Integrating Social Media Features in NL-Alert

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Abstract

In times of crisis people look for information and support and include social media in their search for sufficient information. The real-time information, support and control people experience while using Social Networking Sites (SNS) seems useful in times of crisis. This paper helps to understand if and how SNS functions can have a positive influence on self efficacy, risk perception and information sufficiency when they are integrated in current risk communication efforts like NL-Alert. This was measured with the help of an online survey with an embedded experiment with 2 conditions where participants were randomly assigned to a control condition showing the classical format of NL-Alert or the expanded condition where SNS functions (a newsfeed and the feature of marking oneself as safe) were added to NL-Alert. The constructs of self efficacy, risk perception and information sufficiency were measured by self reported scores on scale items. Contrary to our expectations results show that self efficacy and risk perception did not differ between conditions, however participants did report a significantly higher score on information sufficiency in the expanded condition when compared to the classical condition.

Keywords: Social media, Self efficacy, Risk perception, Information sufficiency, Crisis communication, Facebook, Twitter, App, Risk communication, Technology

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Introduction

At the moment reliable risk information, from sources like the government and the police, is made available to the public only when authorities consider it necessary. In addition, most of the time, it entails a top-down, one-way form of communication (Ter Huurne, 2008) like a warning message on TV or radio. Dutch authorities have already taken big steps towards integrating new technology when they created NL-Alert, a service that informs people nearby a crisis situation by sending an automated message to their cell phone. This message is send through cell broadcast which makes it possible to direct the message to people in a specific area (Gutteling, Kerstholt, Terpstra & As, 2014). Sending a message to a phone however is still a top down and one-way form of communication.

Social Network Sites (SNS) are one of the fastest growing two-way communication mediums that function online. Two of the largest SNS are Facebook and Twitter (Amichai-Hamburger & Vinitzky, 2010; Hughes, Rowe, Batey & Lee, 2012). Facebook, in the first quarter of 2017, had about 1.94 billion monthly active users (Facebook, 2017). Twitter showed an average of 328 million of monthly active users (Statista, n.d.) and it seems that they will keep on growing. In this study we will focus on the following question: will integrating social media features into current risk communication efforts like NL-Alert help people in their self efficacy, risk perception and in gaining information sufficiency compared to an NL-Alert message without social media features**?**

Theoretical background

Research shows that people in stressful situations tend to look for information and support (Pettigrew, Durrance, & Unruh, 2002; Ter Huurne, 2008; Ter Huurne & Gutteling, 2009). Preferably this is information that is easily accessible so that people can deal with

uncertainty or risky situations that might arise (Pettigrew, Durrance, & Unruh, 2002). On network sites like Facebook and Twitter information is easily accessible. Next to this, on social media you have a direct connection to the people you care about which in turn gives you easy access to support (Cheung, Chiu, & Lee, 2011; Steinfield, Ellison, & Lampe, 2008). This suggests that using social media in risk communication indeed could be promising. The Los Angeles Fire department, for example, already uses SNS in their communication efforts. The use of Twitter makes it possible for them to have easily accessible, interactive two-way communication since being part of the conversation is now accessible for anybody. Next to their new availability for conversation they are also able to provide information at the precise moment it happens. Messages the fire department sends out vary from responses to questions on Twitter, to updating on the status of a fire in real-time (i.e.: @LAFD: @Leafstalk: @ChristineNia @DeighvydQahztio Thank you for reporting the grass fire alongside the freeway). In agreement with this, Merchant, Elmer and Lurie (2011) found that in a large scale of emergency situations, social media is already used. During the 2009 influenza pandemic Twitter was used to inform people on where the vaccine was available, the 2010 Deepwater Horizon oil spill in the Gulf of Mexico resulted in people tweeting photos of oil covered birds and so giving real time information on the state and scope of the disaster.

It seems that Facebook also recognizes the role they play in disaster situations. Alongside the regular uses of social media Facebook developed a feature especially designed for users that are in a crisis. Based on your location and the amount of messages being posted about a disaster, Facebook introduces you to Safety Check (Facebook, n.d.). Just two examples of incidents where this feature was activated are the terror attack on Westminster in London 2017 and the earthquake in Nepal 2015. People at these disaster sites were, through Facebook Safety Check, able to mark themselves as being 'safe' which was afterwards posted

to the newsfeed of all of their friends. Furthermore, this Safety Check feature gives you the possibility to give or look for help by providing a map with the location of help posts.

