Imagination is more important than experiencing it first-hand:
The Influence of Imaginative Enactment on Sense of Security

Lizzy Glaser

Snr 2111597

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Communication and Information Sciences

Business Communication and Digital media

Department Communication and Cognition

School of Humanities and Digital Sciences

Tilburg University, Tilburg

Supervisor: Dr. J. Verhoeven

Second Reader: Dr. P. Schafraad

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Abstract

The field of crisis communication has predominantly adopted an organizational approach, neglecting the psychological processes and responses of stakeholders throughout a crisis. During times of crisis, individuals' imaginations can run wild with speculations about what truly happened, causing them to feel unsafe. Three crisis reporting strategies deployed by the news media during the initial stages of a crisis have been identified by this study: informative, descriptive, and suggestive. The study investigates the influence of these crisis reporting strategies on sense of security and whether its relationship is mediated by imaginative enactment (predicted by empathy) and perceived crisis severity. Based on data collected from 194 participants exposed to an online crisis news article, the study reveals that there was no effect of the three proposed crisis reporting strategies on the sense of security, and no mediation effect was found. Unexpectedly, the results suggest that the underlying processes of imaginative enactment and perceived crisis severity explain why stakeholders may feel unsafe after being informed about a crisis. The study highlights the necessity for a new approach to crisis communication while deepening our understanding of the psychological dimensions and processes experienced throughout crisis situations.

Keywords: *crisis communication, crisis report strategy, sense of security, imagination, imaginative enactment, perceived crisis severity, empathy, emotional-induced severity*

Introduction

A crisis event can be distressing for stakeholders. Crisis events are beyond one's control and jeopardise personal safety. In Oss, The Netherlands in 2018, a Stint, an electrically motorised cargo bike to transport children, collided with a train resulting in the death of four young children and the serious injuries of the operator and another adolescent. The catastrophe caught the entire country off guard, leaving it heartbroken and frightened by the scene they imagined in their minds. This likely left them feeling unsafe. In this case, the company addressed the matter in a problematic style because its spokesman claimed not to feel responsible or guilty (Redactie De Ondernemer, 2018), and the organisation solely communicated pity rather than genuine remorse in their press release. While it is improbable that an apology could have salvaged Stint economically (Grebe, 2013), it is feasible that it could have aided public image as well as stakeholder relationships, emotions, and their wandering imagination of the terrible event.

Parsons (1996) associates crises with the "Murphy Factor" (p. 26), like society's phenomenon of "Murphy's Law", suggesting that anything that can go wrong, will go wrong. Understanding crisis events, how one processes them, and their effect on stakeholders is necessary for helping organisations to better understand their target groups', their needs and, as a result, manage internal and external crises more successfully. Severe crises never have an immediate explanation. Life-threatening events can be intense and affect both the physical and mental well-being of stakeholders (Marsen, 2019), leaving individuals overwhelmed with a range of emotions, fears, and safety-related questions. These implications can be amplified in our digitalised world, where footage of and articles about disaster is easily accessible online (Goyal, 2023). The constant stream of differently reported and upsetting stories exacerbates the psychological toll, causing people to lose their sense of security. Furthermore, the media favours the sensationalised narrative, emphasising

extraordinary events that elicit primordial fears or pique our intrinsic curiosity (van der Meer, Kroon & Vliegenthart, 2021). However, this emphasis on the unusual presents a significant difficulty; while these events captivate our attention, they represent outliers and mislead perceptions of danger by highlighting rare occurrences with low statistical probability.

As the unusual consistently dominates headlines, it portrays abnormal events as the norm, and therefore distorts our perception of reality (van der Meer et al., 2021). Gerbner's Cultivation Theory (1969) proposes that prolonged media exposure can influence an individual's worldview as well as their perceptions of reality. Moreover, it suggests that the more one consumes media, the more likely they are to believe that the reality portrayed in the media is indicative of the real world. Though initially centred on television as the dominant medium, the rise of digital world, including social networks and fast media coverage, has taken on this influential position (Nevzat, 2018).

Individuals' perceptions and emotions can be strongly influenced by the amount of information available to them during an extreme crisis. Insufficient or limited information can lead to uncertainty. This uncertainty surrounding crises makes it difficult, if not impossible, to make sense of a crisis situation. As a result, the ambiguity connected to the crisis can trigger multiple interpretations (Ulmer, Sellnow & Seeger, 2023), leading individuals to mentally visualise and imagine the event based on media information. The interpretations stemming from stakeholders' perspectives, are often influenced by the limited resources available to them, including their imagination. Individuals can use imagination to create vivid mental imagery that can elicit intense experiences in their minds, such as visualising or mentalising a catastrophe through imaginative enactment (Blackwell, 2020, pp. 243-244). Individuals' emotional responses can be heightened and alter their sense of security, how safe people feel both emotionally and physically in their surroundings, when they mentally visualise situations. While not everyone goes through this process, those who

are more empathic, sensitive, and more involved with the crisis event, are likely to imagine the scene and may have a sense of unsafety towards organisations or their products when confronted with such events.

Crisis reporting in the media has a significant impact on how individuals perceive, experience, and imagine the event (Nijkrake, Gosselt & Gutteling, 2015; Kim & Cameron, 2011) and how it affects their sense of security. Stakeholders' opinions can be greatly influenced, for example, if they learn about a mentally distressing crisis event from the news before an organisation has a chance to address it. Normally, organisations will employ a strategy called "stealing thunder", where they will disclose negative crisis information before it can be released to the public to prevent this (Williams et al., 1993; Lee, 2016). However, there are instances when this is not possible, and the media is the first to report the crisis. To the researcher's knowledge, no research to date has directly examined the role of communication on imaginative enactment nor stakeholders' sense of security in the field of corporate communication research.

Crisis communication research has predominantly focused on response strategies, particularly reputation repair strategies (Coombs, 2007). Organisations use these strategies to protect their reputation and image during a crisis (Kim, Avery & Lariscy, 2011). Regardless of crisis severity, organisations and crisis managers continually prioritise reputation and image repair as their overarching goal (Kim et al., 2011). The research of Kim et al. (2011) suggests that reputation repair makes up for most research in the field of crisis communication and less than 2% aimed to address public safety or health concerns. Other research (Kim and Sung, 2013) takes a stakeholder-centred approach, highlighting how organisations can seek to mitigate and soothe stakeholders' concerns through base crisis responses. A significant gap remains in our understanding of how a stakeholders' sense of security is influenced after reading the crisis event that is reported in the news, particularly

those exacerbated by vividly imagining the severity of the crisis event. This is important as it helps researchers understand the way media's reporting strategies can evoke feelings of insecurity among stakeholders, and how their imaginations can strengthen the impact of events. It also emphasises the value of understanding the needs of stakeholders as an organisation before constructing a crisis response strategy. This leads to the following research question:

To what extent and how do crisis reporting strategies in the media influence a stakeholder's sense of security?

Theoretical framework

This chapter provides a structured review of empirical findings and theories that serve as the foundation of this study's theoretical framework. It will focus on crisis communication, the media, crisis reporting strategies, and how sense of security can be influenced by perceived severity and imaginative enactment. Based on this framework, three hypotheses were formulated.

Crisis Events and Communication, and The Media

Pearson and Clair (1998) refer to an organisational crisis as a "low-probability, high-impact event that threatens the viability of the organisation and is characterized by ambiguity of cause, effect, and means of resolution" (p. 60). Often, an organisational crisis stems from a single crisis event, which serves as a trigger for obstacles that the organisation must overcome. A crisis event is, therefore, an unpredictable occurrence that disrupts daily operations and acts as a threat to an individual, organisation, or community that "requires decisive and immediate action from the organisation" (Cornelissen, 2017, p. 212). They can manifest in different shapes and forms, such as natural disasters, financial disasters, physical danger, or scandals. Depending on the nature of the event, an organisation must employ well-

defined and calculated crisis communication to prevent further damage to their reputation and relationship with stakeholders.

