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*A Study on the Effects of News Frames in the
Social-Mediated Crisis Communication of the Local
Government*

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ABSTRACT

This study took a first step in examining the effects of news frames in crisis communication via social media. The effects of social media in crisis communication on receivers are still understudied. Previous research mainly stressed the presence of certain news frames on social media and was merely directed to the appearance and presence of these news frames in media coverage. In a 2x5-design, the effects of five news frames during two types of crises on public crisis responses are examined. Looking at how the public responds is relevant, because they mark whether the local government succeeded in her crisis communication. Risk perception, secondary crisis communication, trust, benevolence, competence, integrity, willingness to depend, subjective probability of depending (intention to follow advice), reputation, personal involvement and the attribution of crisis responsibility are the public crisis response variables in this study.

The effects were measured with the use of an online questionnaire in which the participants were exposed to a manipulated Facebook message, in which the frame and cluster were manipulated. In total, 304 participants participated in this study. An analysis on the mean scores within and between the conditions suggests that the conflict frame has the most positive effect on the public crisis responses and that the effect of this frame is different in both clusters.

The results imply that the local government should emphasize the political conflict during a victim crisis to be perceived as more competent, and during a preventable crisis to be perceived as more benevolent and trustworthy. In both clusters the conflict frame leads to a higher perception of risk and secondary crisis communication.

In addition to the effects of news frames and crisis cluster, this study looks at the effects of several public crisis responses on risk perception and at the intention to engage into secondary crisis communication. The findings indicate that a higher personal involvement leads to a higher risk perception and to more secondary crisis communication. Furthermore, a higher risk perception also directly leads to more secondary crisis communication.

KEYWORDS: *Crisis communication; News frames; Crisis type; Social media; Framing; Public crisis responses.*

1. INTRODUCTION

During a crisis, the public is earlier informed about the crisis via social networks than by traditional forms of news communication (Palen, Vieweg, Liu & Hughes, 2009). Where social media defines a crisis as a revolution right from the beginning, the other media are not as quick in defining the situation and recognizing events (Hamdy & Gomaa, 2012). Because of the fast and rapid character of social media, the press and government lose their autonomy in providing news and crisis information during crises. Although the government and her organizations are just one of the available news sources for information during a crisis situation, she retains her task to inform the population of citizens in her region and/or country in crisis situations (Jonkers, 2010; Van Duin, 2011). The Security Regions Act (2010), states that the government has to inform citizens during crisis situations. This does not necessarily mean that the government and its organizations are the first appointed to inform the citizens. Nevertheless, she considers informing her citizens as one of her tasks (Jonkers, 2010; Van Duin, 2011).

During crisis situations, social media is getting more and more important for citizens to search for and share information (Regtvoort & Siepel, 2009). Users of social media, especially in times of crisis, are very accurate in collecting and sharing information. Because users can correct each other, you see a rapid self-corrective action on false information (Bos, Van der Veen & Turk, 2010). However, it appears that during a crisis, citizens tend to rely more on information that is provided by the government on social media than on information from citizens (Sutton, Palen & Shklovski, 2008). Citizens expect the crisis communication of the government to be reliable, open, honest and rapid. Besides that, they expect it to be consistent with their need for information (Siepel & Regtvoort, 2009).

The main reason for the government to use social media in managing crises, is the fact that her stakeholders are already using them to communicate about it (Guth & Alloway, 2008; Palen et al., 2009; Scherp et al., 2009, as cited in Veil, Buehner & Palenchar, 2011; Waters, Burnett, Lamm & Lucas, 2009). Furthermore, the government should be present at social media, because otherwise she would possibly lose contact and feeling with her citizens. As a result, she would be no longer aware of what motivates and moves her citizens (Veil et al., 2011).

Via social media, the government can exchange and compare information during a crisis, which enables her to react faster and better, and to provide help in the right time and place (Muhren, Van den Eede & Van de Walle, 2009). Timely information during crisis situations prevents false theories and rumors (Durham, 2008). In case of rumors, the possibility of two-way communication allows the government to undertake action against any rumors (Waters et al., 2009; Research Council for Safety, 2012).

However, the current situation is that the government has to make better and more use of social media during a crisis (Research Council for Safety, 2012; Bos et al., 2010). The local government does not have a full understanding of how these can assist and support her in managing a crisis situation (Marken, cited in Veil et al., 2011). Since the effects of social media in crisis communication on receivers are still understudied (Schultz et al., 2011), this study will focus on the effects of crisis communication via social media on public crisis responses like risk perception, secondary crisis communication, trust, benevolence, competence, integrity, willingness to depend, subjective probability of depending (intention to follow advice), reputation, personal involvement and the attribution of crisis responsibility. Looking at the public's responses to the organization's online response to the crisis situation is relevant, because it marks whether the crisis communication

has failed or succeeded (Coombs & Holladay, 2012). The image and representation of the government that is held by citizens (e.g. trust, reputation) is developed through the information that is received in their interaction with the media and government (Coombs & Holladay, 2007). Since, the attribution of responsibility, and therefore the impact of reputational damage, depends on the crisis cluster (Coombs & Holladay, 2002, 2004), this study will compare the victim cluster to the preventable cluster. These two clusters contrast the most in the attribution of crisis responsibility (Coombs, 2006).

Remarkably, not only factual information seems to be of importance in creating and disseminating images. The offered 'frames' in news messages seem to be even more important than the facts (Bovens, 't Hart & Van Twist, 2007). Where these frames are initially originated and applied in the traditional media, also social media make use of messages that contain comparable frames (Bekkers, Beunders, Edwards & Moody, 2009). However, the use of news frames in crisis communication via social media is still underexposed and little explored. In the research area of traditional media there is existing research that is focused on the use of news frames for different types of crises (e.g. Cho & Gower, 2006; An & Gower, 2009). In the area of social media there are only a few studies that specifically focus on this subject (f.e. Muralidharan et al., 2011; Hamdy & Gomaa, 2012). Where previous studies are merely directed to the appearance and presence of news frames in media coverage, this study will specifically focus on the effect of news frames via social media. The effects of the use of news frames on social media are still understudied.

Furthermore, in addition to the effects of news frames and crisis clusters, the effect of the public crisis response variables on risk perception and secondary crisis communication will be examined. More insight in these effects can contribute to the understanding of how the news messages influence the public's risk perception and why and when people engage in secondary crisis communication.

This leads to the two following research questions: "Which of the news frames, within and between the crisis clusters, has the most positive effect on the public crisis responses?" and "What are the effects of the public crisis responses variables on people's risk perception and secondary crisis communication?". With the knowledge of these effects the local government can adjust her crisis communication strategy via social media channels to a strategy that is highly beneficial for both her and her citizens.

In the next chapter, this study continues with a literature review of the relevant theoretical concepts. This is followed by the method section (Chapter 3), in which information is given about the measures, participants and procedure. After that, the results (Chapter 4) and the subsequent conclusions are subjected to a discussion (chapter 5) that links to the used literature. Finally, limitations and suggestions for future research are discussed.

2. THEORETICAL FRAMEWORK

In this chapter, the theoretical concepts within this study will be discussed, based on previous research. Therefore, in the following sections, crisis and crisis communication will be defined, followed by previous literature on news frames, crisis cluster and the public crisis response variables.

2.1 CRISIS AND CRISIS COMMUNICATION

According to Coombs (2007) a crisis can be described as *'[...] a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational*

threat'. Due to the fact that a crisis is associated and characterized with a situation in which an individual experiences a high level of uncertainty (that he or she wants to reduce), a crisis asks for an immediate need for information (Sellnow & Seeger, 2001; Sellnow, Seeger & Ulmer, 2002). Especially specific information regarding the event or occurrence needs to be communicated during crises (Mitroff, 2004, as cited in Stephens & Malone, 2009).

Coombs (2010) defined crisis communication as '*the collection, processing, and dissemination of information required to address a crisis situation*'. According to Fearn-Banks (as cited in Howel & Miller, 2010), crisis communication can be described as 'the dialogue between the organisation and its publics prior to, during, and after the negative event' (p. 9).

The three basis objectives of crisis communication are providing information, reducing harm and give meaning to the crisis situation (Regtvoort & Siepel, 2009). Without receiving information in time, individuals are forced to rely on rumors. In addition, this lack of information increases their level of uncertainty and makes them to exacerbate the situation during a crisis (Sellnow & Seeger, 2001; Sellnow et al., 2002; Veil & Ojeda, 2010). This is why providing information during a crisis is of great importance.

Given the fact that stakeholders have a high need for information in a crisis situation, there are several ways for them to receive information. Coombs (2007) makes a distinction in four ways of receiving information during a crisis by stakeholders. Firstly, through the interactions of stakeholders with the organization. Secondly, mediated reports as a source of information. Thirdly, second-hand information from other individuals or stakeholders, and fourthly the information that stakeholders get from the news media.

In order to minimize the possible damage to the organization, there has to be an ongoing dialogue between the organization and the stakeholders (Fearn-Banks, 2007, as cited in Howell & Miller, 2010). In the long term the effects of a crisis are highly influenced by an organization's corporate communication during and after a crisis situation (Coombs, 1999). In order to preserve the relationship an organization has with the stakeholders, an organization has to determine its communication strategy in the communication with several stakeholder groups and how she responds to the crisis (Stephens & Malone, 2009).

The integration of the internet in an organization's response to a crisis increases the organization's ability for rapidly framing and defining the crisis to the media (Taylor & Perry, 2005). Social media plays an increasing role in the social construction and destruction of a crisis (Utz & Göritz, 2011). In addition, the users of social media are often also producers of the content (Bekkers et al. 2009), which makes it possible for everyone to send public messages.

A distinction can be made between three different characteristics of social media, which are of influence on crisis communication: 1) immediacy, 2) network power and 3) the ability of interactivity (Palen et al., 2009). These characteristics distinguish social media from traditional channels. Furthermore, there are three conditions when it comes to adequate and effective communication in crisis situations, namely openness, honesty and speed (Jong, Petit & Jochmann, 2005). Social media meet these requirements, which make them effective in crisis communication. The public considers social media to be more credible for obtaining information about the crisis than traditional mass media (Horrigan & Morris, cited in Liu, 2010; Procopio & Procopio, cited in Austin, Liu & Yin, 2012; Sweetser & Metzgar, 2007). Furthermore, social media scores higher on interactivity, authenticity and credibility (Pleil, 2007; Seltzer & Mitrook, 2007).

Not only is the used medium of influence on the organization's image. The content is also of

great importance. The right communication shapes the organization's image. Therefore, the crisis response should be linked to the type of crisis or crisis cluster (Coombs & Holladay, 2002).

2.2 CRISIS CLUSTER: THE ATTRIBUTION OF CRISIS RESPONSIBILITY

The organization's image is better protected when the strategic use of communication in crisis response strategy matches the type of crisis (Allen & Caillouet, 1994, as cited in Coombs & Holladay, 1996). A distinction can be made between three different crisis clusters, based on the three categories as identified by Coombs (2006): (1) victim clusters, (2) accidental clusters and (3) preventable clusters. During crises in the victim clusters the organization is the victim of the crisis. The accidental cluster concerns crises in which "the organizational actions leading to the crisis were unintentional" and in the preventable cluster "the organization knowingly placed people at risk, took inappropriate actions, or violated a law/regulation" (Coombs, 2006, p. 243).

Crisis types are a form of frame. The features of each of the crisis types reflect certain aspects of the crisis, and they indicate how the crisis should be interpreted by the organization's stakeholders. In shaping and establishing the crisis frame crisis managers will emphasize certain cues of the crisis. For example: whether the crisis was accidental or intentional. This is highly determining for the image of the organization by stakeholders (Coombs & Holladay, 2002). The public will seek to assign responsibility to the person who is responsible for the crisis. This has to do with the fact that crises will elicit the search for attributions (Coombs, 2006a). The responsibility that is attributed to the organization in crisis by the stakeholders is determined by the messages they receive from both the organization and news media (Heath, 1998).

When the crisis is perceived as stable, stakeholders will attribute a lower level of responsibility to the organization (Griffin, 1994, as cited in Coombs & Holladay, 1996), and when they perceive the organization as highly responsible for the crisis, the negative impact on the organization's image will be stronger (Coombs & Holladay, 2002). Thus, the organization's reputation is more damaged when the attribution of responsibility for the crisis is stronger (Coombs & Schmidt, 2000; Coombs & Holladay, 2001, 2002; Laufer & Gillespie, 2004). Therefore, it is important to take a look at the attribution of crisis responsibility (Coombs, 2006). The type of crisis or frame determines the level of responsibility for the crisis stakeholders attribute to the organization (Coombs & Holladay, 2002; Coombs, 2006, 2007).

When identifying the type of crisis, organizations will have more insight in how much crisis responsibility stakeholders will attribute to the organization, right from the start of the crisis (Coombs & Holladay, 2002). Not only crisis types can be used to frame the crisis, but also news frames can be of influence on how people interpret the situation. Therefore, the following paragraph will discuss the concept of news frames.

2.3 NEWS FRAMES

Framing the news refers to a situation in which the message of an organization hands a framework of interpretation to the people who receive it, and therewith it determines and influences people's thinking and talking about issues (Pan & Kosicki, 1993). The mode of presentation in this 'frame-setting' determines the salience of the aspect of an issue, and how people process and interpret the news message (Scheufele, 1999; Wong & McMurray, 2002). According to de Vreese (2004) "*frames in the news are as important as core facts in a news story [...]*". By accentuating certain parts of the message, stakeholders will mainly focus their attention these parts (Druckman, 2001). With the use

of frames, an indication of how to interpret the crisis can be given to the organization's stakeholders (Coombs & Holladay, 2002).

The media has the ability for agenda-setting through deliberate coverage of issues (Brunken, 2006). In this way they decide what is discussed by the public (Barnes, Hanson, Novilla, Meacham, McIntyre & Erickson, 2008). According to Carrol (2004) the process of 'agenda-setting' can be best described as *'the process by which the news media create public awareness and concern for certain issues.'* Coombs (2006) states that people seek crisis information and evaluate the situation based on the media coverage of the crisis. By selecting what information should be in- or excluded in a news story, the news media frame a story (Iyengar & Kinder, 1987, as cited in Iyengar & Simon, 1993; Pan & Kosicki, 1993). In this way people's interpretation of that story is shaped (Hallahan, 1999).

Based on the frames as discussed by Neuman, Just and Crigler (1992), Semetko and Valkenburg (2000) identified five news frames: attribution of responsibility, conflict, economic, human interest and morality. A description of the news frames is shown in table 1 below.

Table 1.
A description of the five news frames that are used in this study

News frames	Description (based on literature)
Responsibility	"This frame is defined as "a way of attributing responsibility for [a] cause or solution to either the government or to an individual or group" (Semetko & Valkenburg, 2000, as cited in An & Gower, 2009, p.108).
Conflict	"The conflict frame is used in such a way as to reflect conflict and disagreement among individuals, groups, or organizations" (An & Gower, 2009, p.108).
Economic consequences	"This frame reports an event, problem, or issue in terms of the consequences it will have economically on an individual, groups, organizations, or countries" (An & Gower, 2009, p.108).
Human Interest	"This frame "brings a human face or an emotional angle to the presentation of an event, issue, or problem" (Semetko & Valkenburg, 2000, as cited in An & Gower, 2009, p.108).
Morality	"This frame puts the event, problem, or issue in the context of morals, social prescriptions, and religious tenets" (An & Gower, 2009, p.108).