So why do people use SNS in these situations? When we look at the needs these sites fulfill, Shao (2009) mentions a number of variables that seem to be in play such as fulfilling information, entertainment and mood management needs. In concurrence, we see that social media indeed does more than just fulfill social needs. During breaking news events, for example, it already seems to play an important role in sharing information. Non-professionals are often already on the ground and can share eye witness reports, photo's or video's of the event (Diakopolos, De Choudhury & Naaman, 2012). Latonero and Shklovski (2010) state that sites like Twitter give individuals the ability to broadcast and exchange small amounts of information with large audiences, regardless of distance, and all this in a timely manner. These options seem obviously useful during times of emergency and crisis, as information changes unexpectedly and needs to be cast around to the public rapidly. Social Network Sites thus indeed seem a promising means for communication efforts but how exactly could they have an added value to risk communications? Which variables that influence ones' reaction in times of crisis could SNS effect?

Not knowing what is going on and not having control over a situation is a cause of stress (Brysbaert, 2006). In a crisis where people have no control they will, as mentioned earlier, search for information and support (Pettigrew, Durrance, & Unruh, 2002; Ter Huurne, 2008; Ter Huurne & Gutteling, 2009). People seek for this information to reduce uncertainty (Ter Huurne, 2008). Modern research in this field focusses on a more bottom up approach where users' needs are considered. In this research the concept of information sufficiency is introduced as the gap between the information someone thinks he or she has and the

information one thinks he or she needs to adequately deal with the situation (Ter Huurne, 2008; Griffin, Neuwirth, Dunwoody, Giese, 2004). Since finding sufficient information in a crisis is time sensitive, the easily accessible, real time information that social media provides can be especially of help.

When one believes to have sufficient information to deal with a situation this logically strengthens your feeling of control. Having more knowledge about what is going on thus influences the belief that one can actually deal with the situation. Bandura (1997) explained that this belief to deal with a situation yourself is called self efficacy. Efficacy can be seen as communal or individually activated processes that seek to achieve an intended effect (Sampson, Raudenbush & Earls, 1997). This efficacy can, but does not have to, concern peoples own capabilities. If efficacy touches on one's own skills it can be defined as self-efficacy: the 'belief in one's capability to organize and execute the action required' and thus to start the process or act yourself. This leads us to believe that for people to decrease their stress levels and for them to take control of an alarming situation it is important that they find sufficient information in a timely manner. We expect that social media can provide in this timely information and that with the addition of social media features to crisis communication people will strengthen their self efficacy.

On the other hand, next to having sufficient information, self efficacy also seems to be correlated to the perception people have of a risk. How you perceive a risk is dependent on numerous variables which can be divided in emotional and rational determinants (Slovic & Peters, 2006; Slovic, Finucane, Peters & MacGregor, 2004). You have instinctive and intuitive reactions to risk (feelings) and a more logical, analytical assessment (rational) which together are responsible for your risk perception. According to the extended parallel process model (EPPM), if people perceive the risk as serious the situation can go two ways and which

way it goes depends on their efficacy. People can choose to control their fear for the risk or they choose to control the threat. Controlling your fear leads to avoiding the problem ("this is not a problem for me"). When people have a high self efficacy they choose to control the threat and perform the required actions to make sure they are safe (Witte & Allen, 2000). So a person feeling well and performing the desired self protecting behavior all seems to derive from the amount of information that is available, their self efficacy and their risk perception. Since we expect the addition of social media features to influence self efficacy, it is interesting to test how this correlated concept of risk perception is influenced when SNS are more integrated in risk communication efforts.

In this study we explore this integration of social media features (a newsfeed and marking oneself as safe) in NL-Alert by creating a new format and measuring the self efficacy, risk perception and information sufficiency. This leads to the following question: will the scores on self efficacy, risk perception and information sufficiency differ in a condition where social media features are integrated from a condition that provides no additional social media features?

