, satisfied students and helped to gain trust on authorities. Therefore, to advise preventive and supportive measures, awareness building through providing trustworthy information should be given priority.
Schneider et al. 2021	This study examined the effects of communicating indications of evidence quality to the public on the perceived trustworthiness. The findings showed that, compared to those given no quality cues, participants who were told the quality of the evidence on eye protection was 'low', rated the evidence less trustworthy, and rated it as subjectively less effective. The same effects emerged compared to those who were told the quality of the evidence was 'high', and in one of the two studies, those shown 'low' quality

	of evidence said they were less likely to use eye protection. Participants who were told the quality of the evidence was 'high' showed no statistically significant differences on these measures compared to those given no information about evidence quality.
Sheen, Tung, and Wu 2021	This study explored how media audiences update their trust in the government during the COVID-19 outbreak depending on the information they received. Findings showed that the information from a non-official source enhances the credibility of official government messages. Findings implied that dictators can actually "borrow credibility" from their citizen journalists and even nondemocratic leaders can make themselves more trustworthy to potential dissenters through citizen journalism. Allowing information flow from non-official sources can be a practical measure for governments to address the problem of a credibility deficit during a pandemic.
Su, Su, and Zhou 2021	This study examined how cultural factors, government efficiency and good performance, the use of official media, public expectation of the government effect public trust in local and central government during the early stage of Covid-19 pandemic. The findings showed that local governments in many parts of the country gained more trust than usual, narrowing the trust gap with the central government. In the early stage of the pandemic, effective implementation of anti-COVID policies, official media propaganda, and public expectation all contributed to the public's increased confidence in local governments.
Vu 2021	This study explored how much the Vietnamese public trust their government during the COVID-19 pandemic and how public trust in government translates into support and compliance with government's policy and regulation. The findings showed that there is a significant positive correlation between accessible, trustworthy communication and public trust in government. The findings also demonstrate a significantly moderate positive correlation between public trust in government and policy compliance. The more the public trust the government, the more likely they comply with government's policy during the COVID-19 pandemic.
Yang 2018	This study examined the role of government dialogic competency and credibility of risk information in negative government–public relationship outcomes and examined the effects of negative government–public relationship outcomes.

	The findings showed that the perceptions of credibility related to risk information were critical determinants of negative attributes in government–public relationship outcomes (i.e., distrust, dissatisfaction, and relational dominance) and that such negative government–public relationship outcomes significantly increased the publics' relationship dissolution intentions with the government, which, in turn, increased actual activism behaviours against the government.
Yuan 2021	This research explored systematically factors that influence public reactions during COVID-19 pandemic, including different measures of risk perceptions, public trust in different levels of governments, and attention to news. This research found that the effects of attentions to news, provincial experience, trust in government, demographics, and political cultures on risk perceptions depend on measures of risk perceptions, risk judgments vs. cognitive vs. affective risk perceptions. Moreover, the effect of culture on trust in government is consistent across different levels of government, trust in local, provincial, and central governments; living in the epicentre of COVID-19 in China decreases trust in local/provincial government but not trust in central government; public attention to news can bring both positive (trust in government) and negative (negative affect) outcomes. Finally, it confirmed positive associations among risk perception, subjective knowledge, and attention to news.