2.3.1 News frames in traditional media

Previous research by Price, Tewksbury and Powers (1997) on news frames in traditional media, examined *'the effect of news frames on the applicability of ideas and feelings'* (p.5). Price et al. (1997) showed that the frames had a significant influence on the cognitive responses of the respondents. In their study they experimentally manipulated news articles for several news frames. Similar to previous research from Huang (1996), Price et al. (1997) found that the frames of individuals do not only depend on the media coverage of an event. They argue that *'participants demonstrated a capacity to introduce their own thoughts, going beyond the information provided and drawing out some basic implications on their own'* (Price et al., 1997, p. 496).

Like Price et al. (1997), the same was done by De Vreese (2004), who also manipulated news stories to reflect certain frames (e.g. conflict- and economic consequences frame). Also his study suggested that the frames gave direction to the public's thoughts.

Contrary to the previous studies, later research by An and Gower (2009) was not focused on the effects but on the presence of news frames in the news coverage, which was examined with the use of a content analysis on crisis news coverage. An and Gower's results show that the attribution of responsibility frame appeared the most in the coverage (95.1%), followed by the economic- (74.9%), human interest- (64.4%) conflict- (62.8%) and the morality-frame (54.9%).

2.3.2 News frames in social media

In scholarly research there is a dearth of research that particularly focuses on the use of media frames on social media, since commonly mainly news coverage is being examined with the use of media frames (Wasike, 2013). There are a few studies that specifically focused on this topic.

Armstrong and Gao (2010) for example, showed that the media uses certain frames on social media (Twitter), by emphasizing crime, public affairs and business related topics. Although the emphasizing of certain topics in this research is not specifically labeled to the framing theory, it does show that there is a relation between the use of news frames and social media. This relation has been confirmed by later research from Hamdy and Gomaa (2012) who examined the framing of news from newspapers, independent media and social media during the Egyptian uprising in January 2011 and how these framed messages, using the frames as distinguished by Valkenburg, Semetko and De Vreese (1999), formed the public opinion. The results showed that social media use quite different frames than traditional newspapers. The most used frame was the human interest frame, followed by the responsibility frame. The other frames were not used in the coverage (Hamdy & Gomaa, 2012).

Muralidharan, Rasmussen, Patterson and Shin (2011) who specifically focused on the use of frames in social media during a crisis situation, did a study on the use of Facebook and Twitter during the Haitian earthquake relief efforts. They applied the framing theory to the analysis of Facebook posts that are examined in their study, using the five frames by Semetko and Valkenburg (2000). Their results showed that some message frames were more often used than others on Facebook and Twitter. Regarding the use of frames by non-profit organizations the most used frames were morality (49.3%) on Facebook and the responsibility frame on Twitter (35.6%). The media organizations made more use of conflict frames for both Facebook (80.8%) and Twitter (87.6%). This study by Muralidharan et al. (2011) is an important effort in the research on the use of message frames on social media, because there is a dearth of research into this area. However, the effect of framing on social media is still understudied.

2.3.3 News frames and crisis clusters

As previously mentioned in section 2.2, framing not only takes place by the use of news frames. According to the Social Crisis Communication Theory (SCCT) from Coombs (2007) the process of framing also takes place by using different crisis types. Given the fact that every type of crisis contains specific characteristics, these characteristics will determine how the stakeholders process and interpret the crisis situation (Coombs & Holladay, 2002). In this way, both the news frames and the crisis clusters have to be taken into account.

A study that specifically focuses on news frames and crisis types is the study by An and Gower (2009). They did a content analysis of crisis news frames and focused on several crisis types (as distinguished by Coombs, 2006), and which of the news frames by Semetko and Valkenburg (2000) and level of responsibility are used by the media for each of these crisis types. Their research showed differences between the used news frames and levels of responsibility for each of these crisis types. The attribution of responsibility frame is more used when the crisis type is in the preventable cluster (98.1%) than in the accidental (79.2%) and victim cluster (76.9%). In addition, the human interest frame was used more in the victim cluster (92.3%) than in the accidental (83.3%) and preventable cluster (60.5%). In case of a preventable crisis, the most used frame was the conflict frame. In this type of crisis also the morality frame was more likely to be used. Furthermore, the accidental and the preventable cluster used the economic frame.

An & Gower (2009) show that there is a clear link between the use of frames, the level of responsibility and the crisis type. However, their research is focused on the traditional media as a source and medium for information about a crisis. Furthermore, they did not examine the effect of the news frames. For this reason it is impossible to predict their effects on the public crisis responses based on only the frequency in which they are present in the news coverage in each of the crisis types. The same applies to the other studies we already mentioned, that also only examined the presence in the media coverage.

Cho and Gower (2006) on the other hand, did study the effect of news frames and crisis type. They investigated the effect of the human interest frame and crisis types in news coverage and how people responded to a corporate crisis. Their results indicated that the human interest frame was of influence on the public's emotional response to the crisis. However, also this study was focused on traditional media. In addition, Cho and Gower only focused on the effect of a single news frame. Therefore, this study will actually examine the effects of the five news frames on several public crisis responses in the context of social media.

2.4 PUBLIC CRISIS RESPONSES

A question that arises is whether the use of frames in social media during different types of crisis affects the public crisis responses. And if so, it is of interest to know which of the frames has the most positive effect of the public crisis responses. To answer these questions, this study will examine the effects of the news frames on the public crisis responses.

Therefore, the following research question is formulated:

RQ1: Which of the news frames, within and between the crisis clusters, has the most positive effect on the public crisis responses?

As Palen et al. (2009) made a distinction between three different characteristics of social media that distinguishes it from traditional channels and is of influence on crisis communication, it is relevant to focus on the effect of the frames on social media. Within this study, as shown in *figure 1*, the focus will be on public crisis responses as risk perception, secondary crisis communication, trust, benevolence, competence, integrity, willingness to depend, the intention to follow advice, reputation, personal involvement, and the attribution of crisis responsibility. In the sections below, each of the concepts will be discussed based on previous literature.

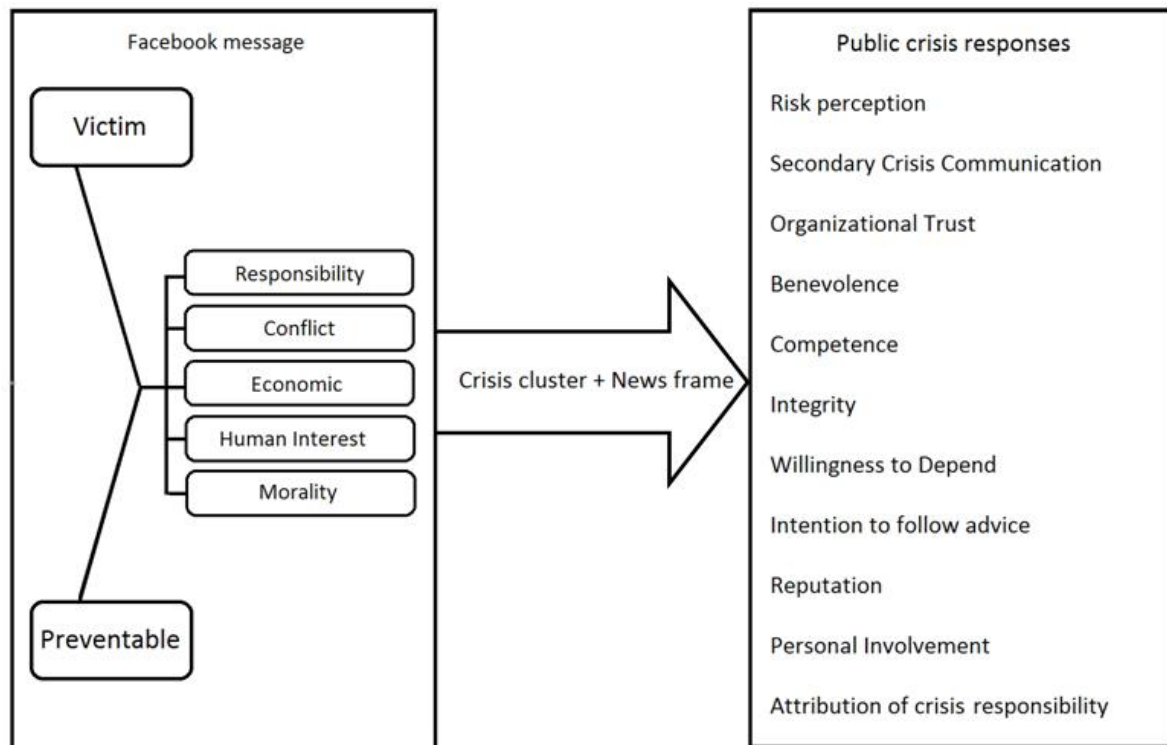


Figure 1. Experimental research model

2.4.1 Risk perception

Risk perception can be seen as the way people observe and/or assess risks. People construct their own reality and assess risks based on personal perceptions (Kuttschreuter & Gutteling, 2001). This intuitive imaging of risk is based on the way it is communicated, psychological mechanisms who give an indication how to deal with uncertainty and previous high risk experiences (Jaeger, Renn, Rosa, & Webler, 2002). Perception, and therefore risk perception, is the result from the merging of opinions, judgments, the affect and attitude of people towards events and observations (Pidgeon, Hood, Jones, Turner & Gibson, 1992). This can cause anxiety. Slovic, Finucane, Peters and MacGregor (2004) stated that the perception of risk is also driven by the sense of risk, the affect heuristic. This means the assessment of the risk is also based on the feeling people experience (Slovic et al. 2004).

Research from Lerner and Keltner (2000) concluded that the risks were assessed more pessimistic when a person experienced anxiety in their confrontation with sources of risk. Another reason why fear arises is the fact that people don't trust the available sources of information that are often experts and government agencies (Renn & Rohrmann, 2000).

2.4.2 Secondary crisis communication

For many people social media has become part of their everyday life (Ellison, Steinfield & Lampe, 2007). Especially during crises, the social media use of the public increases (Rainie, 2010). The public actively uses social media to share crisis information (Macias, Hilyard & Freimuth, 2009).

During a crisis, stakeholders can disseminate negative or positive word-of-mouth. The increasing use of the internet, and in particular social media, makes this relatively easy for stakeholders. Word-of-mouth (WOM) on the internet is called electronic word-of-mouth (eWOM)

and refers to negative or positive comments from stakeholders on the internet that can be read by the public (Hennig-Thurau, Gwinner, Walsh & Gremler, 2004). Negative word-of-mouth can damage the reputation of an organization (Tucker & Melewar, 2005).

Schultz et al. (2011) take a broader perspective on the electronic word-of-mouth with their focus on secondary crisis communication. Secondary crisis communication can be defined as the intention of people to tell other people about the crisis, to share the received information with others and to leave a comment (Schultz et al. 2011). During crisis situations it is pretty simple for citizens to share the crisis with others. The internet and social networks offer people the possibility to share and reshare the crisis with millions of people (Veil, Buehner & Palenchar, 2011).

Where traditional secondary crisis communication occurs face-to-face with the presence of social context cues (Knapp & Daly, 2002), secondary crisis communication via social media is slightly different with its dynamic and real-time interaction with a global reach (Kietzmann, Hermkens, McCarthy & Silvestre, 2011).

Research suggests that secondary crisis communication, the behavioral intention of stakeholders to share crisis information, can be influenced by crisis situations and it eventually even affects the corporate reputation (Coombs & Holladay, 2007; Schultz et al. 2011). When people engage in secondary crisis communication on social media, their positive or negative perception about the organization is crisis possibly affects the perception of other people and finally, even their behavior (Coombs & Holladay, 2007). This is the reason why secondary crisis communication is of great importance for the crisis management of the local government. During a crisis situation, the dissemination of information from the local government has a high priority. More insight into the willingness of citizens to share the information or leave a comment can be useful to improve the crisis management of the local government.

2.4.3 Trust

The trust in experts and government agencies decreased in the last decades (Laird, 1989; Hine, Summers, Prystupa & McKenzie-Richer, 1997). The trust the public has in the local government is determined by the trust they have in the information that is provided by the same local government (Fessenden-Raden, Fitchen & Heath, 1987). The credibility of the source has impact on the effect of the message (Gutteling & Wiegman, 1992).

During crisis situations public trust is of great importance (Chong, 2006; Larson & Heymann, 2010). Research shows that trust is an important determinant of successful crisis communication (Peters, Covello & McCallum, 1997). But what is trust exactly?

In the literature there are many different definitions available, since the word trust is used in many different contexts. The concept of 'trust' is often used on an individual level of relationships, or on the level of individual and institution (Hardin, 2002). Ben-Ner and Halldorsson (2010) describe trusting as: *'the inclination of a person "A" to believe that other persons "B" who are involved with a certain action will cooperate for A's benefit and will not take advantage of A if an opportunity to do so arises.'* Hardin (2002) argues that a characteristic of trusting relationships is that it generally is a three-part relationship, in which "A trusts B to do X" (Luhmann, 1980: 27). When specifically looking at trust in organizations, organizational trust can be described the best as the way an organization's corporate trustworthiness and trust intention is evaluated by its stakeholders (Xie & Peng, 2009).

It is not easy for an organization to develop trust. It takes a long time to develop it. But when trust is build and it is damaged, it is also difficult to restore the trust (Nooteboom, 2002; Klein

Woolthuis, Nooteboom & De Jong, 2010). High levels of trust will contribute to greater trustworthiness, and will eventually contribute to higher developments of trust (Nooteboom, 2003).

Although, some studies in the past focused on trust as a unitary concept (e.g. Rotter, 1971), current research sees it as multidimensional (e.g. Mayer, Davis & Schoorman, 1995, Rousseau et al. 1998). However, many researches made different distinctions in dimensions of trust. Based on McKnight, Choudhury and Kacmar (2002), this study will make a distinction between trusting intentions and trusting beliefs.

Trusting intentions: the willingness to depend, subjective probability of depending

According to McKnight et al. (2002) trusting intentions means "[...] *the truster is securely willing to depend, or intends to depend, on the trustee*". Trusting intentions is formed by two sub constructs: the willingness to depend and the subjective probability of depending. The latter goes beyond the willingness of an individual to rely on another person. It is more about the stated intentions of an individual that he or she has the intention to rely on them in specific ways. An example of this was given by Currall and Judge (1995) who defined trust as a subjective probability of depending and measured the intention of people in sharing information with others.

Regarding the subjective probability of depending, Rubin, Amlot, Page and Wessely (2009) examined the perception of the public and their anxiety and behavior change in relation to the swine flu pandemic. They found that people are more likely to follow the recommended measures during a crisis when the level of public trust in the organization that is responsible for the crisis management is higher (Rubin et al., 2009).

Trusting beliefs: competence, benevolence, integrity

Trusting beliefs on the other hand, is "[...] *the confident truster perception that the trustee has attributes that are beneficial to the truster*" (McKnight et al., 2002). Although there are many trusting beliefs in the literature (e.g. Butler, 1991), three most used beliefs are, competence, benevolence and integrity (Bhattacharjee, 2002; Mayer et al., 1995; Gefen, 1997, as cited in McKnight et al., 2002).