Method

Participants and design

In total there were 76 participants in the study. Due to an omission by the researcher the questions concerning age, gender and education were added later in the data collecting phase resulting in a smaller subsample of those specific variables. The subsample on gender, age and education consisted of 29 men and 37 women (M_{age} = 28,66, SD = 10.08) and scored relatively high on education (Secondary education 23%, Secondary vocational education 6,8%, Higher professional education 25,7%, Academic education 35,1%). Two participants were excluded from the 76 participants, one acknowledged that the questionnaire was not understood, the other participant filled in the same answer everywhere and could thus be

discarded because of suspected response bias. The study was designed as an online survey

with an embedded experiment that consisted of 2 conditions, condition one, a control

condition (showing the NL-Alert as it currently is) and condition two, an expanded condition.

(showing NL-Alert with the added functions of marking yourself as save and the newsfeed

function). The survey was distributed through various social media sites and participation was

voluntary. All participants were randomly assigned to one of the two conditions (an

independent samples T-Test on age ($t(66) = 0.51$, $p = .61$) showed no significant difference, a

chi-square test on education χ^2 (3, $N=67$) = 1.699, $p = 0.637$ and on gender χ^2 (1, $N=66$) =

3.021, $p = 0.08$ also showed no significant difference concluding successful randomization).

Materials

      Manipulation. In both conditions participants were presented with a video and an

image of a phone with an NL-Alert message popping up resembling a message that is actually

used by the government. All visual materials were created by the author. The video showed

the actions possible, in order to create a greater understanding of how NL-alert would work in

reality. In condition one (control condition) the NL-Alert message was based on the format of

NL-Alert as is (see figure 1 and https://youtu.be/yDF7JLksChs).

Figure 1. Classic NL-Alert format. The message states: Emergency NL-Alert (time 9.41, date 01-05-2017), toxic chemicals at a fire nearby. Close windows and doors, stay inside and tune in on an alarm transmitter. Participants see the image and can close it.

Condition two (expanded condition) provided the same pop up message but this time with the new functions of marking yourself as safe and a newsfeed option (see figure 2 and https://youtu.be/I_gxz3c55g0).

Figure 2. Expanded NL-Alert format. The message is the same as in the classical condition. Added here are the option to call for help, to mark yourself as safe to five 'in case of emergency' numbers and to read a newsfeed constructed from reliable sources.

Since the functions in the expanded condition were unknown to participants they were further explained in the survey. The initial NL-alert message and the disaster presented were the same for both conditions (see appendix A).

Measures. The survey consisted of 25 items. To check if information needs were comparable between groups, participants were first asked three questions about their intended information seeking behavior (i.e.: When there is a chemical fire nearby, I try and find as much information as possible). The questions asked were based on the questionnaire proposed in Ter Huurne (2008) and together formed a reliable scale (Cronbach's α = .70). Hereafter the stimuli were shown. Then the measure of perceived usefulness was administered among participants (i.e.: NL-Alert is useful when I want to lower the risks that are threatening my

safety) this to make sure that the additions to NL-Alert would not result in a lower usability.

The five questions were based on Kee-Young Kwahk and Jae-Nam Lee (2008) the questions

together formed a reliable scale (Cronbach's α = .77). Third, self-efficacy (i.e.: With this

information I can protect myself against the possible risks of a chemical fire) and risk

perception (i.e.: When there is a chemical fire nearby I am highly susceptible to risks). Both

scales were measured with three questions. The questions measuring self efficacy were based

on Gutteling, Kerstholt, Terpstra and As (2014) and together formed a reliable scale

(Cronbach's α = .73), the questions measuring risk perception were based on Gutteling,

Kerstholt, Terpstra, and As (2014). In their research this scale was tested in multiple samples

resulting in Cronbach's alphas of α = 0.65, 0.67 and 0.56 respectively. In the current study the

scale scored moderate (Cronbach's α = .54). Lastly information sufficiency was measured

with three questions (i.e.: After getting the NL-Alert message I know a lot about the subject

chemical fire) which were based on Ter Huurne (2008) and formed a reliable construct with

an Cronbach's α = .75. There were some alterations made to the non specific information in

the existing questions to achieve relevance to this specific scenario (i.e.: 'I should know

everything about changes or accidents regarding this topic in my surroundings' was changed

into 'I should know everything about changes or accidents regarding chemical fires in my

surroundings'). All aforementioned items were asked on an eight-point slider scale (0= do not

agree, 7= agree). Next to the standardized questions about information sufficiency there were

two questions added that asked the participant about their additional information needs. On an

eight-point scale people were asked whether or not they felt the need to look for additional

information. Next to this they had the option to, in an open text field, explain which

information they would seek for and where. Scale items were compared between conditions

with the help of an independent samples T-Test. The data that resulted from the open question

was labeled, categorized and then reduced to central themes (i.e.: severity). The complete

questionnaire can be found in appendix A.

