Manipulating arguments, credibility of the source and Involvement- what factors influence Risk Perception?

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25 August 2008, Enschede

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Abstract

This study tried to investigate the influence of source credibility, health threat and personal involvement in risks on the perception of these risks. It uses the elaboration likelihood model (ELM) to study the effect of chosen route on elaboration of messages. It tested the hypotheses that involvement influences risk perception, and that the source which gives a certain kind of arguments influences the way people respond to it, as well as the amount of trust they will have into the message. Moreover it was assumed that even the kind of arguments, which could estimate the risk of a specific health threat as high or low, influenced risk perception, and elaboration. 8 different groups of respondents were set down in 2 different countries. Unfortunately this study could not find any significant relation between involvement and risk perception. However it found interesting effects concerning trust into the source in relation to arguments given

Introduction

Risk communication is an interesting field, which gains more and more importance in the face of the variety of (health) risk our environment poses. Nowadays we are faced with new risks nearly every day, and so the question under with circumstances people elaborate messages containing risk information needs to be clarified. Risk communication, especially persuasive communication is "a process of attitude change" (Brehm, Kassin, Fein, & Mervielde, 2000, p. 189). Thus the intent of risk communication is to persuade individuals to accept a new attitude for their own welfare.

Petty and Cacioppo (1981, 1986a, 1986b) have developed a model that aims at clarifying the process of processing risk-relevant information, the elaboration likelihood model (ELM). They pose that people take a specific route to process risk relevant information, namely the central or the peripheral Route. They base their model on the assumption that certain features of a message will lead to the adoption of one route.

Cognitive response models generally (Greenwald, 1968; Perloff & Brock, 1980) and the ELM specifically (Petty & Ciacioppo, 1981, 1986a, 1986b; Pretty, Haugtvedt & Smith, 1985) see receivers as actively participating in the persuasion process. Receivers produce cognitions in response to the persuasive stimulus. This perspective of an active participator give way to a variety of new problems, because effective risk communication needs to know about the factors influencing this decision making process. Because this study relies on the ELM a detailed description of this model will be given.

The Elaboration likelihood model

In essence there are two ways individuals can choose by elaborating messages, the central and the peripheral route. It has to be clarified that this process is not a conscious one. Individuals do not "choose" to take one route of elaboration as they would choose what to eat today, but this "decision" is completely unconscious. The word "choose" is used on the following pages to indicate this unconscious process. So the reader of this article should keep in mind that the meaning of the word "to choose" is used in a little different way.

If individuals choose the central route there are likely to elaborate on the given information, critically consider the arguments given and form an own opinion (Petty and Cacioppo, 1986a, 1986b). It occurs only when the receiver possesses both the motivation and the ability to think about the message. Individuals who chose the peripheral route are thought to lack ability or motivation to critically think about the message. They also focus more on cues the message contains, such as number of arguments instead of the quality, the credibility or attractiveness of the source instead of focusing on the content and strength of the argument given.

Thus *motivation* and *cognitive ability to think about the message* given are of great importance. Knowing if the current audience possesses this abilities so seems crucial if a speaker wants to have his message thoughtfully elaborated.

Having an audience high in motivation and cognitive ability enhances the chance that they will follow the central route of persuasion and critically think about the arguments. Especially for risk communication this is an important point, because if the intent of the message is, that the audience actively process information about health risk than central route should lead to, at least, thoughtful elaboration of given arguments. If the content of the message has personal consequences for the audience than it is of even greater importance that people form a reasoned, detailed opinion (Petty, Cacioppo & Schumann, 1983). An audience low in motivation and cognitive ability is likely to chose the peripheral route, and so the features of the message and source such as attractiveness or expertise. But this does not mean that the message can not have a persuading influence (Meijnders, Midden & Wilke, 2001), it just means that the audience will not critically think about the arguments to form an opinion, but decide whether or not to believe in this source. So speakers should know about their audience before they decide which kind of representation to give.

The importance of the different ways of elaborating health relevant messages also lies in the attitudes formed after persuasion (Petty, Haughtvedt & Smith, 1995, cited in Petty, Heesacker & Hughes, 1997). Attitudes formed after taking the central route are more easily to access, which heightens the chance that they result in behavioural change. They are also more strongly related to actual behaviour (Meijnders, Midden & Wilke 2001).