The trustworthiness of an organization is determined by these three dimensions (Mayer et al., 1995). Competence refers to an organization's competencies to reach its goals. An important factor in assessing an organization's trustworthiness is evaluating its ability or competence (Butler, 1991; Lewis & Weigert, 1985). When the public has little trust in the organization that is responsible for managing a crisis, they are more likely to question the organization's competence in crisismanagement. Furthermore, they will question the reliability of the information they receive during crises (Glik, 2007).

Benevolence refers to the organization's behavior as a whole regarding its concern for stakeholders, and integrity is about whether an organization does and acts in accordance with her moral values and principles (Mayer et al. 1995). Regarding benevolence and integrity, research showed that a higher level of both dimensions will lead to a decrease in distrust, and thus to an increase in trust. This can be explained by the perceived increases in congruent values between the organization and the stakeholders who put trust in it (Sitkin & Roth, 1993).

2.4.4 Reputation

Reputation can be defined as "a perceptual representation of a company's past actions and future prospects that describe the firm's appeal to all of its key constituents" (Fombrun, 1996, p. 165). This

representation is held by the stakeholders of the company and is developed through information they receive in their interaction with the media and the organization. Also second-hand information (e.g. word-of-mouth) affects the reputation (Coombs & Holladay, 2007). As a response to the crises and to prevent a reputational threat, organizations communicate to their stakeholders. The use of different response strategies shows a difference in the outcome of the crisis communication (e.g. organizational reputation, emotions, negative word-of-mouth, Coombs & Holladay, 2009). Therefore, crisis communication is of great importance. Organizational reputation is strongly influenced by the corporate communication (Gray & Balmer, 1998).

Research shows that the reputation of an organization has a positive relation with specific crisis characteristics and crisis responsibility (Coombs & Holladay, 1996, 2002; Coombs & Schmidt, 2000). The attribution of responsibility and therefore the impact on reputational damage is higher during intentional crises (Coombs & Holladay, 2002, 2004).

Organizations use social media to repair their reputation because of their speed, interactivity and the fact that they are seen as more dialogic in relationship building than traditional media (Kent, Taylor & White, 2003; Schultz & Wehmeier, 2010). The conversational human voice and the possibilities of social media in responding to the crisis will benefit the organization-stakeholder relationship (Sweetser & Metzgar, 2007). People want immediate and in-depth information (Sweetser & Metzgar, 2007; Schultz et al., 2011; Bates & Callison, 2008, as cited in Liu et al., 2012), and the aspect of social presence that characterizes social media is of great importance and can be partly mediated via social media channels (White & Fu, 2012).

2.4.5 Involvement

Involvement can be regarded as the personal relevance, interest and significance of the risk-topic to the individual (Johnson, 2005). During situations of uncertainty, individuals evaluate whether they can be affected by the situation (Heath, Liao & Douglas, 1995). When an individual is not aware of a problem, he or she is not sufficiently involved or motivated to seek information (Heath et al. 1995; Petty & Cacioppo, 1986). The evaluation of a message is determined by the involvement, relevance and ability (clarity) of the information. Relevance and ability should both lead to a higher level of involvement (Earle, Cvetkovich & Slovic, 1990, as cited in Johnson, 2005). Involvement plays a key role in the Elaboration Likelihood Model (Petty & Cacioppo, 1981; 1986) and the Situational Theory (Grunig, 1989), that both assume that involvement plays a major role in the processing of information and the formation of an attitude. Furthermore, it turns out to be a strong moderator in the relation between attitudes and intentions (Earle et al., 1990, Johnson, 2005). High involvement would lead to a better way of processing information and more constant attitudes. This is in line with research from DeFleur and Ball-Rokeach (1989), which concluded that a higher level of involvement has more effect on knowledge, attitude and behavior.

2.5 THE EFFECTS OF RISK PERCEPTION AND SECONDARY CRISIS COMMUNICATION

As discussed in section 2.4, this study focuses on the effects of news frames within each crisis cluster on the public crisis response variables. In addition, we also want to examine the effects of the public crisis response variables on risk perception and secondary crisis communication (as shown in *figure 2*). Therefore, a second research question with is formulated.

***RQ2:** What are the effects of the public crisis response variables on risk perception and secondary crisis communication?*

To answer this question, several hypotheses are formulated on the relations as presented in figure 2. The hypothesized relations in the model are based on previous research that will be discussed below.

During a situation of risk, most people do not have sufficient knowledge to judge and estimate the risk of a situation (Gregory & Miller, 1998, as cited in Siegrist, Cvetkovich & Roth, 2000). Therefore, people should be able to rely and trust on the information on certain risks that is handed by the government (Earle & Cvetkovich, 1995). With this trust we refer to the willingness of people to be dependent on the information they receive from certain agencies that are responsible for the decision-making and actions regarding issues that have to do with for example public health and safety (Siegrist et al., 2000). However, this trust can be very easily damaged, but is difficult to rebuild (Slovic, 1993). When people do not trust the available sources of information (e.g. experts and government agencies) fear can arise (Renn & Rohrman, 2000) and this will possibly lead to a higher risk perception (Lerner & Keltner, 2000). Therefore, it is essential for the local government to be careful with the information they provide to citizens.

Trust in the government, even as clear information regarding the situation, will lower the perception of risk (Renn & Rohrman, 2000). Hurlimann (2007), who did a research on trust and risk perception in the reuse of recycled water, found that a higher risk perception was significantly associated with a lower amount of trust in the governmental agencies that were responsible for the management of the water. This is in line with the study from Ter Huurne and Gutteling (2008) in which they concluded that risk perception is influenced by the trust in governmental agencies.

In addition to trust, there are also other influencers on the risk perception. Personal experiences, social and cultural values, media and the perceived benefits (Berry, 2004), but also gender, race, political affiliation and the distance of people from the possible source of risk are of influence in the formation of risk perception (Gutteling & Wiegman, 1992; Slovic, 1997; Finucane, Slovic, Mertz, Flynn & Satterfield, 2000; Kahan, Braman, Gastil, Slovic & Mertz, 2005). When the situation of risk is of personal relevance for an individual, he or she will look for risk information. Personal relevance will make them process this information much deeper (Kahlor, Dunwoody, Griffin & Neuwirth, 2006). Information about risks tends to affect the individual's risk perception more when the information is processed deeper (Kahlor et al., 2006; Natter & Berry, 2005). Thus, when the event is of personal relevance, people have a higher risk perception.

Based on the literature, the following hypotheses can be formulated:

H1a: Trust in the local government has a negative effect on risk perception

H1b: Benevolence has a negative effect on risk perception

H1c: Competence has a negative effect on risk perception

H1d: Integrity has a negative effect on risk perception

H1e: The willingness to depend has a negative effect on risk perception

H1f: The intention to follow advice has a negative effect on risk perception

H2: Reputation has a negative effect on risk perception

H3: Personal involvement has a positive effect on risk perception

The level of trust people have in an organization is an important indicator for reputation (Walsh, Mitchell, Jackson, Beatty, 2009). Given the fact trust is part of the reputation, a higher level of trust results in a higher reputation (Fombrun & Van Riel, 2003). In addition to a low level of trust, a higher attribution of crisis responsibility of the public to the organization will have a negative impact on the organization reputation (Coombs & Holladay, 1996, 2001, 2002). According to the SCCT model, crisis responsibility is of direct influence on the organizational reputation (Coombs & Holladay, 2002), the

reputational damage increases when the attribution of crisis responsibility increases (Coombs, 2006). Therefore, the following hypotheses regarding trust, the dimensions of trust, the attribution of crisis responsibility and reputation are formulated:

- H4a:** Trust in the local government has a positive effect on reputation.
- H4b:** Benevolence has a positive effect on reputation.
- H4c:** Competence has a positive effect on reputation.
- H4d:** Integrity has a positive effect on reputation.
- H4e:** The willingness to depend has a positive effect on reputation.
- H4f:** The intention to follow advice has a positive effect on reputation.
- H5:** A higher attribution of crisis responsibility has a negative effect on reputation.

The public can also form her opinion about the government based on the information they receive via the media or other people (Highhouse, Brooks & Gregarus, 2009). During a crisis, secondary crisis communication plays a major role in disseminating information (Schultz et al. 2011). When the word of mouth message is more personally relevant, people are more likely to share the message with others (Allsop, Bassett & Hoskins, 2007). The other way around, research shows that people who share news via Facebook are also getting more personally involved with the news and information they have shared on social media (Penn State, 2015).

Furthermore, when people associate the information about a crisis with negative feelings (e.g. worry or fear), people are more likely to share this information with others via social media (Chen & Sakamoto, 2013). This is why it's relevant to examine the effect of the public crisis responses on secondary crisis communication. Is the secondary crisis communication of citizens higher when they have a higher risk perception or when they are more personal involved? To be able to answer these questions, the following hypotheses are formulated:

- H6:** Risk perception has a positive effect on secondary crisis communication.
- H7a:** Personal involvement has a positive effect on secondary crisis communication.
- H7b:** Secondary crisis communication has a positive effect on personal involvement.

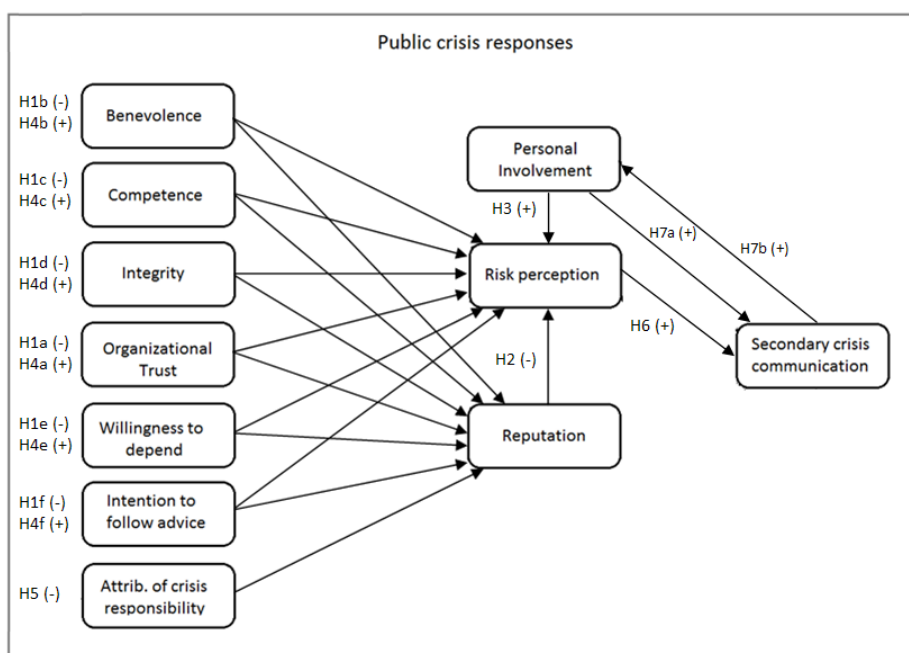


Figure 2. Hypothesized model for the relations between the PCR-variables

3. METHOD

3.1 RESEARCH DESIGN

This study made use of a 2x5-design. A distinction was made between two crisis clusters (victim cluster vs. preventable cluster) and five news frames (responsibility-, conflict-, economic consequences-, human interest-, morality frame). The dependent variables in this study were *risk perception, secondary crisis communication, trust, benevolence, competence, integrity, willingness to depend, subjective probability of depending (intention to follow advice), reputation, personal involvement and the attribution of crisis responsibility*.

In total, the design led to ten conditions to which the respondent was randomly assigned to. In each condition the respondents was asked to read a manipulated Facebook message. In all of the messages a standard content was used; a message from the municipality of Groningen concerning a victim or preventable crisis situation.

In order to measure the effects of the news frames within each of the crisis clusters, independent from the content, this study followed the design of Valkenburg, Semetko and Vreese (1999). For all of the conditions the core text (crisis description) kept constant, and only the inserted news frame varied for each of the five frame-conditions within each cluster. This is in line with the method and approach in the study from Von Sikorski and Schierl (2012) on news frames, in which they also systematically varied the frame-description and kept the core text the same. Thus, for each of the 5 conditions within each crisis cluster (victim vs. preventable) the news frame differed. This led to a combination of one of the five news frames with one of the two crisis clusters. Table 2 gives an overview of the ten conditions and Appendix B and C show examples of manipulated messages.

3.2 PARTICIPANTS

130 men (42.76%) and 174 females (57.23%) participated in this study. Men and females were equally divided over the ten conditions ($\chi^2 = 13.180$, $df = 9$, $p = .155$). The average age of the participants was 28 years old ($M = 28.00$, $SD = 11.042$, $\max = 65.0$, $\min = 18.0$). Differences in age were also equally divided over the conditions, $F(9, 294) = .896$, $p = .529$.

195 (64.1%) of the 304 participants were 'students', 98 (32.2%) were 'workers' and 11 (3.6%) were 'unemployed'. Regarding the education level of the participants, one participant (0.3%) had no education, 10 (3.3%) VMBO/MAVO/LBO, 42 (13.8%) MBO, 15 (4.9%) Havo, 24 (7.9%) VWO, 86 (28.3%) HBO, 123 (40.5%) WO, and three (1%) had another education. Table 2 gives an overview of the participants in each of the conditions.

Table 2

Research design: 2 (Cluster: Victim vs. Preventable) x 5 (News frames: responsibility, conflict, economic, human interest, morality)

Crisis cluster	News frames				
	Responsibility Frame	Conflict Frame	Economic consequences Frame	Human Interest	Morality Frame
Victim	Condition 1 (n=32)	Condition 2 (n=31)	Condition 3 (n=30)	Condition 4 (n=29)	Condition 5 (n=31)
	Men=34,4%	Men=58,1%	Men=23,3%	Men=44,8%	Men=41,9%
	Female=65,6%	Female=41,9%	Female=76,7%	Female=55,2%	Female=58,1%
	Age(M=25.62, SD=9.47)	Age(M=28.68, SD=13.30)	Age(M=31.40, SD=13.86)	Age(M=27.45, SD=11.81)	Age(M=27.55, SD=10.82)
Preventable	Condition 6 (n=28)	Condition 7 (n=32)	Condition 8 (n=30)	Condition 9 (n=31)	Condition 10 (n=30)
	Men=39,3%	Men=59,4%	Men=43,3%	Men=35,5%	Men=46,7%
	Female=60,7%	Female=40,6%	Female=56,7%	Female=64,5%	Female=53,3%
	Age(M=27.89, SD=9.45)	Age(M=26.34, SD=8.26)	Age(M=28.27, SD=11.68)	Age(M=30.77, SD=12.45)	Age(M=26.17, SD=7.76)

3.3 PROCEDURES

This study used an online questionnaire, which was designed and distributed with the program 'Qualtrics'. This program produced a link of the questionnaire that could be published and shared on public Facebook and LinkedIn pages. In addition, the researcher sent the link via e-mail to friends, family, colleagues and other contacts in his network.

The participants were randomly assigned to one of the ten conditions. First, the participants were asked to read the introduction of the questionnaire. Right after the introduction, they were asked to accept the terms and conditions that were established by the researcher (e.g. research purpose, use of personal data etc.). If they did not, the participants could not continue.