Procedure. The survey took place online. Participants were able to open and complete the survey in their own time and on a desktop computer as well as a mobile phone or tablet. In both conditions participants were welcomed and asked to digitally accept the informed consent form. After accepting this they were introduced to the concept NL-Alert so gaps in knowledge between participants would be resolved. Participants were then presented a hypothetic scenario in which the respondent was instructed to envision being in a situation where there is a chemical fire nearby. First one of the two control variables (intended information seeking behavior) was measured. With this control variable we wanted to test for individual differences in behavior. After this control variable was measured a video and an image of a phone with the NL-Alert message was shown. Second perceived usefulness was measured, also a control variable. Then the main variables were measured (self efficacy, risk perception, information sufficiency, need for information). At the end of the survey participants where thanked and debriefed.

Results

Control variables

Intended information seeking behavior. The information seeking behavior of participants was compared between conditions. This construct was asked beforehand to make sure the participants did not differ significantly on their need for information as this could skew the results. Statistically there was no significant difference between the participants of control condition ($M = 4.53$, $SD = 1.36$) and expanded condition ($M = 4.15$, $SD = 1.59$; $t(72) = 1.09$, $p = .277$). Participants did not differ in their indented information seeking behavior between conditions before being exposed to the video clips in both conditions. All means and outcomes of t-tests of all dependent variables are summarized in table 2.

Perceived usefulness. In both conditions perceived usefulness was measured to make sure that the alterations did not affect the usability of NL-Alert as this could influence the results. Both conditions scored above average on an eight-point scale. The control condition showed a perceived usefulness that was slightly lower ($M = 4.63$, $SD = 1.15$) compared to the expanded condition ($M = 4.99$, $SD = 1.17$). This difference was not statistically significant however, $t(72) = -1.30$, $p = .199$) meaning that the additions to NL-Alert did not result in different perception of usefulness between conditions.

Correlations. In this study participants scored themselves on self efficacy, risk perception, information sufficiency and an added question on the need for additional information. To check if constructs correlated a bivariate Pearson correlation analysis was done. Self efficacy showed a medium correlation with information sufficiency $r(72) = 0.400$, $p < .01$, no significant correlation with risk perception $r(72) = 0.035$, $p = .765$. This means that when people score themselves higher on self efficacy they also score themselves higher on information sufficiency. No significant correlation was found between self efficacy and the added question on need for information $r(72) = 0.041$, $p = .726$. Risk perception did not correlate significantly with any of the other constructs (see table 1). Information sufficiency showed, next to the correlation with self efficacy, a medium negative correlation with the added question on need for information $r(72) = -.331$, $p < .01$. This means that when people scored themselves higher on information sufficiency they score themselves lower on need for additional information (for a summary of the correlations see Table 1).

Table 1

The Pearson correlation of the variables self efficacy, risk perception, information sufficiency, need for information and control variables.

Variables	1	2	3	4	5	6
1. Self Efficacy	-					
2. Risk Perception	0.04	-				
3. Information Sufficiency	0.40**	0.01	-			
4. Need for information	0.04	0.13	-0.33**	-		
Control variables						
5. Intended Information Seeking Behavior	0.21	0.43**	0.06	0.37**	-	
6. Perceived Usability	0.78**	0.15	0.47**	0.02	0.29*	-

*. Correlation is significant at the 0.05 level (2- tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Scale variables

Self efficacy. The measure of self efficacy scored slightly lower in the control condition ($M = 4.58$, $SD = 1.30$) compared to the expanded condition ($M = 4.96$, $SD = 1.43$) but the difference was not statistically significant ($t(72) = -1.18$, $p = .244$). Participants thus did not report feeling more efficacious because of the alterations in NL-Alert.