Appendix C. STUDY 2: Stimuli of Sub-study 1

Crisis Posts

Control Group	Since the outbreak of the epidemic in A City, the local health sector has been directing infected citizens to a designated quarantine site for comprehensive treatment, which is managed and operated by the local health sector. Unfortunately, within the past week, there have been reports of 5 fatalities occurring at the quarantine facility. Social media sources suggested that these tragic deaths stemmed from excessive symptoms after infection. The infection triggered a cascade of fatal complications, contributing to the unfortunate demise of those affected.
Victim	Since the outbreak of the epidemic in A City, the local health sector has been directing infected citizens to a designated quarantine site for comprehensive treatment, which is managed and operated by the local health sector. Unfortunately, within the past week, there have been reports of 5 fatalities occurring at the quarantine facility. Social media sources suggested that these tragic deaths stemmed from a critical strain on medical resources resulting from the sudden outbreak of the epidemic. The demand for critical medical equipment exceeds supply for a while despite the health sector's efforts to deploy, contributing to the unfortunate demise of those affected.
Accidental	Since the outbreak of the epidemic in A City, the local health sector has been directing infected citizens to a designated quarantine site for comprehensive treatment, which is managed and operated by the local health sector. Unfortunately, within the past week, there have been reports of 5 fatalities occurring at the quarantine facility. Social media sources suggested that these tragic deaths stemmed from an unforeseen breakdown of the medical equipment. These sudden malfunctions have caused some critical medical equipment to become inoperable, contributing to the unfortunate demise of those affected.
Preventable	Since the outbreak of the epidemic in A City, the local health sector has been directing infected citizens to a designated quarantine site for comprehensive treatment, which is managed and operated by the local health sector. Unfortunately, within the past week, there have been reports of 5 fatalities occurring at the quarantine facility.

	Social media sources suggested that these tragic deaths stemmed from corruption infiltrating the procurement procedures for medical equipment. Critical devices procured through this process have displayed severe defects in both performance and quality, contributing to the unfortunate demise of those affected.

Response Post

Bolstering Strategy	Dear citizens, Regarding the recent reports of fatalities, we would like to emphasize that, over the years, our health department has demonstrated professionalism and expertise in addressing various health emergencies. Our prompt response, effective containment strategies, and commitment to public safety have successfully resulted in the protection of countless lives. Amidst the current epidemic, our dedication remains steadfast, and we will tirelessly fulfill our duty to safeguard the well-being of our citizens and this city. We would also like to express our heartfelt gratitude to the healthcare works, volunteers, and all the citizens for their unwavering dedication and support during this ongoing health crisis. Your collective efforts play a pivotal role in our response to this epidemic!

Appendix D. STUDY 2: Stimuli of Sub-study 2

Crisis post **(Preventable)**	Since the outbreak of the epidemic in A City, the local health sector has been directing infected citizens to a designated quarantine site for comprehensive treatment, which is managed and operated by the local health sector. Unfortunately, within the past week, there have been reports of 5 fatalities occurring at the quarantine facility. Social media sources suggested that these tragic deaths stemmed from corruption infiltrating the procurement procedures for medical equipment. Critical devices procured through this process have displayed severe defects in both performance and quality, contributing to the unfortunate demise of those affected.

Component	**Denial**	**Apology**
Fundamental	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We want to categorically state that the rumors are untrue, and we strongly reject these allegations. The unfortunate demise of the five patients was not a result of any corruption in the medical equipment procurement process.	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We regret to inform that the rumors are true, and we sincerely apologize for what has happened. The unfortunate demise of the five patients was a direct result of the corruption in the medical equipment procurement process.
Explaining	It was due to their pre-existing health conditions, which led to severe complications upon contracting the infectious disease, and ultimately contributed to the tragic loss of lives.	It was due to the acquisition of substandard medical equipment at inflated prices, which led to these equipment failures, and ultimately contributed to the tragic loss of lives.
Soothing	We extend our deepest sympathies and heartfelt concern to the affected citizens and the entire community. The loss of lives under any circumstances is truly tragic, and our thoughts are with those who have been impacted by this unfortunate incident.	We extend our deepest sympathies and heartfelt concern to the affected citizens and the entire community. The loss of lives under any circumstances is truly tragic, and our thoughts are with those who have been impacted by this unfortunate incident.

Committing	We solemnly pledge our commitment to rigorously adhere to regulations and protocols, operating with transparency and integrity. We assure you that we are implementing robust measures prevent such an event from happening.	We solemnly pledge our commitment to rigorously adhere to regulations and protocols, operating with transparency and integrity. We assure you that we are implementing robust measures prevent any recurrence of such an event.