But if the intent of the speaker is, to inform the public about certain health risk, which poses a great, but hidden threat to the public? Two new factors come into play here, first the *features of the health threat* and the grade of *personal involvement*, both have shown to have a great impact on the motivation to actively evaluate given information.

It is a well known finding that the way people perceive a risk directly influences the way they respond to it. Research conducted by Slovic (see for example Slovic, 1987, Slovic, 1993, Slovic 2000), has demonstrated that factors such as whether a risk is perceived to be involuntarily, catastrophic or uncontrollable are more important factors than the risk information alone. So it follows, that risks which are perceived as controllable, voluntarily and non-catastrophic are not taken that seriously by an audience and will more likely lead to low involvement and so to taking the peripheral route of elaboration.

The question, whether or not health related risk information on itself is eliciting some kind of involvement remains here. This is a well known problem in the field of health and risk psychology. If this should be true than this would have consequences for this study, because it uses an involvement manipulation. If the theme on itself would create some kind of involvement on itself it would be interesting to see whether the manipulation still works or if all respondents report being highly involved.

It also seems logical that high involvement in a threat contributes to choosing the central route of persuasion.

H1: The effect of the health threat on risk perception is influenced by
personal involvement of the receiver

It is plausible that if involvement is high, en thus consequently the central route is chosen and the information is thoughtfully elaborated, the quality of arguments becomes more important (Petty & Cacioppo, 1984). What is meant with arguments here has to be clarified. Petty and Cacioppo themselves define arguments as "bits of information contained in a communication that are relevant to a person's subjective determination of the true merits of an advocated position" (Petty & Cacioppo, 1981, p. 11). These are thought to be a part of a message that elicits a cognitive reaction, as for example thinking about an issue.

So an argument could simply be a statement in a whole sentence, for example that red roses are red. But it would also remain an argument when a source is added to it, as for example, the most famous rose-expert of the world claims that red roses are red. Of course adding a source changes the strength of an argument. Here an argument indicates the statements made in the text, while the source is believed to mediate its quality and strength.

This shows that the *arguments* given in a message are of great importance too. If the threat poses a great risk to the audience and if they are more personally involved they are likely to be more motivated to think about given arguments, to choose the central route. By doing this and attending more to arguments, the strength of these arguments become more and more important and will strongly determine the success of the message (Brehm et al., 2000). As Festinger points out, people seek for consistency in their cognitive system (Festinger, 1957). Moreover, thoughts based on positive cognitions are supposed to be more often accessed and that negative material is not so often consulted. Sometimes even peripheral factors, like the attractiveness of the source create positive emotions. People connect these positive feelings directly to the message, so risk perception should be more favourably if positive emotions are elicited. (Petty et al., 1993).

What does this mean for risk perception? Do arguments containing threatening information, thus eliciting negative feelings, heighten risk perception? This will be one focus of this study. Because this is a main part of the manipulation given in the text, we will not pose an extra hypothesis for this assumption but rather control for this by doing manipulation checks.

Besides the audience and arguments threat relevant information always comes from a *source*. Especially health relevant information is often given by the government or by medical instances.

This poses the question to what extent trust in or credibility of the source influences whether or not people attend to and accept messages.

Work from Slovic points out that people generally do not trust the government, and this effect gets even more articulated if risk information is about risks that are viewed as involuntarily, potentially catastrophic, uncontrolled. As mentioned above, under these conditions the credibility of the source becomes important (Slovic, 1987, 2000). Also lay people deeply distrust the scientifically world, and view social and scientifically world as separate (Woolgar, 1996). If a distrusted sources provides information that appears to promote its own interest, this will influence peoples attitudes in the opposite direction (not gaining trust, but losing it), especially if attitude already was "negative" in first place. This means that risk communication by a deeply distrusted source can result in even more resistance against the topic. This is even made clearer by Frewer (1999), as he made a distinction between outcome uncertainty (what happens, with what probability?) and assessment uncertainty (to what extent will that change through given information?). So information that is perceived to have no effect on initial risk perception will generally be rejected, but this effect is more strongly if the source that gives the information is a distrusted one (Frewer, 1999). Because this relates mainly to serious health risk, as nuclear or chemical plants it is interesting to find out whether this is also true for "minor" health risks. These are not that catastrophic as for example the explosion of a nuclear plant, so the question remains whether people in this study hold a more negative and sceptic attitude against the government. This highlights the complex interplay between source factors, arguments and personal involvement on the chosen route of elaboration and the outcome (risk perception/ attitude change).
So we pose that trust is an important predictor for risk perception.