The primary goal of crisis communication is to assert control over events and actions in ways that reassure stakeholders that their interests are being protected and that the organisation is adhering to social, safety, and environmental norms (Cornelissen, 2017, p. 211). Additionally, an organisation will strategically use communication during a crisis to protect its reputation (Coombs, 2007; Kim et al., 2011). However, if stakeholders are not convinced that these efforts protect their best interests, they will feel insecure. In the initial stages of an organisational crisis, the news media has one of the most powerful positions when it comes to raising the initial awareness of the situation and ultimately framing it (Neuwirth, 2008). Given that the press usually covers uncommon events, crises can acquire wide public attention before an organisation can adequately respond. Organisations may struggle to deal with this early coverage; nevertheless, if properly examined, they can use these media frames to build a strong base response, and successfully address public concerns.

Crisis Reporting Strategies

During a crisis, the public's main information source predominantly comes from the news media (Van der Meer, 2016; Van der Meer & Vliegenthart, 2018). The media's role has significance, given that they decide what information is highlighted and presented. Previous studies have highlighted how framing used by the media can form the narrative and influence how people perceive the situation, allowing them to shape the agenda by selecting which crises to cover and how much publicity they receive (Searles & Smith, 2016). For example, substantial coverage of a crisis might make it appear more serious and urgent, whereas little coverage can diminish its significance. In addition to this it can result in what is regarded as The Primacy Effect (Ehrenberg & Alpium, 2023). This refers to how the perspectives of

individuals are often influenced by the initial information they receive regarding a situation. The first stories from the news media establish the context for how the crisis is and may continue to be interpreted and addressed in the future (Ehrenberg & Alpium, 2023). As news media differs greatly from organisational owned media, negative narratives provided by the news media can negatively affect stakeholder opinions (Sago & Hinnenkamp, 2014).

In the case of crisis events falling under human-interest stories and involving victims, the media deploys framing messages that will be referred to as "crisis reporting strategies". These approaches, differing from organisational crisis response, prioritise informing the public about important information based on whatever information that is available. They may use a variety of techniques, including descriptive narratives and statistical breakdowns. Like the framing theory, which suggests that mass media create saliency (An & Gower, 2009), crisis reporting strategies address how information facilitates understanding that can create saliency.

To continue, depending on the framing of the crisis message, a crisis reporting strategy can carry different meanings. Sullivan (2023) characterises the concept of framing as the process that guides how we understand and react to information from a sociological as well as linguistic perspective. When crisis information is framed, it can affect how events are recounted and interpreted by different stakeholders. Sullivan (2023) further identifies three levels of framing based on the exact meaning of words (semantic framing), the background knowledge of individuals (cognitive framing), and how information is presented to influence or communicate (communicative framing).

Semantic framing centres around the denotative meaning of words and expressions, as described by Leech (1981), and has a single meaning that has no further insulation towards emotions. This approach is referred to as an informative strategy and emphasises uses empirical and numerical facts to effectively convey information, such as precise

location, timeline, and actions during a crisis. Similar to the base response strategy of adjusting information used by organisations (Coombs, 2007; Kim et al., 2011), this strategy presents crises with a strong focus on objective facts, accurate numbers, and it does not allow for additional emotional or deeper interpretation.

Next, cognitive framing explores the connotative elements of information (Leech 1981) by manipulating how individuals' previous experiences and knowledge impact their conceptions of a crisis event and further influencing perceptions of its causes and impacts. This approach is referred to as a descriptive reporting strategy and utilises sensory and sensational information to communicate the crisis. A descriptive reporting strategy appeals to readers' emotions through descriptive language surrounding the senses such as sound, smell, and touch to facilitate mental imagery that inhibits perspective-taking. This is done through exaggerated language and what Burgers, Konijn & Steen (2016) refer to as combinations of figurative frames. The reporting style includes figurative language such as metaphors and hyperboles to strengthen the narrative and storytelling, allowing readers to immerse themselves in the first-hand perspectives of those affected. Hänska and Bode (2018) emphasise the importance of eyewitness elements in reporting crisis stories, highlighting the invaluable insights first-hand accounts can provide, particularly in crisis where there are constraints in capturing images.

Finally, a communicating frame can reveal how varying levels of denotative and connotative meaning (Sullivan, 2023; Leech, 1981) can influence how information is presented to the public. A message that reveals minimal denotative and connotative meaning creates more ambiguity, prompting individuals to infer additional information. Consequently, individuals may feel uncertain, resulting in them to fill in the gaps on their own. The reporting strategy is referred to as s suggestive reporting strategy and exploits the human need to seek information. Suggestion has a wide-ranging impact, including perception and

imagination. A suggestion is a type of communication in which a suggestor consciously or unintentionally activates and facilitates another individual's ideas or thought processes through indirect verbal or non-verbal communication. As a result, the suggestor assumes control of an individual's feelings, beliefs, or wants through an automatic activation of former meaning structures (Rotaru & Dafinoiu, 2011). Rotaru and Dafinoiu (2011) propose that suggestive language triggers a set of linkages in the impulsive system in the mind of the receiver that relates back to their environment or surroundings. In other words, a suggestion will stimulate a structure of meaning that can remain active for a set amount of time, determined by the strength of the ties it includes (pp. 36-37). Therefore, suggestive language in this strategy will provide the information as narrative full of information that alludes to a larger picture, that may allow readers to piece their own narrative together.

Sense of security

When stakeholders initially read about a crisis event in the news with limited information, they may feel insecure at that moment. An individual's sense of security is greatly influenced by several elements that range from personal to organisational, including emotional well-being and safety, communication, and trust (Spadaro et al., 2020, p. 4). An emotional sense of security refers to having an optimistic outlook on both you and other people, while physical sense of security indicates a reassurance of safety in your surroundings "without fear of disturbance or injury" (Frías, Shaver & Mikulincer, 2015; Fischer, Halibozek & Walters, 2013, p. 3). Feeling unsafe can stem from crises, or unmet basic needs, while security likely stems from feelings of content with limited threat to freedom (Wills-Herrera, 2014; Wills-Herrera, 2023). Nevertheless, following a crisis event, this notion may become fragile. It is particularly relevant for organisations in terms of stakeholders' perceptions of safety and confidence in the entity's ability to avoid similar events in the future and effectively manage any problems they create.

A combination of emotional, cognitive, and social elements impact individuals' senses of security after severe crises. Victim-centered crises, such as public transportation accidents or natural disasters, can trigger strong emotional responses, such as anxiety or fear (Jen, 2009). As a result of these feelings, stakeholders may feel unsafe in their surroundings and uncertain towards the future. Therefore, after severe crisis events, individuals actively seek stability and reassurance (Zhou, Ki & Brown, 2019). They rely on trusted news media and organisations for updated information (Austin, Liu & Jin, 2012) as well as safety measures and precautions. This emotional element of sense of security can be linked to cognitive processes of risk perception following crises. Stakeholders assess threats to their sense of security based on news coverage and information from sources they deem trustworthy, such as the organisation itself (Ndlela, 2018; Jurgens & Helsloot, 2017). In turn, this impacts their perception of the probability that certain crises may repeat. In addition to this, cognitive biases, such as the availability heuristic, play an important role in sense of security as it may lead stakeholders to feel less safe when they overestimate the probability of easily recalled events that receive high volumes of media coverage (Feng, 2022). To continue, social elements such as word-of-mouth information and collectively trying to make sense crisis events (Austin, et al., 2012; Heverin & Zach, 2012) can further impact individuals' senses of security following crises should the event have a larger impact socially (Slovic & Weber, 2013).