Risk perception. The control condition showed a risk perception that was slightly lower ($M = 3.61$, $SD = 1.36$) compared to in the expanded condition ($M = 3.70$, $SD = 0.98$). The two conditions did not differ significantly $t(72) = -.33$, $p = .742$). This means that the expanded NL-Alert did not result in a difference in risk perception.

Information sufficiency. The classical format of NL-Alert as shown in the control condition scored significantly lower ($M = 1.78$, $SD = 1.35$) then the expanded version of NL-

Alert (M = 3.08, SD =1.25; $t(72)$ = -4.196, p = .000; d = .995). The data suggest that the

additions to NL-Alert had a large effect on the reported information sufficiency, it is

noticeable however that both means are still below average on an eight-point scale.

     Need for information. The answer on the question of whether or not the participant

would look for additional information also differed significantly between conditions. The

control condition (M = 6.05, SD = 1.41) scored higher than the expanded condition (M = 5.07,

SD =1.71; $t(72)$ = 2.70, p = .009; d = 0.63). In the expanded condition participants thus

reported to agree in a lesser amount with the statement "after receiving this NL-Alert message

I would feel the need to look for additional information" this was a middle large effect. Both

means however are above average on the eight-point scale given.

Table 2

Participants scores on self efficacy, risk perception, information sufficiency, need for information and control variables.

	Control condition		Expanded condition		Difference between conditions (T-Test)	
Main measures	*M*	*SD*	*M*	*SD*	*t*	*p*
Self Efficacy	4.58	1.30	4.96	1.43	-1.18	.244
Risk Perception	3.61	1.36	3.70	0.98	-.33	.742
Information Sufficiency	1.78	1.35	3.08	1.25	-4.20	.000[*]
Need for information	6.05	1.41	5.07	1.71	2.70	.009[**]
Control measures						
Intended information seeking behavior	4.53	1.36	4.15	1.59	1.09	.277
Perceived usefulness	4.63	1.15	4.99	1.17	-1.30	.199

Means derived from an eight-point scale 0= do not agree, 7= agree.

[*]. Significant at the p<0.05 level. Large effect Cohen's *d* = 0.995

[**]. Significant at the p<0.05 level. Middle large effect Cohen's *d* = 0.63

Additional measures

Open question. After labeling, categorizing and grouping the answers given on the open question (with respect to which information participants would seek for and where) they were interpreted. Most participants in both conditions stated, when talking about information sources, that they would look for information on the internet. Few people reported other sources like the TV, Radio or Teletext. When addressing the kind of additional information people would look for there seemed to be some difference between conditions. In the control condition more people reported a need for specifications about the disaster ("I want to know what exactly went wrong and which chemicals are in play") and a desire for information about the severity ("I would look up how bad it really is"). This suggests a slight difference in the type of information participants still require after getting the NL-Alert message. In the control condition, people also asked for more factual information about the disaster itself. Participants mentioned the need to know "what is a chemical fire?" and "which chemical materials are in play?". Answers from participants in the expanded condition seemed to include more need for concrete information about appropriate actions and future prevention. Some examples of the information participants requested are "do I need to warn kids playing outside?" or "if I'm in an unknown area, where can I go for shelter?".

General discussion

Since the introduction of the internet people have been choosing SNS for their communication efforts. These platforms give people the option to, without any barriers, exercise control over what information to share. The ease of use, real time information and feeling of control that comes with the use of SNS seems promising in times of crisis. In this study we aimed to clarify whether integrating social media features into current risk communication efforts like NL-Alert could help people in their self efficacy, risk perception

and in gaining information sufficiency compared to an NL-Alert message without social media features. To test these effects, we randomly exposed half of participants to an expanded NL-Alert message which presented the SNS features of marking oneself as safe and a newsfeed. With this design we indented to determine if the addition of SNS features would influence the aforementioned variables in a positive manner.

We looked at the scores on self efficacy, risk perception and information sufficiency. The results showed that the addition of social media features did not cause any differences in reported self efficacy and risk perception. There was however a significant difference in reports on information sufficiency. People thus do not seem to experience that the added functions would help them in their self efficacy or that these additions influence their risk perception but it does help the fulfillment of their information needs. The effects of the additional features seem to effect specific variables only.