H2: Motivation to elaborate on arguments given by the government is lower than the motivation to elaborate on arguments from health professionals

H3: Trust into arguments given by the government is lower than trust into arguments from the health professionals

H4: Risk perception depends on the trust in the source and the kind of arguments that are given (attenuate or amplification). We expect the highest risk perception if the low trusted source gives attenuation arguments.

If this article should find that arguments given by the government indeed result in rejecting the message then this could give a little more information about the complex way people elaborate on health relevant risk information and so lead to more effective communication.

Methods

Design and Procedure

The design of this study is a 2 (arguments: attenuate vs. amplification) x 2 (source: Government vs. health professionals) x2 (Involvement: high vs. low) factorial design. Participants are randomly assigned to one of the eight groups (see table 1). These groups differ accordingly to the kind of message, source and involvement. For a more detailed description of the manipulation see table 1 below.

Table 1

Overview over groups

	Source: goverment (low trust)	Source: health professionals (high trust)
Message 1 ("attenuate")	Group 1.1 High Involvement Group 1.2 Low Involvement	Group 2.1 High involvement Group 2.2 Low involvement
Message 2 ("amplification")	Group 3.1 High Involvement Group 3.2 Low Involvement	Group 4.1 High Involvement Group 4.2 Low Involvement

Manipulation

The text given to participants informs them about the risk of the Meticilline-resistent Staphylococcus aureus, named MRSA bacterium. This is a bacterium known as hospital-bacterium, because it mostly appears in hospital and medical settings. It has serious consequences such as lung infections which can lead to death of the patient. Information over this is given, framed in a newspaper article. The main part of the text is the same for all groups, except a last part, which contains the manipulation. There is one message which minimizes the risk of getting MRSA, the so called attenuate group. The other message, the amplification group, maximizes the risk the bacterium poses. This difference forms the first manipulation, whether the risk is displayed to be high or low.

The students are told that this bacterium has either been found at the University where they study, thereby creating high involvement, or at a university far away, so students are minimal involved. The University is named at the beginning and end of the text, so that risk and involvement are explicitly mentioned and connected to each other.

The source is mentioned two times too, as the one who presents the risk and as the one who makes a statement about the threat this risk poses to students of the given University. It is expected that this will have a significant effect on the perception of the message, on whether they will or will not trust in the information given in it. This effect interacts with the kind of message (amplification or attenuate) someone gets, so interaction effects will be likely.

Someone who gets attenuation-arguments from the government is supposed to be most sceptical, because he or she would think that the government just plays down the risk to avoid mass panic or actually facing a problem. They could also think that the government just do not want to admit that there could be a problem that can not be solved easily. On the other hand, if the source is the health professionals, then people are more likely to hold a more positive attitude against them and in turn against the message. People are assumed to see the health professionals as someone who cares more about the patients than the government does, so it is supposed that they are more open to accept messages given by them, and that this will translate into higher scores on the test assessing trust.

People who are highly involved are supposed to choose the central way of elaboration; people who are low involved are supposed to choose the peripheral way.

Measures

Independent Variables are of course the manipulated ones, as: Involvement in the issue (high vs. low), the source which gives the message (government vs. doctors), the arguments (attenuate vs. amplification).

Dependent Variables are: Risk perception, trust into the source, trust into the arguments,

Route of elaboration (indicated by: score on the knowledge test and number of words written down at the free-response task, for a detailed description see below)

Route of elaboration was first measured by a free-response task, where participants were asked to write down as many words that came up to the theme MRSA. A high rate of words referring to facts is assumed to point out that participants chose the central route of elaboration and so think about arguments. Secondly, a qualitative analysis of the words mentioned can pose several interesting results. For example as mentioned in the introduction, emotion is more influencing when choosing the peripheral route, and this could also be indicated by respondents writing down mainly words referring to emotion than to facts.