Secondly, after answering some questions regarding their demographic characteristics, the questionnaire started with one of the ten manipulated Facebook messages, to which one was randomly assigned to. The participants were asked to read the message carefully, before proceeding with the questions since the message could be viewed only once. It was not possible to click back. After reading the message, the participants filled out the questionnaire (see Appendix A). While filling in the questionnaire, the participants were required to answer all questions, before they were able to go further. On average, this took them about ten minutes.

3.4 MANIPULATION CHECKS

Victim vs. preventable

The crisis cluster was operationalized by the crisis description in each of the Facebook messages based on the definition for both clusters as defined by Coombs and Holladay (2002). In the victim conditions a crisis situation was described in which the local government was a victim of the crisis situation, and in the preventable condition a crisis situation was described in which they were responsible for the crisis and they could have prevented it.

The results from the manipulation check showed that the Facebook message in the victim cluster were seen as more *victim* ($M = 3.52$, $SD = .925$) than *preventable* ($M = 2.39$, $SD = .995$). This

result is significant, $F(1, 302) = 61.320, p < .001$. The message in the preventable cluster was seen as more preventable ($M=2.87, SD=.964$) than victim ($M=2.62, SD=1.088$). This result is also significant, $F(1, 302) = 17.897, p < .001$.

News frames

The news frames was operationalized by adding a few sentences to the core message that specifically focused on a certain news frame, using the description of each of the five news frames (e.g. An & Gower, 2009; Semetko & Valkenburg, 2000) as distinguished by Semetko and Valkenburg (2000).

The results from the manipulation check showed that within both clusters there was a significant difference for only three of the five questions that represented the news frames: Victim cluster: conflict, $F(4, 148) = 4.309, p = .003$; economic, $F(4, 148) = 4.116, p = .003$; and human interest, $F(4, 148) = 2.528, p = .043$. Preventable cluster: conflict, $F(4, 146) = 11.137, p < .001$; economic, $F(4, 146) = 10.402, p < .001$; human interest, $F(4, 146) = 2.492, p = .046$. This means that the manipulation of the news frames in both clusters wasn't always recognized by the participants. A post-hoc multiple-comparison test shows significant differences within the items of the manipulation check for the three significant news frames.

Victim cluster x news frames

Within the victim cluster, the second item (conflict frame) shows a significant difference between the conflict-responsibility ($M_{\text{difference}} = .855, p = .010$), conflict-economic ($M_{\text{difference}} = .907, p = .007$) conflict-human interest ($M_{\text{difference}} = .907, p = .007$) and conflict-morality ($M_{\text{difference}} = .839, p = .013$).

The third item (economic frame) shows a significant difference between economic and the morality condition ($M_{\text{difference}} = .980, p = .000$), economic-conflict ($M_{\text{difference}} = .771, p = .000$), economic-human interest ($M_{\text{difference}} = 1.067, p = .003$).

The fourth item (human interest) shows a significant difference between human interest-conflict ($M_{\text{difference}} = .664, p = .034$), and human interest-economic ($M_{\text{difference}} = .626, p = .015$).

Preventable cluster x news frames

Within the preventable cluster, the second item (conflict frame) shows a significant difference between the conflict-responsibility ($M_{\text{difference}} = .991, p = .001$), conflict-economic ($M_{\text{difference}} = 1.179, p = .000$) and conflict-morality ($M_{\text{difference}} = .712, p = .045$).

The third item (economic frame) shows a significant difference between economic and the responsibility condition ($M_{\text{difference}} = 1.238, p = .000$), economic-conflict ($M_{\text{difference}} = 1.229, p = .000$), economic-human interest ($M_{\text{difference}} = 1.473, p = .000$) and economic-morality ($M_{\text{difference}} = 1.033, p = .001$).

The fourth item (human interest) shows a significant difference between human interest and the economic frame ($M_{\text{difference}} = .745, p = .044$).

To be able to analyze the effect of the news frames between the clusters, we looked for the same significant differences between the frames within each cluster and compared these frames for both clusters. This resulted in a comparison of the conflict-responsibility, conflict-economic, conflict-morality, economic-morality, and human interest-economic for within and between both clusters.

3.5 MEASURES AND INSTRUMENTS

Attribution of crisis responsibility

The attribution of crisis responsibility was measured by a three items scale from Griffin, Babin and Darden (1992) for blame that was adapted to the subject of this study. The items were formulated as follows: 'Circumstances are responsible for the crisis, not the municipality of Groningen.', 'The blame for the crisis lies with the municipality of Groningen.' and 'The blame for the crisis lies with the circumstances, not with the municipality of Groningen.'. The items were scored on a 5-point Likert scale (1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree). The items represented a reliable scale ($\alpha = .85$).

Organizational reputation

Organizational reputation was measured by five items that were used in Coombs and Holladay (2002). The original scale is from McCroskey (1966) and was designed to measure ethos. Coombs and Holladay (1996) adapted McCroskey's scale into the Organizational Reputation Scale, which consisted of ten items. In a later study Coombs and Holladay (2002) adapted this scale in a five-item scale. In this study the 5-item scale is adapted to the subject of this study. An example of an item is: 'The municipality of Groningen is concerned with the well-being of its public'. The items were scored on a 5-point scale, 1 for strongly disagree and 5 for strongly agree. The items represented a reliable scale ($\alpha = .75$).

Organizational trust

To measure the trust of citizens in the local government different measurement scales on organizational trust were used. Nine items derived from the Organizational Trust Inventory (OTI) by Cummings and Bromiley (1996) and 18 items on organizational trust, measured by three dimensions on trusting beliefs (benevolence, integrity and ability/competence) and by two dimensions on trusting intentions (willingness to depend, subjective probability of depending/ follow advice) from McKnight, Choudhury and Kacmar (2002). The trustworthiness of an organization is according to Mayer, Davis and Schoorman (1995) determined by these three dimensions. An example of an item: '...the municipality of Groningen can be characterized as honest.'. The 18 items were scored on a 5-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree). The other nine items were scored on a different 5-point Likert scale on which the participants had to indicate to what extent they have trust in the local government (1 = Very low, 2 = Low, 3 = Neutral, 4 = High, 5 = Very high).

The items of the in each of the dimensions represented a reliable scale. Trusting beliefs: benevolence ($\alpha = .84$), integrity ($\alpha = .84$), ability/competence ($\alpha = .87$), and trusting intentions: willingness to depend ($\alpha = .70$), subjective probability of depending/follow advice ($\alpha = .80$). The nine item scale on trust as a unitary concept also showed a high reliability ($\alpha = .83$).

Risk perception

The perception of risk was measured by eight items that were based on the items that were used in a study from Rundmo and Iversen (2004). The items can be classified in three dimensions: 1) emotion-based (4 items), 2) cognition-based (2 items) and 3) concern (2 items). A few examples of items: '...I feel unsafe if I know I could be a victim.' (emotion-based), 'How likely you think it is that you are victim of the crisis.' (cognition-based) and 'To what extent are you concerned about crisis situation

and do you think about the risks for citizens in general?' (concern). The items were scored on three different 5-point Likert scales. The cognition-based items on an agreement scale (1=Strongly disagree, 5=Strongly agree), the emotion-based on a likeability scale (1=very unlikely, 5=very likely) and concern to what extent the participant were concerned (1=totally not, 5=very). The items represented a reliable scale with $\alpha=.84$.

Personal involvement

Personal involvement was measured by five items that were based on the items that were adopted from Ter Huurne (2008). The scale consists of two dimensions: 1) involvement (2 items) and 2) personal relevance (3 items). The items represented a reliable scale ($\alpha=.70$).

Secondary crisis communication

To measure secondary crisis communication three items from Schultz, Utz and Göritz (2011) were used. The participant indicated how likely they were to 1) share the message with others, 2) to tell friend about the incident and 3) to leave a reaction. The items were scored on a 5-point scale. The items represented a reliable scale with $\alpha = .65$, which is acceptable in this study.

3.6 DATA ANALYSIS

In this study, a combination of an experiment and a regression was used. For the experimental design, *independent-samples t-tests* were performed to compare the mean scores between the five conditions within each crisis cluster on the public crisis response variables. In addition, a *regression analysis* was performed to test the hypotheses on the relationships between the public crisis response variables from the experimental design (see *figure 2*).

4. RESULTS

4.1 NEWS FRAMES AND CRISIS CLUSTERS: INDEPENDENT SAMPLES T-TESTS

4.1.1 News frames within the victim cluster

An *independent-samples t-test* was conducted to compare the mean scores between the conditions within both clusters. As shown in table 3, significant differences were found in the scores on competence, personal involvement, risk perception and secondary crisis communication between the conditions in the victim cluster.

The results show there was a significant difference in the scores on competence for condition 2 ($M = 3.51$, $SD = .650$) and condition 5 ($M = 3.12$, $SD = .692$); $t(60) = 2.270$, $p = .027$. Participants in the conflict-condition, who read the Facebook message with the conflict frame, assigned a higher level of competence to the local government compared to the participants in the morality-condition.

Regarding personal involvement, the results show us that there is a significant difference in the scores on personal involvement for condition 2 ($M = 3.86$, $SD = .622$) and 5 ($M = 3.54$, $SD = .559$); $t(60) = 2.104$, $p = .040$. Participants in the conflict condition were more personally involved after reading the Facebook message, than the participants in the morality condition.

For risk perception, there was a significant difference in the scores for condition 2 ($M = 3.64$, $SD = .633$) and condition 1 ($M = 3.21$, $SD = .646$); $t(61) = 2.669$, $p = .010$. Participants in the conflict condition had a higher perception of risk compared to the participants in the responsibility condition.

Finally, there was a significant difference in the scores on SCC for condition 2 ($M = 3.32$, $SD = .941$) and condition 1 ($M = 2.75$, $SD = .639$), $t(61) = 2.834$, $p = .006$; condition 2 ($M = 3.32$, $SD = .941$) and 3 ($M = 2.59$, $SD = .810$), $t(59) = 3.259$, $p = .002$; and 2 ($M = 3.32$, $SD = .941$) and 5 ($M = 2.61$, $SD = .812$); $t(60) = 3.179$, $p = .002$. Participants in the conflict-condition scored higher on secondary crisis communication (SCC) than the participants in the responsibility, economic and morality condition.

Figure 3 gives an overview of the significant effects of the conflict frame in the victim cluster.

Table 3.

An overview of the differences in the scores on the PCR-variables between the frames in the victim cluster

	Responsibility	Conflict	Economic	Human Interest	Morality	t	df	Sig.
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)			
Benevolence								
2-1	3.85 (.500)	3.75 (.551)				-.766	61	.447
2-3		3.75 (.551)	3.74 (.598)			.056	59	.956
2-5		3.75 (.551)			3.74 (.575)	.075	60	.940
3-5			3.74 (.598)		3.74 (.575)	.017	59	.987
4-3			3.74 (.598)	3.66 (.932)		-.439	57	.662
Competence								
2-1	3.41 (.677)	3.51 (.650)				.562	61	.576
2-3		3.51 (.650)	3.18 (.788)			1.803	59	.077
2-5		3.51 (.650)			3.12 (.692)	2.270	60	.027*
3-5			3.18 (.788)		3.12 (.692)	.285	59	.777
4-3			3.18 (.788)	3.09 (.742)		-.445	57	.658
Integrity								
2-1	3.34 (.696)	3.35 (.601)				.069	61	.945
2-3		3.35 (.601)	3.55 (.607)			-1.314	59	.194
2-5		3.35 (.601)			3.44 (.615)	-.627	60	.533
3-5			3.55 (.607)		3.44 (.615)	.680	59	.499
4-3			3.55 (.607)	3.31 (.722)		-1.383	57	.172
Willingness to Depend								
2-1	3.50 (1.020)	3.48 (1.204)				-.057	61	.954
2-3		3.48 (1.204)	3.10 (.927)			1.392	59	.169
2-5		3.48 (1.204)			3.22 (1.087)	.922	60	.360
3-5			3.10 (.927)		3.22 (1.087)	.444	59	.659
4-3			3.10 (.927)	3.38 (.907)		1.169	57	.247
Follow Advice								
2-1	4.44 (.818)	4.47 (1.395)				.105	48.16	.917
2-3		4.47 (1.395)	3.93 (1.000)			1.715	59	.092
2-5		4.47 (1.395)			4.19 (1.006)	.888	60	.378
3-5			3.93 (1.000)		4.19 (1.006)	1.013	59	.315
4-3			3.93 (1.000)	3.96 (1.216)		.081	57	.935
Organizational Trust								
2-1	4.39 (.505)	4.39 (.543)				.013	61	.990
2-3		4.39 (.543)	4.28 (.539)			.762	59	.449
2-5		4.39 (.543)			4.32 (.538)	.470	60	.640
3-5			4.28 (.539)		4.32 (.538)	-.298	59	.767
4-3			4.28 (.539)	4.31 (.501)		.185	57	.854
Reputation								
2-1	3.69 (.370)	3.68 (.500)				-.148	61	.883
2-3		3.68 (.500)	3.51 (.664)			1.132	53.874	.263
2-5		3.68 (.500)			3.57 (.657)	.696	60	.489
3-5			3.51 (.664)		3.57 (.657)	-.399	59	.691
4-3			3.51 (.664)	3.73 (.554)		1.407	57	.165

Personal involvement							
2-1	3.86 (.557)	3.86 (.622)			.012	61	.990
2-3		3.86 (.622)	3.61 (.627)		1.572	59	.251
2-5		3.86 (.622)		3.54 (.559)	2.104	60	.040*
3-5			3.61 (.627)	3.54 (.559)	.426	59	.672
4-3			3.61 (.627)	3.81 (.528)	1.325	57	.190
Risk perception							
2-1	3.21 (.646)	3.64 (.633)			2.669	61	.010*
2-3		3.64 (.633)	3.43 (.612)		1.304	59	.197
2-5		3.64 (.633)		3.47 (.615)	1.043	60	.301
3-5			3.43 (.612)	3.47 (.615)	.271	59	.787
4-3			3.43 (.612)	3.39 (.736)	-.210	57	.835
Secondary Crisis Communication							
2-1	2.75 (.639)	3.32 (.941)			2.834	61	.006*
2-3		3.32 (.941)	2.59 (.810)		3.259	59	.002*
2-5		3.32 (.941)		2.61 (.812)	3.179	60	.002*
3-5			2.59 (.810)	2.61 (.812)	-.116	59	.908
4-3			2.59 (.810)	2.86 (.727)	1.362	57	.179
Attribution of crisis responsibility							
2-1	2.42 (.821)	2.69 (.672)			1.434	61	.157
2-3		2.69 (.672)	2.56 (.702)		.754	59	.454
2-5		2.69 (.672)		2.67 (.852)	.110	60	.912
3-5			2.56 (.702)	2.67 (.852)	-.555	59	.581
4-3			2.56 (.702)	2.60 (.818)	.213	57	.832