Even though the current study was exploratory, earlier research gives reason to assume that social media features do indeed help people in times of risk. Self efficacy and risk perception are correlated and seem to rely on the feeling of control and on understanding (Slovic, Finucane, Peters & MacGregor, 2004). When people use social media it gives the feeling of control and it provides them with information (Shao, 2009). Thus the addition of SNS features to an app that is aimed at people in a crisis gave the impression of being promising. The problem however appears to be more complex than just adding a feature to current risk communication efforts. The effective characteristics of the features are not yet clear even after this study and this deserves more attention.

Suggestions & limitations

There are some possible explanations of why not all expected results were visible in our study. First, one could argue that our survey was not conducted in a way that could

measure true self efficacy and risk perception. Self-reports are known to not consistently

show correlations with behavior (Pryor, Gibbons, Wicklund, Fazio, & Hood, 1977) and when

sitting behind a computer or a phone in a safe environment, it might be impossible to

determine one's self efficacy as it would be in times of crisis. This could also explain why our

measures of self efficacy and risk perception did not correlate such as in previous research.

Even though the ecological validity can thus be doubted, at this time it is one of the most

accessible indications we have to further develop communication risk efforts and it is

frequently seen as an effective measure (Gutteling, Kerstholt, Terpstra & As, 2014; Ter

Huurne, Gutteling, 2009; Amichai-Hamburger & Vinitzky, 2010).

The second explanation of why there is no significant result on self efficacy and risk

perception could be that our manipulation was not sufficient. NL-Alert itself already gives

information and also in the control condition there is the possibility to turn to SNS just not

through the NL-Alert app. It could be that our expanded condition only gave the illusion of

providing more information but in reality only provided an entryway to an already existing

option. It may be just a shift in features instead of an enhancement and it thus would not result

in a significant difference. The superficial illusion of additional information could have

influenced the reported information sufficiency but possibly would not have been sufficient to

influence the unconscious processes that act upon risk perception and self efficacy.

The fact that information sufficiency did significantly improve in our expanded

condition leads us to believe our addition does provide the users with something that they are

looking for. Adding to this idea is our cautious interpretation of the results from our open

question which suggests that our study might have touched upon outcomes that need further

research. In our expanded condition less people asked for basic and factual information about

the disaster. We could speculate that there might be different levels of information. It may

well be the case that our expansion touched upon a first level of information that focusses on

basic knowledge about what is happening but that it did not suffice in more detailed or visual information level. This could be the reason why people still report that they would look for additional information online.

Future research

For future research we suggest a novel approach to this topic. Our main recommendation would be that different and more realistic scenarios should be tried out. To discard the doubt about ecological validity we propose to create a scenario that is more realistic with the help of, for example, Virtual Reality. In Virtual Reality participants could experience sounds and visual stimuli comparable with those experienced in a real life crisis. The addition of these extra stimuli could trigger different processes in the brain and perhaps tap into the sympathetic nervous system (responsible for the fight-or-flight response) which our manipulation probably never did. Although VR-technology is not yet accessible for all researchers it could be promising in bringing us closer to true data.

In addition, for future research to improve our manipulation we suggest splitting the two social media features and creating four conditions in stead of two (a control condition, a condition where the newsfeed is added, a condition where 'marking oneself as safe' is added and a last condition where both features are added). Splitting these features gives the possibility to isolate the cause of our results and thus gives new insights. Next to this it could be useful to think of new perspectives on integrating social media features. Possibly when features are not linked directly to the original SNS this could matter. In another perspective it should also be considered to try out other SNS features or, when proven not effective, whether or not integration of these features is desirable at all. Perhaps a multi channel approach, where NL-Alert and SNS efforts are used alongside one another, could offer a solution.

We suggest that future research looks further into this subject and explores the information needs and behavior of people in times of risk and directly thereafter. This information can be used to create a design that positively influences self efficacy and risk perception. Risk communication efforts that use modern technology deserve more attention in scientific research in general. Technological developments in the past resulted in most people having a mobile phone at hand every minute of every day. If we could find out how to service people best in time of need with the use of this technology, the ability to cope independently and safe your own or other lives could be as easy as grabbing your phone out of your pocket.