This test does not stand alone, but has to be analyzed with respect to a second test, that asked multiple-answers questions about statements made in the text, as "How many people are infected by the MRSA-Bacterium per year?". The answer to these questions is information mentioned in the text. It is assumed that people who chose the central route of elaboration captured more of the information given, and so they will score high on this test (giving right answers). Opposable, choosing the peripheral route of elaboration the score will be low, indicating that participants do not attend to precise facts given. This seems logical, because if someone chooses the central route he will give more attention to numbers and facts, than to emotional arguments. People who chose the peripheral route of elaboration are supposed to score low on this test, because they focused more on attitudes and emotions, and neglect the given facts. They will be motivated to interpret the facts immediately as "dangerous" and not keeping the exact number in mind.

The score on this knowledge test is thus an indicator for the kind of Route of elaboration people have chosen. High scores are expected in the high involvement groups, where central route of perception is supposed to be the first choice, whereas low scores are expected in the low involvement, peripheral group. The list consisted of 5 items.

Risk perception was assessed by making statements about the risk, such as: "I would be scared after an infection with the MRSA virus", or: "The MRSA-virus poses a significant health treat". Participants could indicate their agreement on a 5-point-Lickert scale (strong disagreement, disagreement, neutral, agreement, strong agreement). A high score on this questionnaire indicates a high risk perception; the highest reachable score was 65. One item served as control variable. The list consisted of 13 items and Cronbachs alpha was 0.628

Trust in the source was assessed by a questionnaire that made statements about the source, like "I trust the Source" or "I think the source acts on its own favour". Here again a 5-point-Lickert scale (strong disagreement, disagreement, neutral, agreement, strong agreement) were used to score the answers. High scores indicate high trust into the source; here the highest reachable score was 45. Two items in this scale specifically measure trust here, which serve as control measures (see manipulation check). The list consisted of 9 items and Cronbachs alpha was 0.849

Trust in the message was assessed by a last questionnaire were participants again could indicate their agreement with statements on a 5-point-Lickert scale (strong disagreement, disagreement, neutral, agreement, strong agreement). The highest reachable score, indicating high trust into the message was 25. Examples of items are: "I think that the information given is true", "I trust the given information". If the score is high then participants trust in the information given in the message. Again 1 item specifically measure trust into to measure and serve as control measure (see manipulation check). The list consisted of 5 items, and Cronbachs alpha was 0.569.

Pre-test

Because of the great number of groups and the fact that it is done in 2 different countries and thus on two different languages a pre-test with 7 German students from the University Twente speaking Dutch for approximately 3 years was conducted. By doing this it is secured that the formulation of the text and the questionnaires would be equal on both languages to avoid biasing effects of different formulations. Participants are asked to look for formulations which differed in their meaning and to give feedback to the article and questionnaire.

Participants

All participants were supposed to be students of either a Dutch or a German University. Unfortunately this did not resulted in a high number of respondents, so people were invited via internet forums for students. This led to the problem that even former students participated in the study. Respondents who were not studying any longer are falling into the category non-students. It has to be said that these former students are analyzed together with the students, groups are not split up.

The study was conducted in both countries, so the possibility of comparing these both countries was achieved.

In total 177 respondents participated in the survey, 65 of them had to be excluded from data analysis because of missing values, and not answered questions. In these cases people answered the first few questions but stopped soon, so that relevant data could not be gained.

112 cases remained for further analysis. Still some missing values retained, but these are limited to a few questions, so they were not excluded from the analysis.

Of these 112 respondents 61 (54.5%) were male and 51 (45.4%) were female. Mean age was 23 years. Response rate was rather low, participants were individually asked per email or via a post in a student's forum to fill out the questionnaire online.

In the Dutch survey 58 respondents participated, mean age was 23.94 years. 79 % of Dutch respondents were students from the University of Twente, 21 % were non-students.

In the German survey 54 respondents participated, mean age was 24.14 years. German respondents were mainly students of the University of Bielefeld, but also spread around Universities in whole Germany and accounted for 74% of variance, 26 % did not fall into this category (non-students). For a distribution of groups see table 2.