Response post	**Denial**	**Apology**
Fundamental	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We want to categorically state that the rumors are untrue, and we strongly reject these allegations. The unfortunate demise of the five patients was not a result of any corruption in the medical equipment procurement process.	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We regret to inform that the rumors are true, and we sincerely apologize for what has happened. The unfortunate demise of the five patients was a direct result of the corruption in the medical equipment procurement process.
Fundamental + Explaining	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We want to categorically state that the rumors are untrue, and we strongly reject these allegations. The unfortunate demise of the five patients was not a result of any corruption in the medical equipment procurement process. It was due to their pre-existing health conditions, which led to severe complications upon contracting the infectious disease, and ultimately contributed to the tragic loss of lives.	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We regret to inform that the rumors are true, and we sincerely apologize for what has happened. The unfortunate demise of the five patients was a direct result of the corruption in the medical equipment procurement process. It was due to the acquisition of substandard medical equipment at inflated prices, which led to these equipment failures, and ultimately contributed to the tragic loss of lives.

Fundamental + Soothing	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We want to categorically state that the rumors are untrue, and we strongly reject these allegations. The unfortunate demise of the five patients was not a result of any corruption in the medical equipment procurement process. We extend our deepest sympathies and heartfelt concern to the affected citizens and the entire community. The loss of lives under any circumstances is truly tragic, and our thoughts are with those who have been impacted by this unfortunate incident.	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We regret to inform that the rumors are true, and we sincerely apologize for what has happened. The unfortunate demise of the five patients was a direct result of the corruption in the medical equipment procurement process. We extend our deepest sympathies and heartfelt concern to the affected citizens and the entire community. The loss of lives under any circumstances is truly tragic, and our thoughts are with those who have been impacted by this unfortunate incident.
Fundamental + Committing	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We want to categorically state that the rumors are untrue, and we strongly reject these allegations. The unfortunate demise of the five patients was not a result of any corruption in the medical equipment procurement process. We solemnly pledge our commitment to rigorously adhere to regulations and protocols, operating with transparency and integrity. We assure you that we are implementing robust measures prevent such an event from happening.	Dear citizens, We are writing to address the recent circulating rumors on social media regarding the deaths of five patients at the isolation facility. We regret to inform that the rumors are true, and we sincerely apologize for what has happened. The unfortunate demise of the five patients was a direct result of the corruption in the medical equipment procurement process. We solemnly pledge our commitment to rigorously adhere to regulations and protocols, operating with transparency and integrity. We assure you that we are implementing robust measures prevent any recurrence of such an event.

Appendix E. STUDY 2: Measures

Crisis responsibility attribution (Griffin et al., 1992)	The blame for this incident lies with the health sector of A city.
	The health sector of A city is responsible for this incident.
Ability (Mayer and Davis, 1999)	The health sector of A city has much knowledge about the response to health crises.
	The health sector of A city is well qualified in responding to health crises.
Benevolence (Mayer and Davis, 1999)	The health sector of A city is very concerned about my and other citizens' welfare.
	The health sector of A city will go out of its way to help me and other citizens.
Integrity (Mayer and Davis, 1999)	I like the A city health sector's values.
	Sound principles and standard of conduct seem to guide A city health sector's behaviors

* = reverse code
Scale (1 = strongly disagree, 5 = strongly agree)

Appendix F. STUDY 3: Representative quotes for 12 strategies and analysis

Strategy	Quotes	Analysis
Assessment		
IC-Indicating the consequences of actions	*(1) This pause on new immigration will also help to conserve medical resources for our citizens as we fight this virus. — The White House* *(2) Borders matter in a global pandemic…President was right to defend ours since day one. — The White House*	Both examples adopt this strategy to rationalize the decision of reducing immigration by indicating the consequences, intending to manage public perceptions of the organization's ability. Example (1) focuses on the goal of this decision, which points to an expected success—conserving medical resources. Example (2) base the decision on the premise that migration can spread pandemics, which establishes reducing immigration as the appropriate course of action.
DE-Describing the events	*(3) Due to the closure of the neighbourhood, deliveries have been affected to some extent. Generally speaking, the effects are manageable, and there has been no interruption in service [因为小区封闭，投递也受到了一定影响。总体来讲影响是可控的，服务没有间断过。]—NHC (China)* *(4) Our repatriation efforts have successfully brought home over 500,000 EU citizens in a historic EU consular cooperation. —EU commission.*	In example (3), NHC responses to the difficulties in delivering supplies due to the city lock-down and tries to eliminate negative perceptions of its ability by weakening the consequence of the city lock-down. In example (4), the EU commission illustrates the success it has had in repatriating European citizens outside the EU, which tries to emphasize positive perceptions of its ability by highlighting its achievements.