Note: bold* indicates a significant difference: $p < .05$

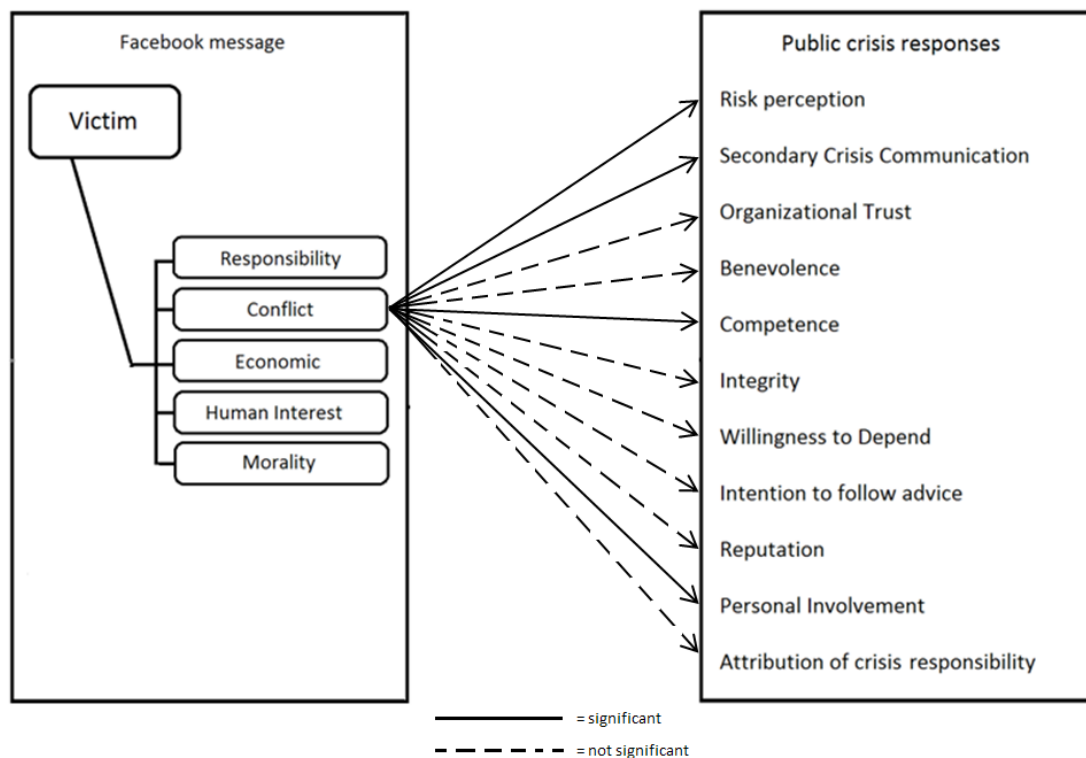


Figure 3. The significant effects of the conflict frame on the PCR-variables in the victim cluster

4.1.2 News frames within the preventable cluster

As shown in table 4, the results show significant differences in the scores on benevolence and organizational trust for the conditions in the preventable cluster. Significant differences were found in the scores on benevolence for condition 7 ($M = 4.14$, $SD = .514$) and 8 ($M = 3.78$, $SD = .785$); $t(49.532) = 2.108$, $p = .037$, and in the scores on organizational trust for condition 7 ($M = 4.45$, $SD = .572$) and condition 8 ($M = 4.11$, $SD = .488$); $t(60) = 2.458$, $p = .017$. Participants in the conflict condition assigned a higher level of benevolence to the local government and had more trust in the local government compared to the participants in the economic condition.

Figure 4 gives an overview of the significant effects of the conflict frame in the preventable cluster.

Table 5

An overview of the differences in the scores on the PCR-variables between the frames in the preventable cluster.

	Responsibility	Conflict	Economic	Human Interest	Morality	t	df	Sig.
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)			
Benevolence								
7-6	3.95 (.652)	4.14 (.514)				1.214	58	.230
7-8		4.14 (.514)	3.78 (.785)			2.108	49.533	.037*
7-10		4.14 (.514)			4.04 (.585)	.651	60	.517
8-10			3.78 (.785)		4.04 (.585)	-1.492	58	.141
9-8			3.78 (.785)	3.97 (.533)		1.103	50.879	.275
Competence								
7-6	3.32 (.827)	3.20 (.633)				-.626	58	.534
7-8		3.20 (.633)	3.16 (.696)			.265	60	.792
7-10		3.20 (.633)			3.39 (.827)	-1.012	60	.316
8-10			3.16 (.696)		3.39 (.827)	-1.182	58	.242
9-8			3.16 (.696)	3.33 (.825)		.880	59	.382
Integrity								
7-6	3.45 (.705)	3.40 (.686)				-.267	58	.791
7-8		3.40 (.686)	3.30 (.641)			.582	60	.562
7-10		3.40 (.686)			3.57 (.612)	-1.016	60	.314
8-10			3.30 (.641)		3.57 (.612)	-1.648	58	.105
9-8			3.30 (.641)	3.48 (.693)		1.027	59	.308
Willingness to Depend								
7-6	3.73 (1.379)	3.56 (1.260)				-.480	58	.633
7-8		3.56 (1.260)	3.16 (.921)			1.444	60	.154
7-10		3.56 (1.260)			3.43 (.927)	.457	60	.649
8-10			3.16 (.921)		3.43 (.927)	-1.164	58	.249
9-8			3.16 (.921)	3.16 (.894)		.025	59	.980
Follow Advice								
7-6	4.30 (1.135)	4.39 (1.210)				.286	58	.776
7-8		4.39 (1.210)	3.97 (.995)			1.501	60	.139
7-10		4.39 (1.210)			4.48 (1.193)	-.304	60	.762
8-10			3.97 (.995)		4.48 (1.193)	1.822	58	.074
9-8			3.97 (.995)	4.31 (1.221)		1.217	59	.228
Organizational Trust								
7-6	4.25 (.784)	4.45 (.572)				1.126	58	.265
7-8		4.45 (.572)	4.11 (.488)			2.458	60	.017*
7-10		4.45 (.572)			4.19 (.461)	1.926	60	.059
8-10			4.11 (.488)		4.19 (.461)	-.635	58	.528
9-8			4.11 (.488)	4.27 (.584)		1.090	59	.280

Reputation							
7-6	3.70 (.529)	3.74 (.562)			.265	58	.792
7-8		3.74 (.562)	3.46 (.576)		1.920	60	.060
7-10		3.74 (.562)		3.73 (.456)	.083	60	.934
8-10			3.46 (.576)	3.73 (.456)	-1.988	58	.052
9-8			3.46 (.576)	3.65 (.531)	1.306	59	.196
Personal involvement							
7-6	3.96 (.579)	3.69 (.540)			-1.916	58	.060
7-8		3.69 (.540)	3.83 (.511)		-1.041	60	.302
7-10		3.69 (.540)		3.75 (.501)	-.447	60	.657
8-10			3.83 (.511)	3.75 (.501)	.612	58	.543
9-8			3.83 (.511)	3.87 (.557)	.323	59	.748
Risk perception							
7-6	3.62 (.788)	3.35 (.702)			-1.398	58	.167
7-8		3.35 (.702)	3.39 (.606)		-.240	60	.811
7-10		3.35 (.702)		3.38 (.540)	-.199	60	.843
8-10			3.39 (.606)	3.38 (.540)	.056	58	.955
9-8			3.39 (.606)	3.41 (.586)	.129	59	.898
Secondary Crisis Communication							
7-6	3.08 (.954)	2.71 (.879)			-1.584	58	.119
7-8		2.71 (.879)	2.91 (.700)		-1.001	60	.321
7-10		2.71 (.879)		2.99 (.669)	-1.407	60	.16
8-10			2.91 (.700)	2.99 (.669)	-.440	58	.662
9-8			2.91 (.700)	2.92 (.824)	.069	59	.945
Attribution of crisis responsibility							
7-6	3.26 (.931)	3.16 (.738)			-.490	58	.626
7-8		3.16 (.738)	3.16 (.693)		.004	60	.997
7-10		3.16 (.738)		3.34 (.776)	-.979	60	.331
8-10			3.16 (.693)	3.34 (.776)	-.995	58	.324
9-8			3.16 (.693)	3.15 (.988)	-.023	59	.982

Note: bold* indicates a significant difference: $p < .05$

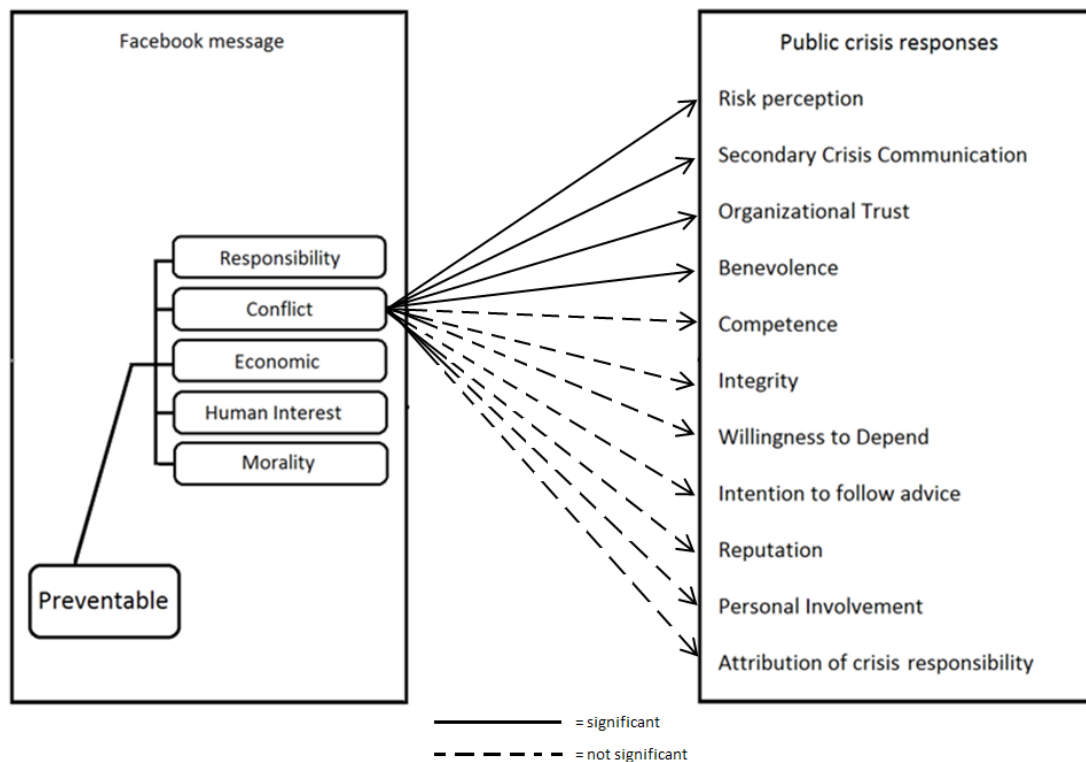


Figure 4. The significant effects of the conflict frame on the PCR-variables in the preventable cluster

4.1.3 Victim versus preventable

As shown in table 5, the results show significant differences in the scores on benevolence, SCC and the attribution of crisis responsibility for the frames in both crisis clusters. Between the two clusters, there was a significant difference in the scores on benevolence for condition 2 and 7 ($p = .006$), on SCC for condition 2 and 7 ($p = .009$), and in the scores on the attribution of crisis responsibility for condition 2 and 7 ($p = .011$), condition 3 and 8 ($p = .002$) and condition 4 and 9 ($p = .022$).

Regarding benevolence, the participants in the conflict-condition of the preventable cluster gave the local government a higher score on benevolence compared to the participants who were in the conflict condition of the victim cluster.

When looking at the secondary crisis communication, participants in the conflict-condition of the victim cluster scored higher on SCC compared to the participants in the conflict-condition of the preventable cluster.

Finally, participants who read the Facebook message with the conflict-, economic, or human interest frame in the preventable cluster, attributed more crisis responsibility to the local government compared to the participants in the same conditions of the victim cluster.

Table 5

The differences in mean scores on the PCR-variables for each frame between the victim and preventable cluster

	Victim M (SD)	Preventable M (SD)	t	df	Sig.
Benevolence					
Conflict	3.75 (.551)	4.14 (.514)	2.852	61	.006*
Economic	3.74 (.598)	3.78 (.785)	.185	58	.854
Human Interest	3.66 (.932)	3.97 (.533)	1.580	43.914	.121
Competence					
Conflict	3.51 (.650)	3.20 (.633)	-1.886	61	.064
Economic	3.18 (.788)	3.16 (.696)	-.087	58	.931
Human Interest	3.09 (.742)	(3.33 (.825)	1.204	58	.234
Integrity					
Conflict	3.35 (.601)	3.40 (.686)	.317	61	.752
Economic	3.55 (.607)	3.30 (.641)	-1.551	58	.126
Human Interest	3.31 (.722)	3.48 (.693)	.906	58	.369
Willingness to Depend					
Conflict	3.48 (1.204)	3.56 (1.260)	.253	61	.801
Economic	3.10 (.927)	3.16 (.921)	.233	58	.817
Human Interest	3.38 (.907)	3.16 (.894)	-.937	58	.353
Follow Advice					
Conflict	4.47 (1.395)	4.39 (1.210)	-.235	61	.815
Economic	3.93 (1.000)	3.97 (.995)	.129	58	.897
Human Interest	3.96 (1.216)	4.31 (1.221)	1.136	58	.261
Organizational Trust					
Conflict	4.39 (.543)	4.45 (.572)	.432	61	.667
Economic	4.28 (.539)	4.11 (.488)	-1.255	58	.214
Human Interest	4.31 (.501)	4.27 (.584)	-.293	58	.771
Reputation					
Conflict	3.68 (.500)	3.74 (.562)	-.448	61	.656
Economic	3.51 (.664)	3.46 (.576)	-.291	58	.772
Human Interest	3.73 (.554)	3.65 (.531)	.613	58	.542
Personal Involvement					
Conflict	3.86 (.622)	3.69 (.540)	1.163	61	.249
Economic	3.61 (.627)	3.83 (.511)	-1.490	58	.142
Human Interest	3.81 (.528)	3.87 (.557)	-.456	58	.650

Risk perception					
Conflict	3.64 (.633)	3.35 (.702)	1.693	61	.095
Economic	3.43 (.612)	3.39 (.606)	.238	58	.812
Human Interest	3.39 (.736)	3.41 (.586)	-.111	58	.912
Secondary Crisis Communication					
Conflict	3.32 (.941)	2.71 (.879)	2.679	61	.009*
Economic	2.59 (.810)	2.91 (.700)	-1.648	58	.105
Human Interest	2.86 (.727)	2.92 (.824)	-.312	58	.757
Attribution of Crisis Responsibility					
Conflict	2.69 (.672)	3.16 (.738)	-2.630	61	.011*
Economic	2.56 (.702)	3.16 (.693)	-3.330	58	.002*
Human Interest	2.60 (.818)	3.15 (.988)	-2.351	58	.022*

Note: bold* indicates a significant difference: $p < .05$

4.2 RELATIONS BETWEEN THE PCR-VARIABLES: REGRESSION ANALYSIS

Hypothesis 1a predicted that when the level of trust in the local government is lower, the perception of risk will be higher. With risk perception as the dependent variable and trust as the independent variable, the regression model is not significant, $F(1, 302) = .927, p = .336$.