Therefore, communication is important in moulding people's sense of security. The way information is delivered may ease or aggravate feelings of unsafety and can differ significantly depending on communication and media channels. Previous research (Buchanan & Sanstrom, 2023) has highlighted how exposure to major crises can trigger immediate negative impacts on one's emotional state and mood. In negatively valanced news, sources may induce fear in stakeholders by using emotional appeals while covering crises (Hase &

Engelke, 2022), therefore adversely affect the well-beings of the public (Boukes and Vliegenthart, 2017). Furthermore, trust is essential for producing a sense of security, particularly in relationships stakeholders build with organisations. Trust can be defined as the one's readiness to "increase their vulnerability to the actions of others whose behaviour they cannot control" (Greenwood & Van Buren, 2010, p. 427; Hosmer, 1995). It is the result of "an emotional bond" (Greenwood & Van Buren, 2010, p. 427) that is formed by the stakeholder towards the organisation. Building and sustaining trust is critical for establishing confidence and assurance in an organisation's capacity to handle crises and enforce safety measures in the long-term.

H1a: An informative crisis news frame will not influence Sense of Security.

H1b: A descriptive crisis news frame will negatively influence Sense of Security.

H1c: A suggestive crisis news frame will negatively influence Sense of Security.

Perceived Crisis Severity

The magnitude of a crisis can lead individuals to experience jeopardised safety, negatively affecting their well-being as they may struggle with a wide range of negative emotions. However, perceptions of crisis severity can vary among individuals and can be dependent on personal factors. As a result, individuals can have varied responses to a crisis, ranging from highly emotional to unconcerned. Therefore, perceived crisis severity is an important notion to better understand stakeholder responses. The research of Zhou et al. (2019) highlights that perceived crisis severity can be broken down into three dimensions: Interest-Induced -, Emotion-Induced -, and Relevance-Induced Severity. Interest-induced severity is the degree to which a stakeholder would like to know and learn more about a crisis, while emotion-induced relevance refers to a stakeholder's "affective response to a crisis", and relevance-induced severity is defined by how far a stakeholder feels implicated in and impacted by a

crisis (p. 52). These three dimensions function interdependently; when crisis occurs, it can evoke strong emotional responses due to surprise or fear. Should it endanger their sense of security, they take notice and look for information to safeguard themselves. The more severe a crisis is, the more invested they become. However, if stakeholders do not consider the crisis relevant, they are less likely to experience interest towards it, and therefore be less emotional about it (Zhou et al., 2019).

Perceived crisis severity can be influenced by many factors. For example, the news and media coverage can play a significant role in public perceptions. Previous research demonstrates that media can influence emotional responses of stakeholders (Nabi, 2003; Kim & Kim, 2021), increase perceived severity of crises portrayed (Chang, 2011), and affect the level of public attention and concern towards the crisis (Neuman, 1990; Fürst & Oehmer, 2021). In turn, how media presents and reports crises can heighten senses of urgency as well as shape social perceptions and discourse around the crisis, ultimately influencing how secure stakeholders may feel following the crisis event.

H2: ***The effect of crisis report message framing on sense of security is mediated by perceived crisis severity.***

Imaginative Enactment as a mediator

Individuals' perceptions of a crisis are not only influenced by the crisis itself, rather how they interpret the crisis (Jin, 2009). When faced with severe crisis, individuals seek information and explanations. This inclination results from residual uncertainties that accompany a crisis, prompting this explanation-seeking behaviour as a method of coping with feelings of uncertainty and anxiety (Goyal, 2023). If additional media or information is absent, such as imagery, individuals may instinctively turn to their own minds to conceptualise the crisis. In philosophy, phenomenology explores how consciousness is

structured from a first-person perspective (Smith, 2018). It investigates a variety of experiences, including perception, memory, cognition, imagination, emotion, and even social behaviour (Smith, 2018). The fundamental structure of an experience is its intent, which dictates its direction through its content or meaning. A conscious experience has a key characteristic in that individuals can experience them, live through them, or act them out through a first-person framework in their minds as opposed to through physical action or execution (Smith, 2018).

As Hanson (1988) highlights, our imagination allows us to envision possibilities inside or beyond our current realities (p. 138). It plays a key role in assigning meaning to experiences and offers understanding to knowledge. Through imagination, individuals construct their interactions and thoughts into a narrative that help make sense of the world surrounding them and create a deeper "understanding that goes beyond facts" (Norman, 2000, p.1). Imagination may have some effect under certain circumstances, such as the social settings, and heightened anxiety that leads individuals to engage in distinctive thoughts (Beer, 1963). Therefore, internal narratives can allow the imagination to create imaginative experiences that work alongside our emotions to fill in the gaps of information that remain unclear.

The term imaginative enactment explains the phenomenon of taking the experience of others and attaching it to your own self by acting it out in the mind. Imaginative enactment has been studied and referred to as "vicarious experience" in storytelling techniques in crisis communication (Lee & Jahng, 2020) creating storyline familiarity and therefore sincerity for the crisis. In a brain imaging study by Reddan, Wager, and Schiller (2018), the researchers measured brain activity while simultaneously measuring bodily response measure the effects of fear management. Their findings demonstrated that imaginative enactment has an important influence on both neurological processes and physical responses, illustrating its

connection to general well-being. To continue, participants who imagined frightening sounds and those who heard them showed surprisingly similar brain activity, indicating that there was little difference between the two experiences at the overall neural level (Reddan et al., 2018). In other words, similar to reading a book or the news, imaginative enactment allows individuals to create an experience that feels like reality. So far, crisis communication studies have not yet explored the imagination of stakeholders and their ability to self-create experiences to crises with victims.

Empathy

Empathy plays an important role in coping with crisis management as it aids in understanding and connection between all agents. Empathy can be defined as the ability to understand another person's experience by taking their frame of reference (Hardee, 2023, p. 51). Reiners et al. (2011) suggests that the multidimensional construct is made up of two important elements: cognitive and affective. Cognitive empathy involves the ability to set aside one's feelings to understand another's feelings, thoughts, or experiences and enhances one's ability to engage with others in socially acceptable ways. On the other hand, affective empathy is the capacity to share the emotional state of another individual through recognition. In other words, affective empathy is "the ability to vicariously experience the emotional experience of others" (Reiners et al., 2011, p. 85).

Research in the field of crisis communication have previously investigated the role of empathy on post-crisis reputation and the role of empathy in communication strategies in organisations and spokespersons perception (Schoofs et al., 2019; Fannes & Claeys, 2022; van der Meer & Verhoeven, 2014; Ndone & Park, 2022), but have not yet investigated its role in how it is related to imaginative enactment. Individuals with higher levels of empathy are more likely to engage in imaginative enactment, reconstructing the sights, sounds, and emotions experienced by those affected by crisis. This empathetic immersion allows them

into deepen their emotional connection and understanding of the events and victims as well as strengthen their ability to respond compassionately.

H3: The effect of crisis report message framing on Sense of Security is mediated by Imaginative Enactment, with empathy determining the level of Imaginative Enactment.