CA-Conducting attribution	*(5) America's aggressive containment strategy is responsible for the low number of U.S. coronavirus cases so far. — The White House* *(6) So much death has been caused by their mistakes…The WHO helped spread the coronavirus in four principal ways. —— The White House*	In the example (5), the White House attributed the low number of cases at the very beginning of the pandemic to its effective policies, attempting to emphasize positive perceptions of its ability. In example (6), it attributed the large number of deaths during the peak of pandemic to WHO's mistakes, attempting to reject all potential skepticism of its ability, integrity, and benevolence.
Relational		
RI-Reducing relational imbalance	*(7) Most public authorities encourage you to stay home this weekend. We know it's not easy. — Health & Food Safety (EU)* *(8) Our hearts go out to the communities hardest hit by the Coronavirus. — The White House*	In example (7) The Health & Food Safety conveys empathy by expressing an understanding of the difficulties that stay-home policies may cause residents. It shows that although the restrictions that introduced by the organization has negative effects, it does not mean the organization is heartless to the public. In example (8), The White House expresses compassion and caring for the communities most affected by the pandemic, thereby attempting to touch the residents and shape a positive perception of its benevolence.
SI-Shaping a common identity	*(9) Even though conditions in the EU countries still vary widely, Europeans rightly ask themselves when and in what order the confinement measures can be lifted. — EU commission*	In example (9), the EU commission turns the question posed to it by the public into a question that Europeans ask themselves. This means that its answer, that is, the schedule for removing confinement measures, is a collective answer

	(10) Against #coronavirus, we all play for the same team — EU Commission	from whole Europeans, attempting to neutralize the potential negative perception of its benevolence. In example (10), EU Commission notes that public sectors and the public are comrades in arms against pandemic, with the same interests and pursuits, thereby attempting to shape the positive perception of its benevolence.
Regulation and Control		
HR-Highlighting the presence of regulations	*(11) When it comes to #coronavirus tracing apps, EU rules - notably the GDPR and the ePrivacy rules - provide strongest safeguards of trustworthiness. — EU commission*	In example (11), the EU commission explains the rules they follow when developing and managing Covid-tracking applications that will ensure that the applications are efficient and secure. This reduces potential concerns about virus tracking leading to invasion of personal privacy. In example (12), the NHS elucidates the entry health declaration policy, outlining associated measures and providing the legal foundation in criminal law to emphasize that these measures align with legal requirements rather than constituting an infringement of civil rights. In this manner, the NHS endeavors to present itself as an entity upholding integrity.
	(12) Some inbound individuals, driven by a mentality of seeking good fortune, employ various means to refuse declaration or inaccurately report their health conditions, refusing to cooperate with temperature monitoring…The aforementioned actions can be convicted and penalized under Article 332 of the Criminal Law, which specifies the crime of "impeding national border health quarantine." [一些入境人员怀着侥幸心理，采取各种手段拒绝申报，或者不如实申报健康状况，不配合体温监测...上述行为就可以依照《刑法》第 332 条的规定，以“妨害国境卫生检疫罪”定罪处罚。]	
DR-Declaring	*(13) There are issues with irregular law enforcement procedures. The investigative team has recommended that the supervisory authorities in*	Li Wenliang, a Chinese ophthalmologist, attempted to warn about the COVID-19 outbreak in Wuhan. Chinese