Hypothesis 1b, 1c and 1d predicted that when the local government is perceived as less benevolent, competent or integer, the perception of risk will be higher. Hypothesis 1d and 1e predicted that when the willingness to depend or to the intention to follow advice is lower, the perception of risk will also be higher. Given the fact that the concept of trust consists of several dimension, a regression analysis on each of the dimensions is done. With risk perception as the dependent variable and competence, benevolence, integrity, willingness to depend or subjective probability of depending as independent variable, the regression model for each of the dimensions is not significant: benevolence, $F(1, 302) = .167, p = .683$; competence, $F(1, 302) = .888, p = .347$; integrity, $F(1, 302) = .433, p = .511$; willingness to depend, $F(1, 302) = 1.939, p = .165$; subjective probability of depending, $F(1, 302) = 3.625, p = .058$. This was contrary to the expectation. This means hypothesis 1b to 1f can be rejected.

Hypothesis 2 predicted that when the local government has a higher reputation, the risk perception of citizens would be lower. With risk perception as the dependent variable and reputation as the independent variable, the regression model is not significant, $F(1, 302) = .618, p = .433$.

Hypothesis 3 predicted that when people are more personally involved, they will have a higher perception of risk. The regression model with the perception of risk as the dependent variable and personal involvement as the independent variable is significant, $F(1, 302) = 26.199, p < .001$. However, only 8% of the differences in the perception of risk can be predicted by personal involvement ($R^2 = .08$). Personal involvement, $\beta = .283, t = 5.118, p < .001, 95\% CI [0.20, 0.45]$ has a significant, weak correlation with risk perception. This is in line with the expectation. This means that hypothesis 3 is accepted and this confirms that citizens will have a higher risk perception when they are more personally involved with the crisis situation.

Hypothesis 4a predicted that when the level of trust in the local government is higher, this has a positive effect on the local government's reputation. The regression model with reputation as the dependent variable and trust as the independent variable is significant, $F(1, 302) = 119.899, p < .001$. 28% of the differences in reputation can be predicted by trust ($R^2 = .28$), $\beta = .533, t = 10.950, p < .001, 95\% CI [0.43, .62]$. Trust has a significant strong correlation with reputation.

Hypothesis 4b, 4c and 4d predicted that when the local government is perceived as less benevolent, competent or integer, this has a negative effect on the reputation. Hypothesis 4e and 4f predicted that a lower willingness to depend and a lower intention to follow advice would also lead

to a lower reputation. The regression model with reputation as the dependent variable and each of the trust dimensions as the independent, the model is significant: benevolence, $F(1, 302) = 118.025$, $p < .001$; competence, $F(1, 302) = 13.821$, $p < .001$; integrity, $F(1, 302) = 106.937$, $p < .001$; willingness to depend, $F(1, 302) = 34.292$, $p = .000$; intention to follow advice, $F(1, 302) = 48.066$, $p < .001$.

Within the model, 28% of the differences in reputation can be predicted by benevolence ($R^2 = .28$), $\beta = .530$, $t = 10.864$, $p < .001$, 95% CI [0.37, 0.53]. Benevolence has a significant strong correlation with reputation.

Regarding competence, 4% ($R^2 = .04$) of the differences in reputation can be predicted by competence, $\beta = .209$, $t = 3.718$, $p < .001$, 95% CI [0.07, 0.24]. Competence has a significant weak correlation with reputation.

When looking at integrity, 26% ($R^2 = .26$) of the differences in reputation can be predicted by integrity, $\beta = .511$, $t = 10.341$, $p < .001$, 95% CI [0.35, 0.51]. Integrity also has a significant strong correlation with reputation. This means hypothesis 4b to 4d can be accepted.

The willingness to depend is responsible for 10% ($R^2 = .10$) of the differences in reputation, $\beta = .319$, $t = 5.856$, $p < .001$, 95% CI [0.11, 0.22]. The willingness to depend has a significant moderate correlation with reputation.

Regarding the intention to follow advice, 13% of the differences in reputation can be predicted by the intention to follow advice, $\beta = .371$, $t = 6.933$, $p < .001$, 95% CI [0.13, 0.23]. The intention to follow advice has a significant moderate correlation with reputation.

Hypothesis 5 predicted that a higher attribution of crisis responsibility has a negative effect on reputation. With reputation as the dependent variable and attribution of crisis responsibility as the independent variable, the regression model is significant, $F(1, 302) = 8.796$, $p = .003$. In the differences in reputation only 2% can be predicted by the attribution of crisis responsibility ($R^2 = .02$), $\beta = -.168$, $t = -2.966$, $p = .003$, 95% CI [-0.18, -0.04]. The attribution of crisis responsibility has a significant weak correlation with reputation.

Hypothesis 6 predicted that when people have a higher perception of risk, their secondary crisis communication will be higher. The regression model with secondary crisis communication as the dependent variable and risk perception as the independent variable is significant, $F(1, 302) = 77.717$, $p < .001$. 20% of the differences in secondary crisis communication can be predicted by risk perception ($R^2 = .20$), $\beta = .452$, $t = 8.816$, $p < .001$, 95% CI [0.44, 0.70]. Risk perception has a moderate correlation with secondary crisis communication. This is in line with the expectation which leads also to an acceptance of the sixth hypothesis.

Hypothesis 7a predicted that when people are more personally involved in the crisis situations, their secondary crisis communication will be higher. With secondary crisis communication as the dependent variable and personal involvement as the independent variable, the regression model is significant, $F(1, 302) = 41.281$, $p < .001$. However, only 12% of the differences in secondary crisis communication can be predicted by personal involvement ($R^2 = .12$). Personal involvement, $\beta = .347$, $t = 6.425$, $p < .001$, 95% CI [0.35, 0.66] has a moderately strong correlation with secondary crisis communication. This is in line with the expectation. Hypothesis 7a and 7b can be accepted.

Table 6 gives an overview of the acceptance and rejection of the hypotheses and figure 5 gives an overview of the significant relations within the model.

Table 6

The acceptance/rejection of the hypotheses within the research model

Hypotheses	F	P	Accepted/ Rejected
H1a: Trust in the local government has a negative effect on risk perception	.927	.336	Rejected
H1b: Benevolence has a negative effect on risk perception	.167	.683	Rejected
H1c: Competence has a negative effect on risk perception	.888	.347	Rejected
H1d: Integrity has a negative effect on risk perception	.433	.511	Rejected
H1e: The willingness to depend has a negative effect on risk perception	1.939	.165	Rejected
H1f: The intention to follow advice has a negative effect on risk perception	3.625	.058	Rejected
H2: Reputation has a negative effect on risk perception	.618	.433	Rejected
H3: Personal involvement has a positive effect on risk perception	26.199	<.001	Accepted
H4a: Trust in the local government has a positive effect on reputation.	119.899	<.001	Accepted
H4b: Benevolence has a positive effect on reputation.	118.025	<.001	Accepted
H4c: Competence has a positive effect on reputation.	13.821	<.001	Accepted
H4d: Integrity has a positive effect on reputation.	106.937	<.001	Accepted
H4e: The willingness to depend has a positive effect on reputation.	34.292	<.001	Accepted
H4f: The intention to follow advice has a positive effect on reputation.	48.066	<.001	Accepted
H5: A higher attribution of crisis responsibility has a negative effect on reputation.	8.796	.003	Accepted
H6: Risk perception has a positive effect on secondary crisis communication.	77.717	<.001	Accepted
H7a: Personal involvement has a positive effect on secondary crisis communication.	41.281	<.001	Accepted
H7b: Secondary crisis communication has a positive effect on personal involvement.	41.281	<.001	Accepted

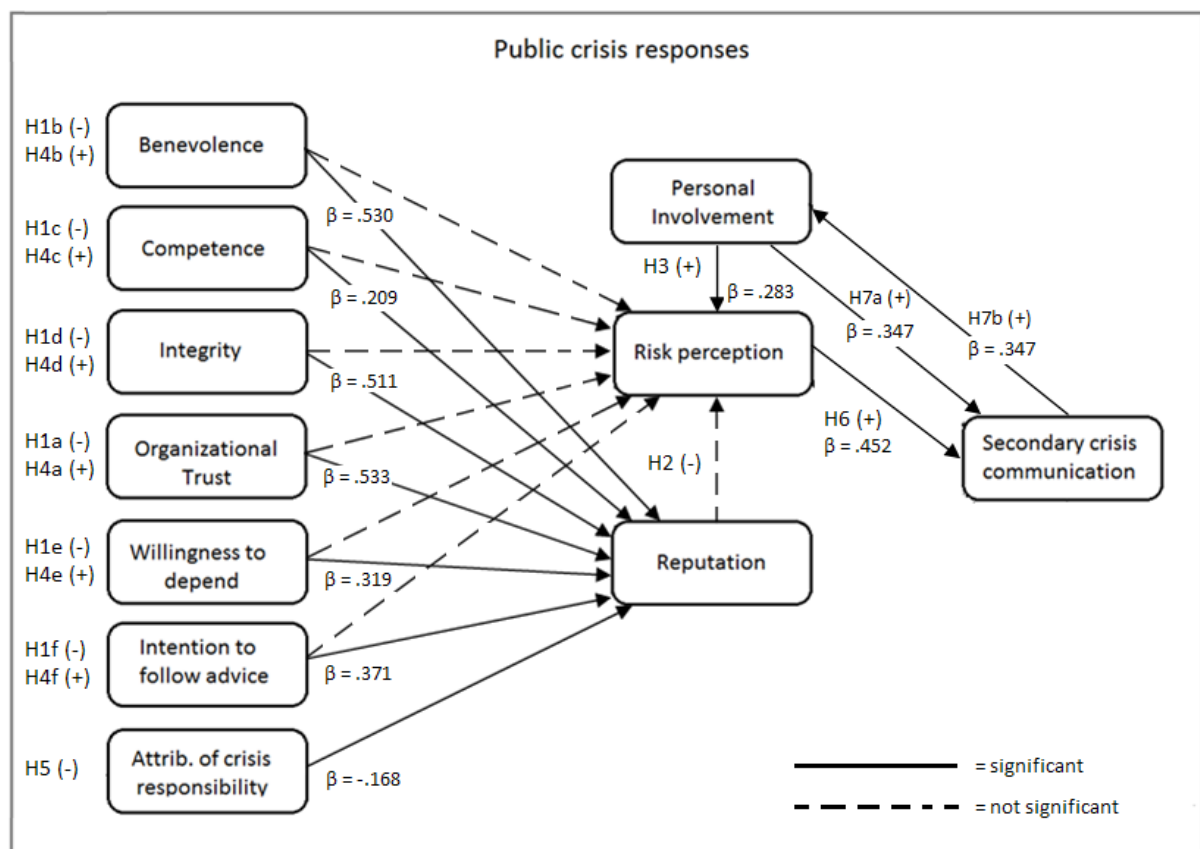


Figure 5. An overview of the significant/not significant relations between the PCR-variables

5. DISCUSSION

The primary goal of this study was to examine the effect of news frames via social media on public crisis responses. These effects were examined by the manipulation of several Facebook messages, in which the 'crisis cluster' and 'news frame' were manipulated. In both crisis clusters, the municipality of Groningen was in crisis and was confronted with a victim crisis (earthquake) or a preventable crisis (contaminated drinking water). In addition to these frame effects, the relations between the public crisis responses variables were studied, how they relate to each other and how do they affect the public's risk perception and secondary crisis communication. This led to the two following research questions: "*Which of the news frames, within and between the crisis clusters, has the most positive effect on the public crisis responses?*" and "*What are the effects of the public crisis responses variables on people's risk perception and secondary crisis communication?*". The effects were measured with an online questionnaire in which the participants were exposed to a manipulated Facebook message, in which the frame and cluster were manipulated. In total, 304 participants participated in this study. An analysis on the mean scores within and between the conditions was performed. In addition, a regression analysis was performed to test the hypothesized relations to test the effect of the PCR-variables on risk perception and secondary crisis communication. In the sections below the main findings of the analyses will be discussed, followed by this study's limitations and suggestions for future research.

5.1 MAIN FINDINGS

5.1.1 Experimental study: the effect of news frames and crisis cluster on PCR

The first research question was formulated on the effect of the use of news frames in Facebook messages for two types of crises on public crisis responses. The results showed that some news frames within each of the clusters had more effect than others on the crisis response variables. These effects are discussed below per cluster and news frame.

Victim cluster: conflict versus morality

The results suggest that during a crisis situation in which the local government is also a victim of the situation and is not responsible, the framing of the Facebook message is of influence on how competent people think the government is in dealing with the situation. When the message puts more emphasis on the conflict about the crisis between several political parties, people tend to see the local government as more competent compared to people who read a message in which the morality of the situation is highlighted. Furthermore, the results suggest that people are more personally involved when reading a Facebook message in which the conflict between political parties is discussed, compared to the discussion of the morality of the situation. Therefore, it can be stated that when the local government wants to increase the personal involvement of citizens and when she wants to be perceived as more competent by citizens during a victim crisis, she will achieve this sooner when she chooses to put emphasis on the conflict between political parties instead of focusing on the morality of the situation in her crisis communication.

Furthermore, the results on the relations between the variables suggest that a higher personal involvement leads to both a higher level of risk perception and secondary crisis communication. This means that emphasizing a political conflict that leads to more personal

involvement in turn also leads to a higher perception of risk and more secondary crisis communication.

Victim cluster: conflict versus responsibility, economic, and morality

In addition to the difference in effect on perceived competency and personal involvement, the results also suggest that the framing in the message is of influence on the perception of risk people have of the situation. When people read a message in which the aspect of conflict is framed, they will have a higher perception of risk compared to people who read a message in which the responsibility for the crisis is framed. In addition, the results suggest that the secondary crisis communication of people will be higher when a political conflict is framed, compared to a message in which the responsibility, economic consequences or morality of the crisis situation is framed. As previously mentioned, the results suggest that a higher perception of risk also indirectly leads to a higher secondary crisis communication. Therefore, it can be stated that when the government wants to increase the secondary crisis communication of citizens, she must emphasize the political conflict regarding the situation.

Preventable cluster: conflict versus economic

During a crisis situation in which the local government could have prevented the crisis, the framing of the Facebook message is of influence on how benevolent people think the government is in dealing with the crisis in a right way. Again, when the conflict between political parties is emphasized in the message, people tend to assign more benevolence to the government than people who are confronted with the economic consequences of the situation. In addition, the results also suggest that people put more general trust in the local government when the conflict is framed instead of the economic consequences. Therefore, it can be stated that when the government wants to be seen as more benevolent and trustworthy during a preventable crisis, her crisis communication strategy should be mainly focused on the political conflict regarding the situation, rather than discussing the economic consequences of the crisis.

Effects of the news frames

The overall results show that when the conflict between several political parties is emphasized in governmental crisis communication, this has the most positive effect on several aspects like the involvement and secondary crisis communication of citizens and how the local government is being perceived by citizens. A theoretical explanation cannot be given for the effect of the conflict frame. A practical explanation for this could be that the message may give citizens the feeling that the local government is indeed concerned about its citizens and wants to resolve the crisis situation in the best possible way. By showing that the situation is being discussed in politics, citizens might actually have the feeling that the government takes things seriously. This would eventually lead to a higher level of personal involvement, risk perception, benevolence, competence, secondary crisis communication and trust. Again, this explanation is not scientifically based.

Effect of the crisis cluster: victim versus preventable

After comparing the effect of the news frames within each crisis cluster, we now take a look at the differences in the effect of the same frames between both clusters. Looking at the results we noticed that between the victim and preventable crisis there are differences on benevolence, secondary crisis communication and the attribution of crisis responsibility.