Figure 4.
Hypothesised Model

Predictor:
Empathy

Imaginative
Enactment

H3
+

H1a, H1b, H1c

Crisis Report
Strategy

Sense of Security

-          -

-

+

H2

Perceived Severity

-
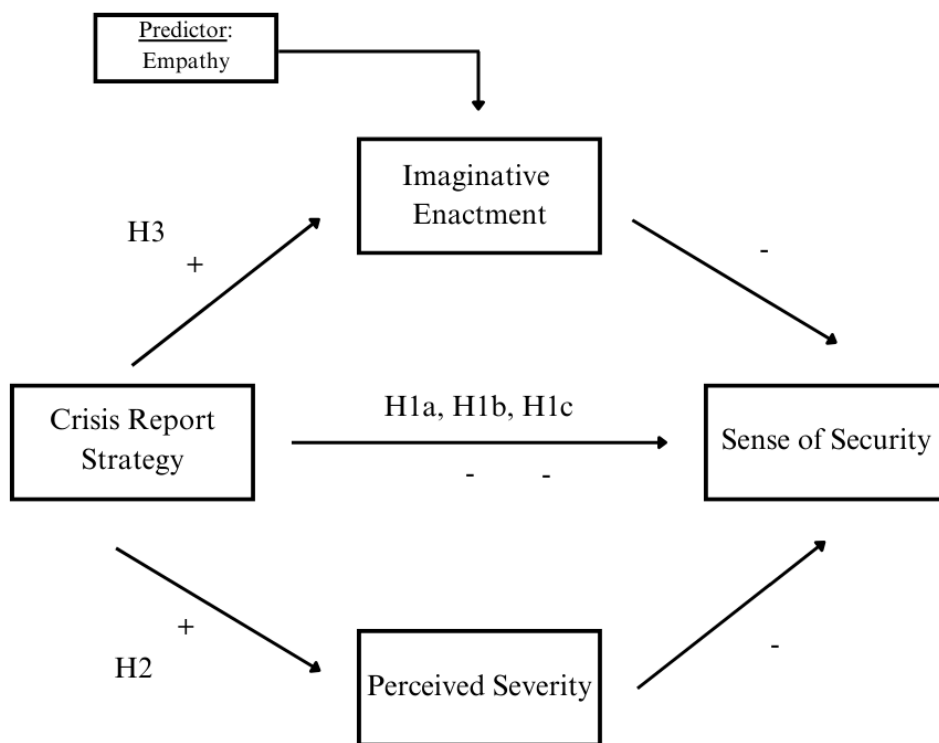
Method

Design

To test the hypotheses, a single factorial, between-subjects design with three levels was used: 3 (crisis report strategy: informative vs. descriptive vs. suggestive) x 1 (sense of security). This study did not make use of a control group, as crisis is always communicated through a strategy. The study used a fictional crisis scenario involving a train from the Dutch national railway company, the NS, that crashed into a popular train station. It predominantly focused on how the story was told and what information was provided, rather than on the organization itself. This approach was intended to elicit more emotions and natural reactions.

Participants

Participants were recruited through social media such as LinkedIn, Facebook, and Instagram as well as through snowball sampling from the researcher's networking circle. A total of 194 subjects aged 18 – 68 (M = 31.59, SD = 10.76) were used for analysis, of which 49.5% identified as a woman, 46.9% identified as a man, 3.1% identified as non-binary/third gender, and 0.5% preferred not to say. Most participants (64.4%) reported English as a second language, English was the mother tongue of 25.3% participants, 9.3% of participants spoke English as a third language, and 1% of participants reported English as their fourth or higher language.

Procedure and Stimuli

Subjects were sent a link to the online survey administered through Qualtrics and randomly assigned to one of the three conditions. As an incentive, two raffles of 25 euros (or a local currency for international participants) for online web shops were offered as a raffle to those that participated. Those sensitive to distressing messages were advised to not take part in the study. Participants were requested to ensure that they took part in the experiment in a distraction-free environment so they could fully concentrate on the task. Consenting participants were randomly presented with one of the three conditions, where each condition presented a news message with different report strategies (informative, descriptive, or suggestive).

The following crisis event was communicated: a train malfunctioned at a terminus and was unable to break, crashing into the train station, and leaving many injured. This scenario was presented in the form of an article excerpt that contained the same baseline story; however, it was worded according to condition. A digitally altered image of The Hague Central Station was placed above each news article. The image that did not display the accident, rather the outside of the station with police and ambulance present. Furthermore, the

crisis event that was depicted in this experiment was fictitious but had powerful, realistic

qualities because it had occurred in the past, but not to this extent. Just over twenty years ago,

a train failed to stop and crashed into a chocolate store in The Hague Central Station (Nu.nl,

2003). In The Netherlands, there have been about thirty fatal railroad accidents in the last

eighty years, with the Oss tragedy in 2018 being the most recent (Redactie, 2023).

Once subjects were allocated to a condition, they were instructed to take their time

reading the information, but they were not instructed to enact the event in their imagination.

During this time, they were unable to skip to the next section until the 90 seconds had passed.

This timeframe was selected based on the average speed of reading, while allowing extra

time for imaginative enactment to occur. The work of Brysbaert (2019) claims that an average

adult can read up to 238 to 260 words per minute depending on the reading content. The news

articles excerpts ranged from 191 to 244 words, allowing for up to more than 46 seconds to

enact the crisis situation. To continue, participants were asked to rate their experiences of the

event, then finally their perceived severity of the crisis. Subjects were presented with a

manipulation check to determine correct manipulations. Finally, participants were informed

that the crisis event was fictitious and thanked them for their participation. On average, the

survey lasted 14.33 minutes.

Dependent measures

The dependent variable within this study was Sense of Security. The dependent variable was

measured with a 10-item scale testing physical and emotional Sense of Security using a 7-

point Likert scale ranging from "Strongly Disagree" to "Strong Agree". The variable was

reverse coded for statistical analysis. A sample statement from this scale is "The crisis event

made me feel unsafe." The value for Cronbach's Alpha for the scale was adequate ($\alpha = .782$).

Mediating variables

To measure Imaginative Enactment, this study used one 8-item 7-point Likert scales ranging from "Strongly disagree" to "Strongly Agree". For example: "I can mentally envision the environment and surroundings of the crisis event". The value for Cronbach's Alpha for the scale was good (α = .886).

To measure Perceived Severity, this study used a 7-point likert scale ranging from "Totally disagree" to "Totally Agree" using the multidimensional "Perceived Crisis Severity Scale" by Zhou, Li, and Brown (2019). This scale measures the interest-, emotional-, and relevance-induced severity of the crisis (Appendix 1). The value for Cronbach's Alpha for the Interest Induced Severity was excellent (α = .916), for Emotional Induced Severity it was good (α = .897), and for Relevance Induced Severity it was good (α = .830).

Predictor variable

To measure the variable Empathy this study used the QCAE scale based on Reiners et al. (2011). It was made up of two subscales of 12 items, online simulation and peripheral responsivity that measured cognitive empathy and measure affective empathy. Initially, the value for Cronbach's Alpha for the scale was unacceptable (α = .419). However, after removing items 1 ("I sometimes find it difficult to see things from the "other guy's" point of view"), 8 ("It is hard for me to see why some things upset people so much"), and 11 ("I usually stay emotionally detached when watching a film"), the scale was deemed adequate (α = .702).

Manipulation Check

A manipulation check was performed to determine whether the participants perceived the experiment's manipulation of message framing correctly as intended (See Figures 1, 2, & 3). Firstly, an univariate analysis of variance revealed a significant effect of message frame on the perception of numerical support, ($F_{(2, 191)}$ = 77.462, p < .001, $\eta2$ = .448), indicating a

successful manipulation and a large effect size. Participants in the informative frame (M = 5.67, SD = 1.186) perceived their condition to be more informative and data-based than the descriptive (p < .001, Bonferroni- correction; M = 3.38, SD = 1.984) and suggestive frame (p < .001, Bonferroni- correction; M = 2.15, SD = 1.408; see Figure 1).