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Appendix A

NL-Alert Survey

Algemeen

Q20 Welkom bij deze vragenlijst. Deze vragenlijst is een onderdeel van een onderzoek van de Universiteit Twente. Het doel van dit onderzoek is om meer inzicht te krijgen in het gebruik van, en de mening over NL-Alert. Om dit doel te bereiken willen wij u graag wat vragen stellen in de hierop volgende vragenlijst. Uw antwoorden op deze vragen zullen geheel anoniem en vertrouwelijk worden behandeld. Deelname is geheel vrijwillig en u kunt op elk gewenst moment stoppen zonder verdere nadelige consequenties. Mocht u vooraf nog vragen hebben dan kunt u contact opnemen met d.e.m.vandijl@student.utwente.nl.

○ *Ik verklaar, op een voor mij duidelijke wijze, te zijn ingelicht over de methode en het doel van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord. Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op elk moment zonder opgaaf van redenen mijn deelname aan dit onderzoek te beëindigen. (1)*

Q2 NL-Alert is de mobiele informatie dienst van de Nederlandse overheid. In noodsituaties wordt u door middel van een bericht op de hoogte gesteld van wat er aan de hand is en zo nodig geïnformeerd over handelingen die u het beste kunt ondernemen om uw veiligheid te beschermen. Een van de situaties waarin NL-Alert typisch wordt ingezet is de situatie van een chemische brand. Stelt u zich gedurende de vragenlijst voor dat u het getoonde NL-Alert bericht krijgt omdat er in uw omgeving een chemische brand plaatsvindt. In de vragenlijst wordt u gevraagd NL-Alert en de situatie te beoordelen.

Q12 Wanneer er een chemische brand bij mij in de buurt plaatsvindt, dan zoek ik naar zoveel mogelijk informatie hierover.
_____ *0= Oneens 7= Eens (1)*

Q37 Ik zoek naar informatie over wat ik moet doen in het geval van een chemische brand.
_____ *0= Oneens 7= Eens (1)*

Q38 Als er een chemische brand ergens in Nederland is ben ik geneigd om hier informatie over te zoeken.
_____ *0= Oneens 7= Eens (1)*

Controle conditie

Q48 Hieronder ziet u een video waarin een versie van NL-Alert gedemonstreerd wordt. In de rest van de vragenlijst vragen wij u deze versie van NL-Alert te beoordelen. U kunt de video zo vaak bekijken als u wilt of pauzeren waar u het nodig acht. Bij de video is geen geluid.

Q54 video https://youtu.be/yDF7JLksChs

Q58 In de video heeft u het volgende NL-Alert bericht gezien:
Noodmelding NL-Alert 01-05-2017 9:41 Giftige stoffen bij chemische brand in de nabijheid.
Sluit ramen en deuren. Blijf binnen. Stem af op calamiteitenzender.
Hieronder ziet u nog een visuele weergave van wat er in de video getoond is.

Q50

Expanded conditie

Q46 Hieronder ziet u een video waarin een versie van NL-Alert gedemonstreerd wordt. In de
rest van de vragenlijst vragen wij u deze versie van NL-Alert te beoordelen. U kunt de video
zo vaak bekijken als u wilt of pauzeren waar u het nodig acht. Bij de video is geen geluid.

Q53 video https://youtu.be/I_gxz3c55g0

Q52 In de video heeft u het volgende NL-Alert bericht gezien:
Noodmelding NL-Alert 01-05-2017 9:41 Giftige stoffen bij chemische brand in de nabijheid.
Sluit ramen en deuren. Blijf binnen. Stem af op calamiteitenzender.
Bij ontvangst van een NL-Alert melding is er de mogelijkheid om uzelf veilig te melden aan
vooraf, door u gekozen nummers. Deze nummers zijn bijvoorbeeld het nummer van uw
partner, moeder/vader of kind. Ook zullen hulpdiensten informatie over uw situatie
ontvangen. Naast het 'veilig melden' kunt u ook om hulp verzoeken waarna u wordt
doorverbonden met 112. Mocht u veilig zijn en behoefte hebben aan meer informatie zoals
updates, video's en foto's van betrouwbare bronnen dan kunt u de 'newsfeed' bekijken.
Hieronder ziet u nog een visuele weergave van wat er in de video getoond is.

Q47

Algemeen

Q51 Heeft u uit de video en/of afbeeldingen begrepen hoe NL-Alert werkt?
- *Ja (1)*
- *Nee (2)*

Q56 In de onderstaande items vragen wij u NL-Alert te beoordelen op basis van de demonstratie en de afbeeldingen die u net gezien heeft.