The results suggest that during a preventable crisis, the local government is considered to be more benevolent in dealing with the crisis when the conflict between political parties is framed than when the same issue is framed during a victim crisis.

In addition to benevolence, the use of the conflict frame also showed a different effect between the two crises for secondary crisis communication. The results suggest that when a conflict between political parties is framed during a victim crisis, the secondary crisis communication of people will be higher than when a message is framed the same way during a preventable crisis.

Finally, the attribution of crisis responsibility differed for several news frames between the clusters. The results suggest that people tend to attribute more crisis responsibility to the local government during a preventable crisis than during a victim crisis when a political conflict regarding the crisis is present in the message. The same differences were found in framing the economic consequences and morality between the two types of crises. The results on the attribution of crisis responsibility can be easily explained by the fact that people attribute more responsibility to the government during a preventable crisis than during a victim crisis (Coombs, 2006).

From these results we can conclude that the type of crisis is of influence on the effect of the news frame on perceived benevolence, secondary crisis communication and the attribution of crisis responsibility.

5.1.2 Regression analysis: the effect of the PCR-variables on risk perception and SCC

Although previous studies indicate that people's risk perception will be higher when the level of trust in the local government is lower (Renn & Rohrmann, 2000; Lerner & Keltner, 2000; Hurlimann, 2007; Ter Huurne & Gutteling, 2008), we did not find evidence in this study supporting this.

The results did support previous research on the relation between the attribution of crisis responsibility and reputation, which indicated that when the attribution of crisis responsibility is higher, the reputation of the government would be lower (Coombs & Holladay, 2002; Coombs, 2006).

In addition to crisis responsibility and contrary to its relation with reputation, the dimensions of trust seem to have a positive effect on reputation. This relation supports previous research (Walsh et al., 2009; Fombrun et al., 2003) and suggests that when citizens put more trust in the local government, this has a positive effect on the local government's reputation.

Regarding personal involvement, the results suggest that when people are more personally involved, they will have a higher perception of risk. Our results were in line with previous research in this area (Johnson, 2005; Heath, Liao & Douglas, 1995).

Furthermore, the results suggest what when people are more personally involved with the crisis situation or have a higher risk perception, their secondary crisis communication will also be higher. These results were also in line with previous research that confirmed that people were more likely to share a message with others when this message was more personally relevant (Allsop et al., 2007) or when they have a higher risk perception and associate the crisis information with feelings of worry or fear (Chen & Sakamoto, 2013). Furthermore, sharing the message on Facebook would get people also more personally involved with the news (Penn State, 2015). This study found evidence supporting this relation.

These findings suggest that if the local government wants to increase the public's secondary crisis communication she has to focus on the personal involvement and risk perception of her citizens. When citizens are more personally involved during crisis situations, they have a higher perception of risk that will possibly lead to more secondary crisis communication. However, it should

be noted that the investigated relations are not all significantly strong. Furthermore, it should be noted that they do not present a causal relation between the variables.

5.2 LIMITATIONS

Despite a balanced research design (i.e. diverse groups of participants within each condition) and reliable scales, there are limitations in this study that must be noted and taken into consideration when interpreting the results.

The first limitation of this study is that only a limited comparison between the news frames was possible. Due to the fact that not all of the manipulations worked, it was not possible to compare all of the news frames within and between the crisis clusters. Eventually, this resulted in a small comparison between the news frames that only significantly differed from each other on the manipulation checks. An explanation for the fact that participants did not recognize the frame well is maybe because they were not able to go a page back while filling in the online survey. Another possibility is that the core message of each manipulated message was not neutral enough. Eventually, this meant that any statements regarding the main effect of cluster and frame or an interaction effect could not be made. So, it remains unclear what main- and interaction effects of the frames and clusters are beneficial for the local government's crisis communication via social media. From the small comparisons we were able to make, we can carefully conclude that there is not a clear effect of both crisis cluster and news frames on the level of trust citizens have in the government and the reputation the government has. Only emphasizing the conflict between political parties during a preventable crisis leads to more organizational trust and benevolence, and emphasizing the same during a victim crisis leads to more perceived competence. However, the disability to compare all frames must be taken into account here.

A second limitation concerns the municipality we focused on with both crisis messages. This study focused specifically on the municipality of Groningen. Maybe, the already existing image of the municipality was of influence on the opinions of the participants. Perhaps, if there were used more municipalities, differences in the responses of citizens were found.

Furthermore, on the one hand, the Facebook messages and the crisis situations that were used in this research are fictional. Perhaps, when the participants would have noticed this, this could have been of influence on their objective judgment regarding the manipulation. This could have been an influence on the results. However, on the other hand, many participants indicated afterwards that they found the messages quite realistic and asked when these incidents occurred. Finally, a last limitation is the way secondary crisis communication is operationalized in this study. We only focused on this concept as the intention of citizens to share crisis information with others, instead of also looking at the negative or positive charge of the message and the motive of engaging in secondary crisis communication. When people are angry or when the responsibility of the organization is higher, this could be a reason for them to create negative content (Coombs, 2006; Coombs & Holladay, 2007). When this study had taken this into account, a possible relation between secondary crisis communication and the local government's reputation or the attributed crisis responsibility could also be investigated within the model.

5.3 FUTURE RESEARCH

This study took a first step in examining the effect of news frames in crisis communication via social media. Existing literature (Muralidharan et al., 2011; Hamdy & Gomaa, 2012) mainly stressed the presence of certain news frames on social media, instead of the effect and was merely directed to

the appearance and presence of these news frames in media coverage (e.g. An & Gower, 2009). The effects of social media in crisis communication on receivers are still understudied (Schultz et al. 2011). The results of this study contribute to the understanding of the local government, regarding the use of Facebook in their crisis communication towards citizens. By knowing what effects certain news frames have on how the local government is perceived during crises and how it affects the personal involvement, perception of risk and the intention for secondary crisis communication of citizens, she can adjust and optimize her crisis communication strategy to a strategy that is beneficial for her and her citizens during crisis situations.

However, because not all manipulations worked only a small comparison between several news frames could be made. This is why future research is needed that focuses on the main and interaction effects of crisis cluster and news frames. More insight in these effects will lead to the development of certain guidelines that can be used by local governments in their communication strategy. Furthermore, in future research it is recommended to focus on several municipalities. In this way the results are maybe more generalizable on a national level or it might give insight whether there are differences between municipalities or not.

Finally, future research should make a distinction in not only the type of crisis, but also in the severity of the crisis (e.g. GRIP-fases) or the stadium of the crisis (e.g. before, during or after). By taking a lot of factors into account and examining their effects, the local government can come up with a crisis communication strategy that is highly beneficial for both her and her citizens.

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Appendices

Appendix A – Online Questionnaire (Qualtrics)



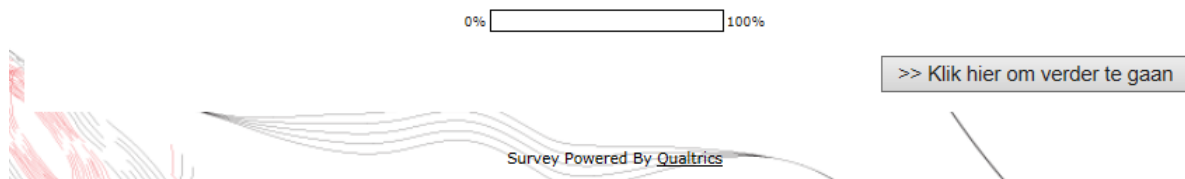
Beste respondent,

Bedankt dat u mee wilt werken aan dit onderzoek! In het kader van mijn afstudeeronderzoek aan de Universiteit Twente doe ik onderzoek naar crisiscommunicatie. U kunt mij helpen door het invullen van de onderstaande vragenlijst. Belangrijk is dat u deze zo eerlijk mogelijk probeert in te vullen. Er is geen sprake van goede of slechte antwoorden, dus ga af op uw eerste ingeving.

Het beantwoorden van de vragen zal een kleine 15 minuten van uw tijd in beslag nemen. Deelname is geheel anoniem en gegevens zullen uiteraard vertrouwelijk worden behandeld. Mocht u vragen hebben die gerelateerd zijn aan dit onderzoek of mochten er onduidelijkheden zijn, dan kunt u ten alle tijde contact opnemen met ondergetekende.

Nogmaals hartelijk dank voor uw medewerking!

Joël Velthorst
j.velthorst@student.utwente.nl





Voordat de vragenlijst begint, dient u eerst onderstaande tekst zorgvuldig door te lezen.

Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard en methode van dit onderzoek. Ik stem geheel vrijwillig in met deelname aan dit onderzoek en ik behoud daarbij het recht deze instemming weer in te trekken zonder dat ik daarvoor een reden hoeft op te geven. Ik besef dat ik op elk moment mag stoppen met het experiment. Als mijn onderzoeksresultaten gebruikt worden in wetenschappelijke publicaties, of op een andere manier openbaar worden gemaakt, dan zal dit volledig geanonimiseerd gebeuren. Mijn persoonsgegevens worden niet door derden ingezien zonder mijn uitdrukkelijke toestemming. Mijn vragen zijn naar tevredenheid beantwoord.

☐ Ja, ik ga akkoord met deelname aan dit onderzoek

Ga verder op de volgende pagina

0%  100%

<<

>> Klik hier om verder te gaan

Hieronder volgt eerst een aantal achtergrondvragen

Wat is uw geslacht?

- ☐ Man
☐ Vrouw

Wat is uw leeftijd?

Wat is uw nationaliteit?

- ☐ Nederlands
☐ Anders, namelijk

Wat is uw beroep?

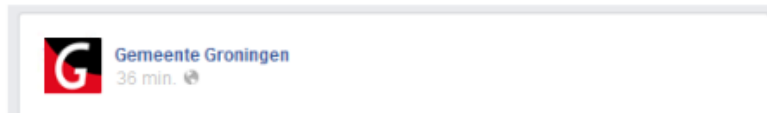
- ☐ Scholier/Student
☐ Werkend
☐ Werkloos

Wat is uw hoogst genoten opleiding?

- ☐ geen / lager- of basisonderwijs
☐ VMBO / MAVO / LBO
☐ MBO (MTS/MEAO)
☐ Havo
☐ VWO
☐ HBO
☐ WO
☐ Anders, namelijk

Wat is uw huidige woonplaats?

Hieronder is een Facebook bericht te lezen. Onderstaand bericht was te lezen op de Facebook-pagina van de gemeente Groningen. Lees dit bericht zorgvuldig door en ga daarna verder met de vragen op de volgende pagina's.



[insert manipulated Facebook message 1-10]

Onderstaande beweringen hebben betrekking op het Facebook bericht dat u zojuist gelezen heeft. Geef steeds aan in hoeverre u het oneens/eens bent met de beweringen.

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
Dit is een crisis waarbij de gemeente Groningen het slachtoffer is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit is een crisis waarbij de acties van de gemeente Groningen, die hebben geleid tot de crisis, onbedoeld waren	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dit is een crisis die voorkomen had kunnen worden door de gemeente Groningen, omdat zij bewust mensen in gevaar bracht of wet/regelgeving overtrad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
Omstandigheden zijn verantwoordelijk voor de crisis, niet de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De schuld van de crisis ligt bij de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De schuld van de crisis ligt bij de omstandigheden, niet bij de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Onderstaande beweringen hebben betrekking op het Facebook bericht dat u zojuist gelezen heeft. Geef steeds aan in hoeverre u het oneens/eens bent met de beweringen.

In het Facebook bericht wordt/worden:



	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
de verantwoordelijkheid voor de gebeurtenis toegeschreven aan de gemeente Groningen, individu of groep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
conflicten en onenigheden tussen individuen, groepen of organisaties weergegeven	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
de economische gevolgen besproken die de gebeurtenis zal hebben voor de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
een menselijk aspect of een emotionele invalshoek toegevoegd aan de presentatie van de gebeurtenis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
de gebeurtenis in een context van morele waarden of sociale voorschriften geplaatst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Beantwoord alle onderstaande vragen *alsof u een inwoner van de gemeente Groningen bent*

Geef voor onderstaande beweringen telkens aan in hoeverre u het met de beweringen oneens/eens bent.

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
Ik vind het ontvangen van informatie over een crisissituatie erg belangrijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zodra er een crisissituatie dreigt in mijn omgeving, ben ik daarin geïnteresseerd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me niet verbonden met de mensen in de crisissituatie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me anders dan de mensen in de crisissituatie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me gelijk met de mensen in de crisissituatie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ga verder met de vragen op de volgende pagina

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<<

>> Klik hier om verder te gaan



Beantwoord alle onderstaande vragen alsof u een inwoner van de gemeente Groningen bent

Geef hieronder voor elk van de beweringen aan welk gevoel het Facebook-bericht bij u als inwoner van Groningen zou oproepen in de gegeven situatie. Na het lezen van het bericht:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
voel ik me onveilig als ik weet dat ik zelf een slachtoffer zou kunnen zijn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ben ik bezorgd dat ik zelf het slachtoffer word	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
voel ik me onveilig, als de burger in het algemeen slachtoffer zou kunnen zijn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ben ik bezorgd dat de burger in het algemeen slachtoffer zou kunnen worden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hoe waarschijnlijk acht u het, op basis van de beschreven situatie, dat

	Erg onwaarschijnlijk	Onwaarschijnlijk	Neutraal	Waarschijnlijk	Erg waarschijnlijk
een burger in het algemeen slachtoffer is van de crisis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u zelf het slachtoffer bent van de crisis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In welke mate bent u

	Helemaal niet	Niet	Neutraal	Wel	Heel erg
bezorgd om crisissituaties en denkt u na over de risico's voor burgers in het algemeen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bezorgd om crisissituaties en denkt u erover na dat u zelf het slachtoffer zou kunnen zijn?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hoe waarschijnlijk acht u het dat

	Erg onwaarschijnlijk	Onwaarschijnlijk	Neutraal	Waarschijnlijk	Erg waarschijnlijk
u het Facebook bericht op Facebook zou delen met anderen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u uw vrienden/familie zou vertellen over het incident?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u een reactie geeft op het Facebook bericht?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ga verder met de vragen op de volgende pagina

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<< >> Klik hier om verder te gaan

Beantwoord alle onderstaande vragen *alsof u een inwoner van de gemeente Groningen bent*

Op basis van het Facebook-bericht dat ik heb gelezen ben ik van mening dat de gemeente Groningen:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
zal handelen in de beste belangen van burgers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
haar best zal doen om burgers te helpen, als zij hulp nodig hebben	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is geïnteresseerd in het welzijn van burgers, en niet alleen in dat van zichzelf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
eerlijk is in haar omgang met burgers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gekaracteriseerd kan worden als eerlijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zich houdt aan haar afspraken/verplichtingen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
oprecht en echt is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
competent en effectief in crisiscommunicatie is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
haar rol van het informeren van burgers gedurende crisis situaties erg goed vervult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
capabel en ervaren is in haar crisiscommunicatie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
over het algemeen zeer goed geïnformeerd is over haar taken gedurende crisissituaties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ga verder met de vragen op de volgende pagina

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<< >> Klik hier om verder te gaan

Beantwoord alle onderstaande vragen *alsof u een inwoner van de gemeente Groningen bent*

Wanneer zich een crisissituatie voordoet..