The second univariate analysis of variance revealed a significant effect of message frame on the perception of descriptive and sensory information, (F(2, 191) = 33.52, p < .001, η^2 = .260), indicating a successful manipulation and a large effect size. Participants in the descriptive frame (M = 5.61, SD = 1.312) perceived their condition to be more descriptive and appealing to the senses than the informative (p < .001, Bonferroni- correction; M = 3.4, SD = 1.67) and the suggestive frame (p < .001, Bonferroni- correction; M = 3.92, SD = 2.065; see Figure 2).

The final univariate analysis of variance revealed a significant effect of message frame on the perception of speculative information, (F(2, 191) = 27.221, p < .001, η^2 = .222), indicating a successful manipulation and a large effect size. Participants in the suggestive frame (M = 4.94, SD = 1.823) perceived their condition to provide more speculative information than the informative frame (p < .001, Bonferroni- correction; M = 2.76, SD = 1.383) and the descriptive frame (p = .029, Bonferroni- correction; M = 4.16, SD = 1.76; see Figure 3).

Figure 1.
The effect of manipulation-check informative message frame.

Figure 2.
The effect of manipulation-check descriptive message frame.

Figure 3.
The effect of manipulation-check suggestive message frame.
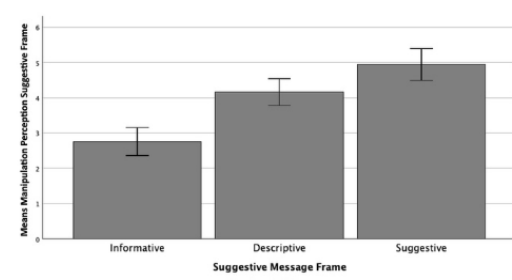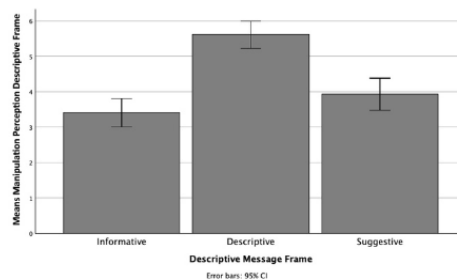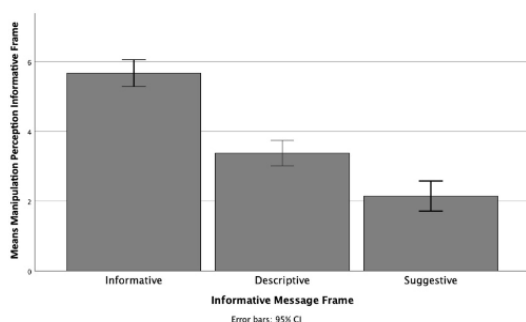
Descriptives

Table 1. *Descriptive Statistics NB All variables are measured on a 7-point scale unless indicated otherwise.*

	N	Mean	Std. Deviation
Sense of Security	194	4.862	.886
Imaginative Enactment	194	4.051	1.327
Emotion-Induced Severity	194	3.117	1.441
Empathy*	194	3.032	.436

* Measured using 5-point scales.

Effect of Message Frame on Sense of Security (H1a, H1b, H1c)

A Univariate Analysis of Variance was conducted to evaluate the effect of message framing (informative, descriptive, and suggestive) on the sense of security felt by the participants. Contrary to predicted, the Univariate Analysis of Variance was statistically non-significant ($F(2, 188) = 1.516$, $p = .222$, $\eta^2 = 1,184$, $\eta_p^2 = .016$). Therefore, H1a, H1b, and H1c can be rejected.

Perceived Severity as a mediator (H2)

A univariate analysis of variance was conducted to examine the effect of Message Frame on Emotion-Induced Severity. The results showed no significant effect of the Message Frame on Emotion-Induced Severity, ($F(2,191)=1.177$, $p = . 311$ p=.311, $\eta_p^2 = .012$). Since this relation is a prerequisite for a mediation effect, H2 is rejected, and no further relations are tested.

Imaginative Enactment as a mediator (H3)

A univariate analysis of variance was conducted to examine the effect of message frame on Imaginative Enactment, with Empathy included as a predictor variable. The results indicated no significant effect of Message Frame on Imaginative Enactment, after controlling for

Empathy, $(F(2,188) = .357, p = .700, \eta_p^2 = .004)$, indicating there are no significant

differences between in levels of imaginative enactment across all three message frames.

These results show that message framing does not influence sense of security through

Imaginative Enactment. Similarly, the interaction effect between Message Frame and

Empathy was also nonsignificant $(F(3,188) = .488, p = .615, \eta_p^2 = .005)$, indicating that

Empathy does not affect the impact of message framing. No mediation can be found because

the independent variable does not impact the mediator. Therefore, H3 is rejected.

Regression Analysis

While not hypothesized within the theoretical framework, the researcher sought to further

explore whether Imaginative Enactment and Emotion-Induced Severity are related to Sense

of Security. Even if the manipulated message strategies did not impact these processes,

Imaginative Enactment and Emotion-Induced Severity might explain the Sense of Security

participants felt after reading about the crisis. A multiple regression analysis was conducted to

examine the relationship and influence of Imaginative Enactment on Sense of Security and

Emotion-Induced Severity on Sense of Security. The model showed that the two variables

entered explained 61.6% of the variance in Sense of Security $(F(2, 191) = 153.521, p < .001)$.

Emotion-Induced Severity was a significant predictor of Sense of Security $(\beta = -.712, p < .001)$. This indicates that for each increase of 1 standard deviation (SD) in Emotion-Induced

Severity, Sense of Security decreases by .712 SD, assuming all other variables are held

constant. Imaginative Enactment was also a significant predictor of Sense of Security

$(\beta = -.140, p = .006)$. This indicates that for each increase of 1 SD in Imaginative Enactment,

Sense of Security decreases by .140 SD, assuming all other variables are held constant.

Table 2. *Regression analysis for emotion-induced severity and imaginative enactment as predictors of sense of security*

Variable	B	SE B	β
intercept	6.605	.132	
imaginative enactment	-.094	0.34	-.14*
emotion-induced severity	-.437	0.31	-.712**
R^2	.616		
F	153.521***		

* $p < .001$, ** $p = .006$, *** $p < .001$

Figure 5.

Results H1, H2, H3, and further multiple regression analysis
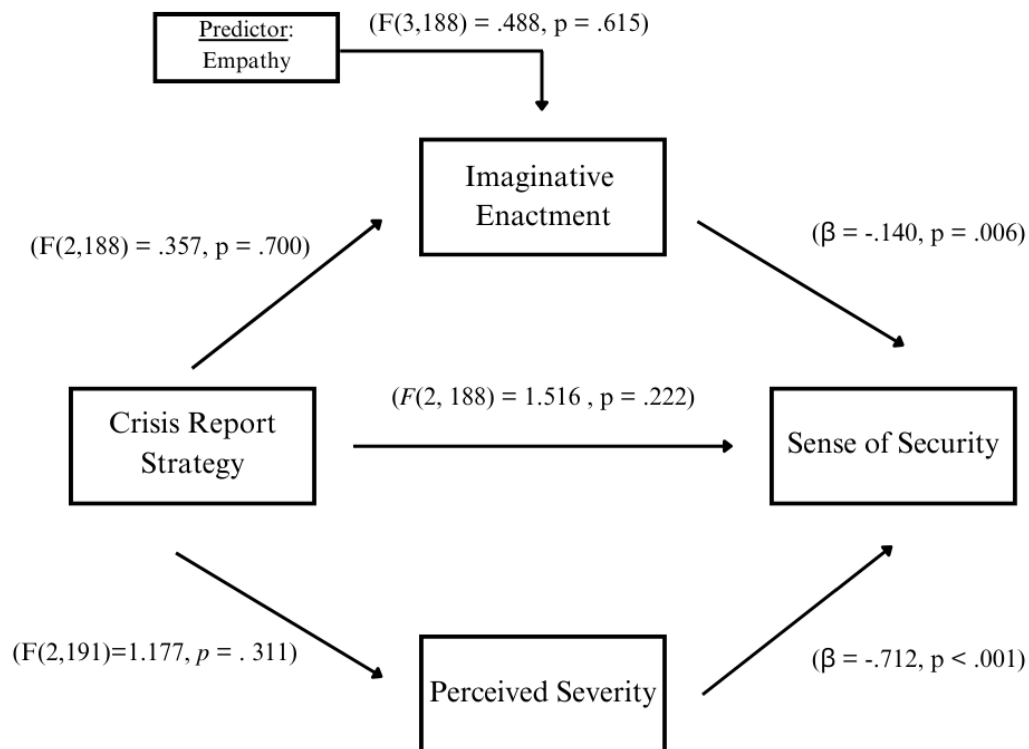
Discussion