rewards and punishments	*Wuhan, Hubei Province oversee and correct this matter, urging the public security authorities to revoke the reprimand and hold those responsible accountable, while promptly disclosing the outcome to the public. [存在执法程序不规范的问题。调查组已建议湖北省武汉市监察机关对此事进行监督纠正，督促公安机关撤销训诫书并追究有关人员责任，及时向社会公布处理结果。]—NHC (China)*	authorities accused him of spreading false information, took disciplinary action. Tragically, Li Wenliang himself contracted COVID-19 and became one of its early victims, which fueled public discussions about the Chinese government's handling of the outbreak. Example (13) reported the results of the National Supervisory Commission's investigation into improper enforcement by relevant agencies and the corresponding penalties. In Example (14), Li Wenliang and other healthcare workers who died during the pandemic were posthumously recognized as "martyrs", the highest honorary title conferred by the Party and the nation to those who have sacrificed their lives. These announcements convey the message that there exist regulations to ensure that integrity is rewarded, and misdeeds punished.
	(14) Recognizing... 14 frontline personnel who sacrificed their lives in the fight against the COVID-19 pandemic as the first batch of martyrs... Their noble spirit will be immortalized! [评定...等 14 名牺牲在新冠肺炎疫情防控一线人员为首批烈士…… 他们的崇高精神永垂不朽！]—NHC (China)	
Ethical Culture		
RE-Revealing the ethical value of behaviors	*(15) The EU is committed to protect people's health and support humanitarian actions and the needs of our neighbours. We published a new export authorisation scheme for protective equipment to suit current needs in the #coronavirus crisis. — EU Commission*	In example (15), The EU illustrated the ethical value of the export authorization scheme it published, that is, to protect people's health and support humanitarianism. Relatively simplified, in example (16) The White House affirms that the health and safety of the people is the norm in all its
	(16) The number-one priority from our standpoint is the health and safety of the American people. — The White House	

		decision-making and action. Both examples attempt to shape public perception of the organization's benevolence.
HE-Highlighting the ethical principles that govern behaviors	*(17) We're working tirelessly during the #COVID19 pandemic. — European Centre for Disease Prevention and Control* *(18) Last night, President @realDonaldTrump held a news conference to share coronavirus updates with the entire Nation. Rather than keep Americans in the dark, this Administration wants citizens to know exactly what their government is doing to keep them safe. — The White House*	In example (17), the ECDC states that they are working with dedication. In example (18), the White House states that this administration has been honest and transparent with the public. Both examples emphasize the fact that the organization is dedicated to its duties, thus attempting to convey an image of integrity.
Transparency		
PD-Providing detailed data	*(19) On February 22, from 00:00 to 24:00, 31 provinces (autonomous regions, municipalities directly under the central government), and the Xinjiang Production and Construction Corps reported 648 new confirmed cases, 97 new deaths (96 in Hubei, 1 in Guangdong), and 882 new suspected cases. On the same day, there were 2,230 new cases cured and discharged, 22,128 close contacts were released from medical observation, and the number of severe cases decreased by 509. As of 24:00 on February 22, according to reports from 31 provinces (autonomous regions, municipalities directly under the central government), and the Xinjiang Production and Construction Corps, there were 51,606 confirmed cases (including 10,968 severe cases), 22,888 cumulative cured and discharged cases (with a deduction of 1 case in Anhui), 2,442 cumulative deaths, 76,936 cumulative reported confirmed cases, and 4,148 current suspected cases. A total of 628,517 close contacts have been traced, and 106,089 close contacts are still*	In example (19) and (20), the CDC and NHC publish COVID-19 data to the public. Although no interpretation is applied, the availability of these detailed data demonstrates the organizations' unqualified disclosure of the current situation. By employing this strategy, the NHC and CDC attempt to convey an image of integrity.