Q36 NL-Alert zorgt ervoor dat ik accurate informatie krijg.
_____ *0= Oneens 7= Eens (1)*

Q13 NL-Alert zorgt ervoor dat ik effectief risico's die mijn veiligheid bedreigen kan verminderen.
_____ *0= Oneens 7= Eens (1)*

Q14 Het gebruik van NL-Alert is nuttig wanneer ik risico's die mijn veiligheid bedreigen wil verminderen.
_____ *0= Oneens 7= Eens (1)*

Q15 NL-Alert zorgt ervoor dat ik makkelijker toegang krijg tot relevante informatie.
_____ *0= Oneens 7= Eens (1)*

Q16 NL-Alert zorgt ervoor dat ik makkelijk toegang heb tot informatie van een hoge kwaliteit.
_____ *0= Oneens 7= Eens (1)*

Q28 Met deze informatie kan ik mezelf beschermen tegen de mogelijke consequenties van een chemische brand.
_____ *0= Oneens 7= Eens (1)*

Q30 Met deze informatie kan ik op een goede manier reageren als er een dergelijk ongeluk gebeurt in de omgeving.
_____ *0= Oneens 7= Eens (1)*

Q31 Ik begrijp de door NL-Alert aangeleverde informatie over de risico's.
_____ *0= Oneens 7= Eens (1)*

Q24 Na het lezen van het NL-Alert bericht weet ik veel over het onderwerp 'chemische brand'.
_____ *0= Oneens 7= Eens (1)*

Q39 Ik weet nu aan welke chemische risico's ik ben blootgesteld.
_____ *0= Oneens 7= Eens (1)*

Q40 Wanneer het gaat over het inschatten van de risico's die komen kijken bij een chemische brand, schiet de informatie tekort.
_____ *0= Oneens 7= Eens (1)*

Q41 Ik heb veel informatie nodig om de risico's waaraan ik ben blootgesteld in te schatten.
_____ *0= Oneens 7= Eens (1)*

Q42 Ik zou alles moeten weten over veranderingen of ongelukken die in de buurt plaatsvinden wat betreft dit onderwerp.
_____ *0= Oneens 7= Eens (1)*

Q44 Zou u na het ontvangen van dit NL-Alert bericht nog op zoek gaan naar aanvullende informatie?
_____ *0= Oneens 7= Eens (1)*

Q45 Als u nog behoefte zou hebben aan aanvullende informatie wat voor informatie zou dit zijn en waar zou u deze informatie zoeken?

Q57 Deze laatste vragen gaan over hoe u aankijkt tegen het risico op een chemische brand.

Q17 Ik denk dat de kans op een chemische
brand waarbij giftige stoffen in mijn omgeving vrijkomen groot is.
_____ *0= Oneens 7= Eens (1)*

Q18 Wanneer er bij een chemische brand giftige stoffen vrijkomen loop ik veel risico.
_____ *0= Oneens 7= Eens (1)*

Q19 Ik denk dat giftige stoffen door een chemische brand de veiligheid/gezondheid van omwonenden ernstig aantast.
_____ *0= Oneens 7= Eens (1)*

Q59 Wat is uw leeftijd?

Q61 Wat is uw geslacht?
○ *Man (1)*
○ *Vrouw (2)*
○ *Geen antwoord (3)*

Q60 Wat is uw hoogst afgeronde opleiding?
○ *Middelbaar onderwijs (1)*
○ *MBO (2)*
○ *HBO (3)*
○ *WO (4)*
○ *Anders (5)*

Q43 Dit is het einde van het onderzoek, bedankt voor uw deelname! Het doel van dit onderzoek is om vast te stellen welk effect het toevoegen van functionaliteiten aan NL-Alert heeft op onder andere de zelf redzaamheid en risicoperceptie van mensen. Mocht u nog opmerkingen of vragen hebben over de zojuist ingevulde vragenlijst, dan kunt u mailen naar d.e.m.vandijl@student.utwente.nl Klik op volgende om uw antwoorden in te zenden.

Raw data can be obtained from the researcher who can be reached at

d.e.m.vandijl@student.utwente.nl.