The current study represents an important step forward in our understanding of the cognitive processes underlying the impact of crises and crisis communication. It proposes that a crisis can threaten sense of security and contributes to risk communication research by examining

the origins of risk and safety perceptions, providing a valuable insight into possible behavioural responses and reactions to crises. Through exploring the cognitive and emotional processes involved in perceiving risk surrounding crises, the research speculates just 'how' crisis can make people feel unsafe. The study set out to investigate whether crisis message framing influences sense of security, mediated by imaginative enactment and by perceived crisis severity. The results suggest that crisis message framing does not have an effect on sense of security. It was further hypothesised that message framing would have an impact imaginative enactment and predicted by empathy, however, this was not confirmed. It was also hypothesised that message framing would have an effect on perceived crisis severity, which was also not confirmed.

While the tested crisis message frames did not directly influence sense of security nor was this relationship mediated by perceived severity or imaginative enactment, the study proposes that a crisis can threaten sense of security. Results suggest that perceived crisis severity and imaginative enactment both have a negative relationship with sense of security, an outcome that was not initially hypothesised. The strong relationship between the mental process and fear demonstrates that further research is needed to determine how crisis communication messages can trigger imaginative enactment: particularly, what types of crisis communication messages trigger imaginative enactment, for who, in what situations, and how they trigger them. A further understanding of these causes can help facilitate a better acknowledgement of public fears and feelings of unsafety following crises as well as to develop more effective communication strategies to address them.

To begin, the findings of this research indicate that the type of crisis report message does not affect stakeholders' sense of security. This suggests that the framing of a crisis message by the news media does not influence stakeholders' perception of physical and emotional security at that given moment. A possible explanation for this non-significant

result may have to do with crisis saturation. Gerbner's Cultivation Theory (1969) claims that media causes us to have inaccurate views of the world through the power of a synthetic reality. This suggests that the media we consume cultivates our reality to be perceived as more dangerous than it really is, causing a desensitisation to major crisis events (Li, Conathan & Hughes, 2017). Similarly, previous research (Scharrer, 2008) indicated that individuals who regularly consume more (local) news are less likely to produce emotional responses to news messages. This suggests that habitual exposure to news media content is less likely to trigger stakeholders emotionally, leading them to develop less reactive approaches to processing news information. Further research by Fanti et al. (2009) revealed that participants repeatedly exposed to (violent) crises in media desensitises individuals by reducing its psychological impact. If participants actively consume news and media, it is possible that they were less responsive to the crisis situation, despite using three different message frames. This desensitisation may imply that people no longer respond in times of crisis as a coping method for unpleasant feelings. This emotional numbness can lead to less concern with crisis events, potentially resulting in a more distant public reaction to genuine crises.

To continue, it is possible that it is not the message type, rather other factors that have stronger influences such as eye-witness accounts that increase personal proximity and influence sense of security as they provide richer information about the event (Hänska and Bode, 2018). Additionally, it is plausible that stakeholders need more visual triggers to enact crises in their imagination, as individual's reactions to information in the form of text and visuals can vastly differ (Goyal, 2023). As our world becomes more digital, visuals and news stories related to crises have become more readily available to the public through social media. These images can leave long-lasting effects on our subconscious as a direct result of how they are processed in our minds (Goyal, 2023).

Next, the emotion-induced severity of a crisis did not mediate the non-significant relationship of crisis report message and sense of security. Perceived severity can be highly subjective, namely, that stakeholders may hold varying definitions of what they consider severe (Zhou et al., 2019). Therefore, if an individual does not perceive a crisis to be severe enough to become interested, emotionally involved, or find it relevant, one's sense of security will not be affected. This study revealed that participants did not find the crisis scenario emotionally severe. A possible explanation for this could be that the information provided in the crisis message was limited, as it was an initial indication of what happened. The message either provided statistical information, perspective-taking information of what passengers may have experienced in during the crisis but did not indicate exact information on the fate of the victims involved in the crash. For example, if the descriptive or suggestive frames reported on how many individuals were injured or the possible deaths, it may have elicited higher perceived emotional severity. For future research, researchers should utilise an update story to act as a "live" update, indicating what happened to the individuals affected.

In addition to no mediating effect of perceived crisis severity, imaginative enactment with empathy as a predictor variable also did not act as a mediator. Additionally, empathy did not act as a determinant factor for imaginative enactment. Contrary to what was expected, participants who demonstrated higher levels of empathy were not able to perceive and emotionally engage more with the experiences of others. Therefore, the capacity stems from the affective components of empathy according to Reiners et al. (2011), does not enable an immediate and more vivid understanding of others' experiences and their emotions.

Further analyses in this study revealed that the higher levels of emotion-induced severity had a strong negative relationship with sense of security after exposure to crisis messages, while the presence of imaginative enactment yielded the weak negative relationship with sense of security. In other words, enacting a crisis situation threatens sense

of security. Furthermore, when a stakeholder perceives a crisis as more emotionally severe, their sense of security lowers. Previous research supports the finding that a crisis message can trigger powerful emotions, Jin (2009) suggests that stakeholders are likely to experience four prominent emotions: anger, sadness, fear, or anxiety. Emotions with this negative valance can likely cloud judgment and increase a feeling of being unsafe in their surroundings. Additionally, stakeholders experiencing strong emotional reactions may perceive the crisis as more severe and worrying, making them feel less secure or safe (Zhou et al., 2019). Media outlets can exacerbate the perceived security of crisis events through the concept, 'media panic' (Wang et al., 2021). News media can construe and sensationalise stories, an approach that can make a minor crisis seem more severe than it is, and further stimulate fear amongst stakeholders.

To continue, the current study aimed to fill a research gap in the field of crisis communication through the introduction of imaginative enactment. The findings highlight the significance of imaginative enactment as a phenomenon explaining why certain stakeholders may feel unsafe following a crisis, while others do not. For example, certain major crisis events such as the 9/11 terrorist attacks in 2001, the Germanwings suicide plane crash in 2015, or natural disasters may hold strong emotional significance and perceived severity compared to other crises, as well as be endlessly replayed like an imaginative movie in people's minds, as if they are at the theatre (Kantoorowicz, Kantorowicz-Reznichenko, de Vries, 2023; Graaf, 2020). These types of crises can be more easily applied across different groups in society as they are not bounded to time or place, meaning it could happen anywhere in the world in the blink of an eye. This element of the unknown can allow individuals' imagination to wander, leading them to repeatedly experience and replay the negative crisis events differently in their minds, arousing high levels of frightened reactions and responses. This finding aligns with the research of Reddan et al. (2018) as it demonstrates that

stakeholders can attach the experiences to themselves of by acting it out in the mind and creating their own personal experience that feels like a true reality to them. Through imaginative enactment, their imagined experience is processed on a neural level that is similar to physically experiencing the event.