	under medical observation. Hubei reported 630 new confirmed cases (541 in Wuhan), 1,742 new cured and discharged cases (965 in Wuhan), and 96 new deaths (82 in Wuhan). There are currently 46,439 confirmed cases (36,174 in Wuhan), including 10,428 severe cases (9,228 in Wuhan). A total of 15,299 cases have been cured and discharged (8,171 in Wuhan), and 2,346 deaths have occurred (1,856 in Wuhan). The cumulative number of confirmed cases in Hubei is 64,084 (46,201 in Wuhan). There were 631 new suspected cases (454 in Wuhan), and there are currently 3,363 suspected cases (2,382 in Wuhan). [2 月 22 日 0—24 时，31 个省（自治区、直辖市）和新疆生产建设兵团报告新增确诊病例 648 例，新增死亡病例 97 例（湖北 96 例，广东 1 例），新增疑似病例 882 例。当日新增治愈出院病例 2230 例，解除医学观察的密切接触者 22128 人，重症病例减少 509 例。截至 2 月 22 日 24 时，据 31 个省（自治区、直辖市）和新疆生产建设兵团报告，现有确诊病例 51606 例（其中重症病例 10968 例），累计治愈出院病例 22888 例（安徽核减 1 例），累计死亡病例 2442 例，累计报告确诊病例 76936 例，现有疑似病例 4148 例。累计追踪到密切接触者 628517 人，尚在医学观察的密切接触者 106089 人。湖北新增确诊病例 630 例（武汉 541 例），新增治愈出院病例 1742 例（武汉 965 例），新增死亡病例 96 例（武汉 82 例），现有确诊病例 46439 例（武汉 36174 例），其中重症病例 10428 例（武汉 9228 例）。累计治愈出院病例 15299 例（武汉 8171 例），累计死亡病例 2346 例（武汉 1856 例），累计确诊	

	病例 64084 例（武汉 46201 例）。新增疑似病例 631 例（武汉 454 例），现有疑似病例 3363 例（武汉 2382 例）。] —NHC (China)	
	(20) As of April 15, 50 US states, D.C., & 4 US territories have reported cases of COVID-19. Of those, 34 report #COVID19 cases are widespread. — CDC	
Transference		
SE-Seeking endorsements from trustworthy parties	*(21) Azar highly appreciates China's efforts and significant achievements in combating the epidemic. He expresses gratitude for China's close communication with the United States on epidemic prevention and control. Azar acknowledges that China's relevant experience and innovative measures in pandemic prevention and control are valuable for the current situation in the United States.* [阿扎高度赞赏中方为抗击疫情付出的努力和取得的巨大成绩，感谢中方就疫情防控与美方保持密切沟通，表示中方有关防控经验和创新举措对美方当前疫情应对具有借鉴意义。] *— NHC (China)*	In example (21), the NHC relays the Alex Azar's (the Secretary of U.S. Health and Human Services) high praise for China's achievements in pandemic prevention and control, in an attempt to emphasize its ability in crisis management. In response to accusations that it was diverting the domestic antagonistic problems, in example (22), the White House claims that CNN, the authoritative media outlet, has already referred to the coronavirus as the "Chinese virus" before the White House does so. It transfers public trust in CNN's professional integrity to the White House, thus neutralizing the negative perception of its integrity.
	(22) Before the media's fake outrage, even CNN called it 'Chinese Coronavirus.' — The White House	
CH-Creating heroic myths	*(23) In this smokeless battle, healthcare workers fearlessly stepped forward and immediately submitted applications to go to the battlefield and join the Party [在这个没有硝烟的战场上，医护人员不畏艰险、挺身而出，第一时间递交战书、入党申请书]. —— NHC (China)*	In the heroic stories of the Chinese communist revolution, the submission of the application to fight and to join the Party means that the soldier has established noble beliefs and given no thought to life or death. In example (23), NHC describes

	*(24) Remote diagnosis, real-time transmission, accuracy, and simplicity… Amid the current pandemic, the Yuhuatai District of Nanjing has introduced scientific and technological methods into its pandemic prevention and control efforts. A technological battle against the pandemic has been waged online to achieve safety, quality, and efficiency through technology. [*远程诊疗、实时传输、准确无误、简单便捷……疫情当前，南京市雨花台区在抗疫防疫工作中引入科学技术手段，打响了一场向科技要安全、质量、效率的互联网科技战“疫”。*] —— NHC (China)*	these actions of its healthcare workers before assisting Wuhan. As representatives of NHC, the bravery and integrity of those employees are expected to demonstrate the culture of integrity existing within the whole system, thereby transferring trust from the individual to the authority. In example (24), by promoting a regional health department that utilizes advanced technological methods in epidemic prevention, the NHC aims to underscore the department's crisis management capabilities, thus shaping the public's perception of the overall health system.