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
voel ik me comfortabel als ik weet dat ik afhankelijk ben van de informatie die wordt verstrekt door de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
kan ik altijd rekenen op de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
heb ik het gevoel dat ik kan rekenen op hulp van de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zou ik me comfortabel voelen om te handelen naar de informatie die me wordt gegeven door de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zou ik niet aarzelen om de informatie te gebruiken die de gemeente Groningen me verschaft heeft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zou ik handelen naar het vertrouwen dat ik heb in de informatie die me gegeven zou worden door de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zou ik me zeker voelen in het gebruiken van de gegeven informatie door de gemeente Groningen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
dan zal de gemeente Groningen gerespecteerd worden door burgers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ga verder met de vragen op de volgende pagina

0%  100%

<< >> Klik hier om verder te gaan

Beantwoord alle onderstaande vragen *alsof u een inwoner van de gemeente Groningen bent*

Geef steeds aan in **welke mate u vertrouwen heeft in de gemeente Groningen na het lezen van het Facebook-bericht.**

	Erg laag	Laag	50/50	Hoog	Erg hoog
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen technisch bekwaam is in de uitvoering van haar taken is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen weloverwogen beslissingen neemt over haar taken is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen haar taken volbrengt is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen een aanvaardbaar niveau van begrip van zijn/haar taken heeft is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen in staat is om haar werk op een aanvaardbare wijze uit te voeren is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat ik kan vertrouwen op wat de gemeente Groningen mij vertelt/mededeelt is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen haar werk doet zonder dat zij andere problemen veroorzaakt is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen weet waar zij mee bezig is, is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het vertrouwen dat ik heb in het feit dat de gemeente Groningen mij oprecht behandelt is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Geef hieronder aan in hoeverre u het met de volgende beweringen oneens/eens bent

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
De gemeente Groningen is begaan met het welzijn van haar burgers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De gemeente Groningen is in wezen oneerlijk en niet oprecht	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik vertrouw er niet op dat de gemeente Groningen de waarheid vertelt over het incident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Onder de meeste omstandigheden, zou ik geloven wat de gemeente Groningen zegt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De gemeente is niet begaan met het welzijn van haar burgers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

0% ☐ 100%

Dit is het einde van de vragenlijst. Hartelijk dank voor uw deelname!

Joël Velthorst

0% ☐ 100%

Appendix B - Victim cluster + News frames

Gemeente Groningen
30 min

Onze stad Groningen is vanmorgen om 11:06 uur getroffen door een hevige aardbeving. De beving had een sterkte van 5,0 op de schaal van Richter en is daarmee de zwaarste beving die ooit heeft plaatsgevonden in Nederland. Het epicentrum van de beving lag in onze binnenstad, maar ook in omliggende gemeenten als Uithuizen, Slochteren en Delfzijl werd de beving gevoeld. Dat meldt het KNMI.

Als gevolg van de hevige beving heeft vooral de binnenstad veel schade ondervonden. Huizen, bedrijfspanden, maar ook winkelstraten, wegen en bomen zijn ernstig beschadigd. Omliggende en aangrenzende gebieden van het crisisgebied worden op dit moment geëvacueerd. Het mogelijke aantal slachtoffers is op dit moment nog niet duidelijk.

Volgens seismoloog Bernard Dost van het KNMI komen bevingen in Groningen vaker voor, maar zijn ze veel minder zwaar. Deze minder zware bevingen worden over het algemeen in verband gebracht met de aardgaswinning in het gebied.

De hulpverlenende instanties, die meteen ter plaatse waren, laten weten dat de situatie op dit moment mogelijk levensbedreigend is en dat het gebied grotendeels onbegaanbaar is. Volgens een politiewoordvoerder is de situatie beheersbaar, maar nog niet onder controle.

Insert News frame 1-5

Onze burgemeester, Vreeman, laat in een eerste reactie weten erg geschrokken te zijn en heeft de noodtoestand uitgeroepen. Verder geeft hij aan alles in het werk te zullen stellen om alle nodige hulp te bieden.

Om op de hoogte te blijven van de huidige situatie, willen wij burgers vragen om radio of tv aan te zetten en om de nieuwsberichten op onze social media kanalen in de gaten te houden. Wij zullen actuele informatie en ontwikkelingen m.b.t. de crisis zo snel mogelijk communiceren via deze kanalen.

Inwoners van Groningen die vragen hebben, kunnen contact opnemen met de Veiligheidsregio Groningen, tel. 050 367 47 77. Voor verdere informatie over de crisis verwijzen we u naar onze website www.gemeente.Groningen.nl of naar onze Twitterpagina: @GemeenteGroningen

Vind ik leuk · Reageren · Delen 123 keer gedeeld

153 personen vinden dit leuk

 Els
19 juni om 12:11 · Vind ik leuk

 Jacqueline
19 juni om 12:20 · Vind ik leuk

Nog 661 reacties weergeven

1. Responsibility frame

Hoewel onze gemeente de ramp niet had kunnen voorkomen, voelt de gemeente Groningen zich verantwoordelijk. Het is onze plicht ervoor te zorgen dat de situatie opgelost wordt en dat de veiligheid van burgers wordt gewaarborgd. Dit is de reden dat de gemeente vindt dat zij haar verantwoordelijkheid moet nemen om de huidige situatie op te lossen.

2. Conflict frame

Onze gemeenteraad heeft naar aanleiding van de situatie besloten direct een debat te starten waaraan alle gemeentefracties deelnemen. Het mogelijke verband tussen de aardbeving en de aardgaswinning onder gemeenteground is het onderwerp van debat. De aardgaswinning, en in het bijzonder de risico's hiervan voor de gemeente en haar inwoners, staan al langer ter discussie en hebben ook in het verleden tot conflicten in de gemeenteraad geleid. D66 is van mening dat de aardgaswinning teveel risico's met zich meebrengt en dat deze buiten de gemeente Groningen doorgang zal moeten vinden. De oppositiepartijen, VVD en PvdA, zijn hier fel op tegen en wijzen op inkomstenderving voor de gemeente en zien een oplossing in preventieve maatregelen om mogelijke schade te beperken voor de gemeente Groningen. De discussie laait hoog op en leidt tot conflicten tussen de partijen.

3. Economic consequences frame

De schade die de beving heeft aangericht aan onze binnenstad is enorm. De herstelkosten voor onze gemeente zullen hoog oplopen. Een exacte schatting van de schade is tot dusver niet te geven, maar op dit moment wordt gedacht aan enkele miljoenen euro's. De geschatte kosten zijn daarmee aanzienlijk hoger dan de begrote financiën op de gemeentebegroting. Hoe de gemeente de kosten voor de rampbestrijding en het herstel gaat financieren zal nog nader besproken worden in de gemeenteraad.

4. Human Interest frame

De emoties onder de inwoners van onze stad lopen hoog op. Naast angst en onbegrip neemt ook verdriet en wanhoop de overhand. Mensen hebben het gevoel alles kwijt te raken. Burgers in de getroffen delen zijn geëvacueerd uit hun woningen en zijn tijdelijk ondergebracht en opgevangen in enkele sportcentra. De pijn onder burgers is duidelijk zichtbaar. Burgers lijken steun bij elkaar te vinden om het leed met elkaar te kunnen delen. Anderen zijn met hulp van onze hulpdiensten wanhopig op zoek naar hun dierbaren. Onze gedachten gaan dan ook uit naar alle slachtoffers en betrokkenen van de crisis.

5. Morality frame

Het is verschrikkelijk wat er zich vanmorgen in onze gemeente voorgedaan heeft. Net als iedereen in de gemeente zijn ook wij erg geschrokken van de situatie en de vreselijke gevolgen ervan. Een situatie als deze roept onzekerheid op. Daarom is het belangrijk dat wij als gemeente de burger zo goed mogelijk op de hoogte houden. Dat is ook de taak van ons als gemeente en dat mag de burger ook van ons verwachten. Vanzelfsprekend kunnen we u garanderen dat de hulpverleners er alles aan zullen doen om de veiligheid van burgers te waarborgen. Een situatie als deze wekt wederom het besef dat een veilig leven en een veilige leefomgeving ook in Nederland niet altijd als vanzelfsprekend kunnen worden geacht.

Appendix C - Preventable cluster + News frames

Gemeente Groningen
35 min

Waterlaboratorium Noord constateerde vanochtend rond 11.00 dat het drinkwater van de gemeente Groningen ernstig vervuild blijkt te zijn. Bij een dagelijkse controle van de waterwaarden bleken er hoge concentraties Chloor in het water aanwezig te zijn.

Als gevolg van het vervuilde drinkwater bestaat de kans dat mensen die het water gedronken hebben gezondheidsproblemen kunnen ondervinden. Het binnenkrijgen van hoge concentraties chloor kan zelfs levensbedreigend zijn. Het mogelijke aantal slachtoffers is op dit moment nog niet duidelijk.

Volgens Bernard Dost van Waterlaboratorium Noord lijkt het vervuilde drinkwater te zijn veroorzaakt door voorzorgsmaatregelen in verband met het warme weer van de laatste tijd. Vanwege de toenemende warmte en de verhoogde kans op legionella besloot de gemeente Groningen eerder dat al het Groningse leidingwater minimaal 0.02 mg/liter chloor dient te bevatten.

De Inspectie voor de Gezondheidszorg (IGZ) en Rijkswaterstaat laten weten dat de situatie op dit moment mogelijk van invloed is op de volksgezondheid. Volgens hen is de situatie beheersbaar, maar nog niet onder controle. De IGZ en GGD laten verder weten dat het drinken van vervuild drinkwater vaak gepaard gaat met symptomen als misselijkheid, braken, buikpijn of buikkrampen of plotselinge koorts.

Insert News frame 1-5

Onze burgemeester, Vreeman, laat in een eerste reactie weten erg geschrokken te zijn en heeft de noodtoestand uitgeroepen. Verder geeft hij aan alles in het werk te zullen stellen om alle nodige hulp te bieden.

Burgers die klachten ondervinden, wordt geadviseerd direct contact op te nemen met hun huisarts of specialist. Voor meer informatie over de gevolgen kijkt u op de website van de GGD Groningen of neemt u contact op via tel. 050 367 4000.

Om op de hoogte te blijven van de huidige situatie, willen wij burgers vragen om radio of tv aan te zetten en om de nieuwsberichten op onze social media kanalen in de gaten te houden. Wij zullen actuele informatie en ontwikkelingen m.b.t. de crisis zo snel mogelijk communiceren via deze kanalen.

Voor vragen kunnen inwoners van Groningen contact opnemen met de Veiligheidsregio Groningen, tel. 050 367 47 77. Voor verdere informatie over de crisis verwijzen we u naar onze website www.gemeente.Groningen.nl of naar onze Twitterpagina: @GemeenteGroningen

Vind ik leuk · Reageren · Delen

123 keer gedeeld

153 personen vinden dit leuk.

Els
19 juni om 12:11 · Vind ik leuk

Jacqueline
19 juni om 12:20 · Vind ik leuk

Nog 661 reacties weergeven

1. Responsibility frame

Hoewel het op dit moment nog onduidelijk is hoe de situatie heeft kunnen ontstaan en hoe dergelijke hoge concentraties in het water terecht gekomen zijn, nemen wij als gemeente onze verantwoordelijkheid en voelen wij ons aansprakelijk voor de ontstane situatie. Het is onze plicht ervoor te zorgen dat de situatie opgelost wordt en dat de veiligheid van burgers gewaarborgd wordt. Dit is de reden dat de gemeente vindt dat zij haar verantwoordelijkheid moet nemen om de huidige situatie op te lossen.

2. Conflict frame

Onze gemeenteraad heeft naar aanleiding van de situatie besloten direct een debat te starten waaraan alle gemeenteraatsfracties deelnemen. De verhoogde concentraties chloor in het drinkwater en de bedreiging voor de volksgezondheid zijn het onderwerp van debat. De toevoeging van chloor en in het bijzonder het risico hiervan op de volksgezondheid staat al langer ter discussie en heeft ook in het verleden tot conflicten in de gemeenteraad geleid. D66 is van mening dat de toevoeging van chloor teveel gezondheidsrisico's met zich meebrengt en dat dit niet langer toegestaan mag worden. De oppositiepartijen, VVD en PvdA, zijn hier fel op tegen en zien tot dusver geen reden om de toevoeging van chloor aan het leidingwater te verbieden. Wel zijn zij van mening dat het proces onderworpen moet worden aan scherpere regels en wetgeving, om een ernstige situatie als deze in de toekomst te voorkomen. Beide oppositiepartijen geven bovendien aan dat een verbod op het toevoegen van chloor aan het water mogelijk zal leiden tot meer legionella besmettingen. De discussie laat hoog op en leidt tot conflicten tussen de partijen.

3. Economic consequences frame

De schade die de verhoogde chloorconcentratie heeft aangericht op de volksgezondheid is nog onduidelijk. De medische kosten die de situatie met zich meebrengt zullen hoog oplopen. Niet alleen de vergoeding van de ziektekosten voor de burgers, maar ook het schoonmaken en het tijdelijk stilleggen van de waterzuiveringinstallaties kost veel geld. De geschatte kosten zijn daarmee aanzienlijk hoger dan de begrote financiën op de gemeentebegroting. Hoe de gemeente de kosten gaat financieren zal nog nader besproken worden in de gemeenteraad.

4. Human Interest frame

De emoties onder de inwoners van de genoemde stadsdelen lopen hoog op. Naast angst voor hun gezondheid, neemt ook paniek, woede en onbegrip de overhand. Burgers snappen niet hoe dit heeft kunnen gebeuren en willen opheldering van de situatie door de gemeente. De gemeente wordt op dit moment overspoeld wordt met vragen van een groot aantal boze burgers. Het valt op dat burgers groepen vormen met medeburgers die ook bij de situatie betrokken zijn om elkaar de steun te bieden en om de situatie met elkaar te kunnen delen. Uit gesprekken met een aantal onder hen blijkt dat zij van mening zijn dat zij in groepen beter gehoord worden door de gemeente. Uiteraard neemt de gemeente neemt de situatie erg serieus en zal zij in het belang van de burger handelen. Onze gedachten gaan dan ook uit naar een ieder die betrokken is bij de huidige situatie.

5. Morality frame

Het is verschrikkelijk wat er zich vanmorgen in onze gemeente voorgedaan heeft. Net als iedereen in de gemeente zijn ook wij erg geschrokken van de situatie en de mogelijke gevolgen ervan. Dit had natuurlijk nooit mogen gebeuren. Wij zullen er daarom ook alles aan doen om de betrokkenen bij deze situatie zo goed mogelijk steun en/of medische hulp te bieden, daar waar dat nodig is. Een situatie als deze roept onzekerheid op. Daarom is het belangrijk dat wij als gemeente de burger zo goed mogelijk op de hoogte houden. Dat is ook de taak van ons als gemeente en dat mag de burger ook van ons verwachten. Vanzelfsprekend kunnen we u ook garanderen dat de hulpverleners er alles aan zullen doen om de gezondheid en veiligheid van burgers te waarborgen. Een situatie als deze wekt wederom het besef dat een veilig leven en een veilige leefomgeving ook in Nederland niet altijd als vanzelfsprekend kunnen worden geacht.