Therefore, while this study is a valuable introduction of imaginative enactment to the field of crisis communication, it is certain that more research is needed to further explore the phenomenon. Future research should set out to determine when individuals enact crisis events in their minds, such as if it occurs when one's mind wanders throughout the day or during sleep. It should also not be limited to the initial exposure to information about the crisis event. Additionally, future research should explore imaginative enactment using qualitative methods to develop a more in-depth understanding of what individuals envision. One suggested approach would involve exposing participants crisis event stimuli, instructing them to vividly imagine themselves as part of that event, then asking participants to describe their imagined experiences in detail. Finally, more research is needed to determine the amount of time that is needed to enact crisis events in one's mind. The current study provided participants with a minimum of ninety seconds to read and enact the crisis event before having the possibility to proceed further with the experiment. Future research should examine the amount of time needed for individuals to enact crisis events in their minds, as well as determine whether enactment begins when one receives information about the crisis event or after they had digested all information provided to them.

Limitations

While the current study presents valuable insights into the relationship crisis communication and psychological processes, limitations of the study should be discussed. Firstly, the ecological validity should be called in to question as the materials could have been better applied to contemporary media, such as social media. It is possible that the framing of the

crisis event did not align with the media type, influencing participants reactions, and reduced the generalisability of the findings to real-world situations. Future research should explore the impact of types of crisis communication and imaginative enactment using different forms of social media. For example, examining the role of eye-witness accounts on different social media platforms to determine whether they affect the psychological impact of the crisis message.

Next, the participants' familiarity with the context of the crisis events, such as the crisis event location or their experience with train travel, were not controlled for. It is possible that without this prior knowledge, individuals had more difficulties enacting the situation due to the uncertainty of surroundings or expectations. However, in major crisis events such as terrorist attacks, individuals may find it easier to use imaginative enactment, despite being unfamiliar with these types of events. Therefore, future research should examine crisis events that illicit more emotions and more disruptive for larger and less stratified groups within society, such as natural disasters and terrorism.

Additionally, the study did not account for the role that socialisation during crisis events. A crisis does not portray an everyday occurrence and can create a large amount of discourse amongst social circles. Through this discourse, individuals can share information as well as received new information that may inhibit higher levels of imaginative enactment as the event is continuously enacted during conversations. Finally, the temporal design of the study limits researcher's ability to draw conclusions on crisis communication and psychological responses over extended periods of time. A longitudinal research approach could provide a deeper understanding of how responses evolve over time. For example, future research could ask stakeholders to describe their perceptions and habits of envisioning previous crisis events.

Conclusion

The results of this study have important implications for both the theoretical understanding of crisis communication as well as its practical implications. From a theoretical perspective, the current research suggests that the traditional aims of crisis communication, such as the Situational Crisis Communication Theory (Coombs, 2007) and reputation management, should be reassessed as it insufficiently considers the role of psychology. More specifically, this study introduced a more stakeholder-centred approach by examining how they are affected. The relationship identified between imaginative enactment, perceived severity, and sense of security highlights the significance of examining the psychological impact of crisis messages on stakeholders more closely. More specifically, following crisis events that can immediately affect larger populations for longer periods of time, such as terrorism/terrorist attacks, and natural disasters. A better understanding of these psychological dimensions will help develop communication strategies to help mitigate fear and enhance safety.

From a more practical standpoint, this research provides implications for organisations, society, and media outlets by calling attention to how crisis communication can inadvertently increase negatively valent emotions. The findings suggest that by acknowledging the role of imaginative enactment, communicators can develop messages that not only inform but also empower the public to manage their fears instead of generating more fear. Moreover, the study helps broaden the understanding of psychological dimensions that are experienced across various types of crises, including terrorism and high-profile crimes. It demonstrates the natural fear society has of the unknown and that we will imagine what it could be like to be involved with major crises. Accordingly, crisis messages should be adapted to avoid the individual psychological triggers of imaginative enactment that are associated with different kinds of crises to alleviate or mitigate fear and anxiety.

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A. Online Qualtrics Survey

Informed Consent

Dear participant,

Thank you for your interest in participating in this research study.

This survey is conducted by Lizzy Glaser for her Master's thesis for the Business Communication and Digital Media programme at Tilburg University. The purpose of this study is to gain a better understanding behind the mental processes that follow crisis events. While participating in this study, please ensure you are in a distraction-free environment where you can fully concentrate. To take part in this survey, you must be **at least 18** years old.

Participation

Participation in this study is voluntary and you have the right to withdraw from the study at any moment. Due to the anonymisation of the data, it is not possible to have your research data removed after the completion of the experiment.

Confidentiality

All research data collected in this survey will be anonymised and kept confidential. No personal information or data will be disclosed to any third parties, and your responses will only be used for the purpose of this study.

Risk

Participation in this research study poses minimal risks. However, if you are an individual that is extremely sensitive to distressing messages it is advised for you not to take part in the study. Should you find any question or part of the study distressing, you can withdraw from the study at any point without consequences.

Bol.com Raffle

By participating in this study, you can win one of two Bol.com gift cards. If you would like to take part in this raffle, you will be directed on how to do so at the end of this survey. Don't live in the Netherlands? Then you can win a gift card for a local online shop (e.g. Amazon).

Questions

Should you want more information or have questions about this research study, please contact Lizzy Glaser (e.c.glaser@tilburguinversity.edu).

Consent

By selecting, "I consent and wish to participate", you declare that you understand and read the information presented and consent to participate in this research. If you do not wish to participate in the research study, please decline participation by selecting "I do not wish to participate".

Consent

○ I consent and wish to participate.
○ I do not wish to participate.

How old are you?

What is your gender?

○ Male

○ Female

○ Non-binary / third gender

○ Prefer not to say

English is:

○ My first language (mother tongue)

○ My second language

○ My third language

○ My fourth+ language

→

Please read the following statements carefully and rate to what extent you agree with the statement.

	Strongly disagree	Slightly disagree	Slightly agree	Agree
I sometimes find it difficult to see things from the "other guy's" point of view.	◯	◯	◯	◯
I am usually objective when I watch a film or play, and I don't often get completely caught up in it.	◯	◯	◯	◯
I try to look at everybody's side of a disagreement, before I make a decision.	◯	◯	◯	◯
I sometimes try to understand my friends better by imagining how things look from their perspective.	◯	◯	◯	◯
When I am upset at someone, I usually try to "put myself in his shoes" for a while.	◯	◯	◯	◯
Before criticising somebody, I try to imagine how I would feel if I was in their place.	◯	◯	◯	◯
I often get deeply involved with the feelings of a character in a film, play, or novel.	◯	◯	◯	◯
It is hard for me to see why some things upset people so much.	◯	◯	◯	◯
I find it easy to put myself in somebody else's shoes.	◯	◯	◯	◯

I can usually appreciate the other person's viewpoint, even if I do not agree with it.	○	○	○	○
I usually stay emotionally detached when watching a film.	○	○	○	○
I always try to consider the other fellow's feelings before I do something.	○	○	○	○

→

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In the next section you will be presented with a news article.
Please take your time to read the article very carefully.
After 1.5 minutes, an arrow will appear in the bottom right corner and you can continue.

→

Condition 1:

Today, 9:56

NS Intercity train collision at The Hague Central Station.

The Hague Central Station has been closed off by local authorities this morning. At 8.36 the Intercity 11720 from Amersfoort Schothorst failed to break when arriving to platform 8 and crashed into the station.

The train was planned to arrive the station at 8.36, where it was scheduled to stay for ten minutes before setting back. It has been reported that the train driver attempted to contact the train traffic controller at 8.34, about 350 metres away from the station. It is estimated that the train drove into the station at approximately 60 kilometre per hour.

The Hague Station is in the top five of the busiest train stations in the Netherlands with approximately 10,000 travellers between the hours of 7.00 am and 9.00 am. This is roughly 150-200% more than other major cities such as Arnhem or 's-Hertogenbosch.

The train had two units and is suspected to have been carrying approximately 700 passengers, with approximately 120 individuals waiting on the platform. Local authorities claim the train continued to drive more than 20 metres into the station before colliding into an escalator and two shops. The police, NS security, and emergency services are currently working together to find those affected by the crash and over 1,500 travellers have been evacuated from the station so far.

The current cause of the crash is still unknown to local authorities. All train travel to and from The Hague Central Station has been suspended until further notice.

Condition 2:

Today, 9:56

Panic echoes through The Hague Central station after train collision during rush hour.

Panic and terror gripped The Hague Central Station this Tuesday morning. Commuters faced the shock of their lives after a train failed to halt at its platform during rush hour, hurtling onward into the station at full speed.

In the tense moments leading up to the collision, the train driver reportedly reached out to traffic control, likely to frantically signal the impending disaster. The train, composed of two units, was packed with approximately 700 passengers both standing and sitting. Meanwhile around 120 individuals stood expectantly on the warm and brightly lit platform, awaiting their morning train.

The impact sent tremors through the crowded station hall like an earthquake. Bystanders watched in horror as the train barrel past the platform that sent shockwaves through the air, ultimately demolishing an escalator and colliding with the AH to go and Bruna stores.

Eyewitnesses, recounting the traumatic catastrophe, described it as a whirlwind of distressing events that unfolded in the blink of an eye: the swift sound of the highspeed train, followed by the piercing screech of grinding metal, frantic screams of fellow travellers, flickering lights, and finally a thick, heavy cloud of dust and debris that engulfed the station, making it difficult to see and breathe.

The current cause of the crash is still unknown to local authorities. All train travel to and from The Hague Central Station has been suspended until further notice.

Today, 9:56

An incomprehensible scene: NS Intercity train crashes into The Hague Central Station

Travellers at The Hague Central Station experienced the unimaginable this Tuesday after what can only be described as an unforeseen event. A train failed to come to a halt at its platform during rush hour this morning. The Intercity train continued its trajectory into the station at full speed, resulting in an unconceivable and devastating collision.

Commuters waiting on the platform must not have been able to believe their eyes as the situation unfolded. As for the hundreds of passengers travelling inside the Intercity, the fear is incomprehensible.

One can only imagine the unthinkable distress that was felt by those affected by this morning's tragedy and recollections of the scene paint a grim picture. Unbelievable confusion and disorder were felt throughout the station, as well as deep-rooted anxiety as everyone struggled to breathe.

The damage has been reported as extraordinary and the cause of the crash is deemed a mystery.

Thousands have been evacuated from the station, and local authorities are still currently working together with emergency services to evacuate the countless number of individuals in the station and those that may still be trapped inside the Intercity.

The following statements deal with your reaction to the train crash. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I mentally envisioned the environment and surroundings of the train crash.	○	○	○	○	○	○	○
I vividly imagined myself in the train crash described, experiencing it as if I were there.	○	○	○	○	○	○	○
I mentally reenacted the sequence of events leading up to and following the train crash.	○	○	○	○	○	○	○
My imagination helps me mentally place myself in various roles within the train crash described.	○	○	○	○	○	○	○
I experience a sense of proximity to the train crash, as if I were there.	○	○	○	○	○	○	○
I find it easy to imagine the sights and sounds of the train crash described.	○	○	○	○	○	○	○
I imagined how I would react if I were directly involved in the train crash described.	○	○	○	○	○	○	○
Reading about the train crash makes me feel as though the danger of the train crash is happening in my own community or environment.	○	○	○	○	○	○	○

→

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The following statements deal with your reaction to the train crash. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The accident made me feel panicked and distressed.	○	○	○	○	○	○	○
The accident made me feel emotionally overwhelmed and helpless.	○	○	○	○	○	○	○
The accident made me feel uncertain and anxious.	○	○	○	○	○	○	○
The accident made me feel alone.	○	○	○	○	○	○	○
My emotional state after reading about the accident was stable.	○	○	○	○	○	○	○

The following statements deal with your reaction to the train crash. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The accident made me feel unsafe.	○	○	○	○	○	○	○
The accident made me feel vulnerable.	○	○	○	○	○	○	○
The accident made me feel worried about the safety and well-being of my loved ones.	○	○	○	○	○	○	○
I can trust this organisation with my well-being.	○	○	○	○	○	○	○

→

The newspaper article I read provided information supported by numerical data (e.g. numbers, percentages).

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
	○	○	○	○	○	○	○

The newspaper article I read provided information that was highly descriptive and appealed highly to the senses (e.g. sight, sound, smell).

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree
	○	○	○	○	○	○

The newspaper article I read provided highly suggestive and speculative information.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree
	○	○	○	○	○	○

→

Thank you for taking the time to participate in this survey. **The following crisis event described in this study was entirely fictional and does not reflect the organisation that was used.**

For participating in this study, you can enter a raffle to win one of the two Bol.com cards (or local online shop) at the value of 25 euros each. To enter the raffle, you need to provide your email address. Your email address will only be used for the purpose of the raffle and will be deleted directly after.

Would you like to participate in the raffle?

○ Yes

○ No

→

B. Adjusted QCAE Empathy Scale (Reiners et al., 2011)

COGNITIVE EMPATHY - ONLINE SIMULATION
AFFECTIVE EMPATHY - PERIPHERAL RESPONSIVITY
*removed for reliability

1. I sometimes find it difficult to see things from the "other guy's" point of view.*

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

2. I am usually objective when I watch a film or play, and I don't often get completely caught up in it.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

3. I try to look at everybody's side of a disagreement, before I make a decision.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

4. I sometimes try to understand my friends better by imagining how things look from their perspective.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

5. When I am upset at someone, I usually try to "put myself in his shoes" for a while.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

6. Before criticising somebody, I try to imagine how I would feel if I was in their place.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

7. I often get deeply involved with the feelings of a character in a film, play, or novel.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

8. It is hard for me to see why some things upset people so much.*

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

9. I find it easy to put myself in somebody else's shoes.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

10. I can usually appreciate the other person's viewpoint, even if I do not agree with it.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

11. I usually stay emotionally detached when watching a film.*

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

12. I always try to consider the other fellow's feelings before I do something.

1 Strongly disagree   2 Slightly disagree   3 Slightly agree   4 Strongly agree

C. **Perceived Crisis Severity Scale**

Measured on a 7-point likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree).

Interest-Induced Severity
IIS 1: I care about the crisis.
IIS 2: Further news about the incident is of my interest.
IIS 3: I hope to know more about the incident.
IIS 4: I think the crisis interests me.

Emotion-Induced Severity
EIS 1: The crisis incurred my sense of stress.
EIS 2: I feel quite anxious about the crisis.
EIS 3: My apprehension grew as I knew more about the crisis.
EIS 4: I'm worried about the crisis situation.

Relevance-Induced Severity
RIS 1: I feel influenced by this crisis.
RIS 2: I feel involved in the crisis.
RIS 3: I find this crisis relevant to me.
RIS 4: The crisis is meaningful to me.