Table 2

Distribution of Participants

	Source: government	Source Health professionals	Total
Arguments 1 attenuation	Group 1.1 Ngm 5 Ngf 10 Ndm 1 Ndf 5 Total: 21 Group 1.2 Ngm 6 Ngf 4 Ndm 5 Ndf 4 Total: 19	Group 2.1 Ngm 3 Ngf 2 Ndm 3 Ndf 2 Total: 10 Group 2.1 Ngm 2 Ngf 1 Ndm 3 Ndf 2 Total: 8	58
Arguments 2 amplification	Group 3.1 Ngm 2 Ngf 4 Ndm 9 Ndf 3 Total: 18 Group 3.2 Ngm 1 Ngf 0 Ndm 5 Ndf 2 Total: 8	Group 4.1 Ngm 2 Ngf 3 Ndm 6 Ndf 1 Total: 12 Group 4.2 Ngm 2 Ngf 7 Ndm 6 Ndf 1 Total: 16	54
Total	66	46	112

Ngm = Number of participants German male, Ngf = Number of participants German female, Ndm = Number of participants Dutch male, Ndf = Number of participants Dutch female

Procedure

At the beginning of the experiment respondents are asked to give demographic information, such as the University they are student of, their age and nationality (see Appendix). Then they read an artificial newspaper article which informs them about a certain health risk. This text also contains the manipulation (high vs. low involvement; great risk vs. no risk; Source). After reading this they have to fill out a free-association test about what they remember about the information given, then a test that asks questions about the given information, one that estimates the level of risk perception, one that estimates trust in the source and one assessing trust in de message. After doing so they are told that the newspaper article was completely made up and given the possibility to leave their email address if they would be interested in the results.

Results

Table 3

Means (SD) of Test scores

Variable	Condition	German:	Dutch:
Knowledge Test (scores)	Low involvement	3.2 (1.4)	3.6 (0.7)
	High involvement	2.8 (1.0)	3.7 (0.8)
Risk perception	Low involvement	3.14 (0.4)	2.96 (0.4)
	High involvement	3.24 (0.4)	2.90 (0.3)
Trust into Arguments	Low involvement	2.97 (0.5)	3.36 (0.7)
	High involvement	3.22 (0.4)	3.17 (0.5)
Trust into Source	Low involvement	3.09 (0.4)	3.34 (0.5)
	High involvement	2.98 (0.7)	3.36 (0.6)

Manipulation Check

Three variables were manipulated, personal involvement, the arguments participants received (Amplification vs. attenuate the risk) and the source which gave the arguments. Evidence for the effectiveness of the manipulations comes from MANOVA analysis. This showed that means in all groups indeed differed concerning risk perception F (1, 89) = 4308, $p < 0.00$.

Involvement was expressed by one item in each survey (German: item 6, Dutch: item 9). Analysis of these items revealed that in the German group high and low involvement groups did not differ in answering that item, F (1, 53) = 0.310, $p > 0.5$. In the Dutch sample the manipulation did seem to work, F (1, 55) = 4.794, $p \leq 0.03$.

Consequently when analysing effects of high and low involvement we will focus on the Dutch sample and not on the German one.

Whether or not the samples differed concerning trust into the message depending on the kind of arguments they received was indicated by one item in each survey (German : item 6, Dutch: item 7). No such effect was found, neither for the Dutch sample, F (1, 53) = 0.152, $p > 0.6$, nor for the German one, F (1, 48) = $p > 0.8$.

The same test was executed for the question whether the source which gave the arguments had any effect of the trust participants had into the source. This was measured by two control items in each sample (both: items 1 and 7). Just one item in the German survey revealed significant effects, F (1, 49) = 5.563, $p < 0.03$.

Table 3 presents means and standard deviation values of these tests.

A qualitative analysis was exerted to analyse the free-response task, where subjects were asked to write down all words which came to their mind in relation to the MRSA virus. Here the number of words was counted as well as if they referred to facts or to more emotional thoughts. Both groups did not differ in the number of words counted F (1, 114) = 0.525, $p > 0.4$. Analyzing only the Dutch sample did not change this result significantly F (1, 63) = 0.514, $p > 0.4$.

So it can not be concluded that people in high involvement groups wrote down more words than did people in the low involvement condition. Words in both groups mainly referred to facts. Thus we can not say that these groups differed concerning thinking about the message and thus we can not make statements about the route of elaboration chosen,

Analysis

Because Dutch and German participants showed variations on nearly all measured variables we will analyse the samples apart.

To test for main and interaction effects a MANOVA with risk perception, trust into the arguments and route of elaboration as dependent variables was executed. Involvement, source and arguments functioned as independent variables.

Analysis revealed that there was no significant main effect for involvement, for arguments or for the source for the Dutch sample. In the German survey there was a main effect for arguments, and a significant three way interaction effect of involvement, arguments and the source. For exact values see table 4.

Table 4

Main and interaction effects for independent variables

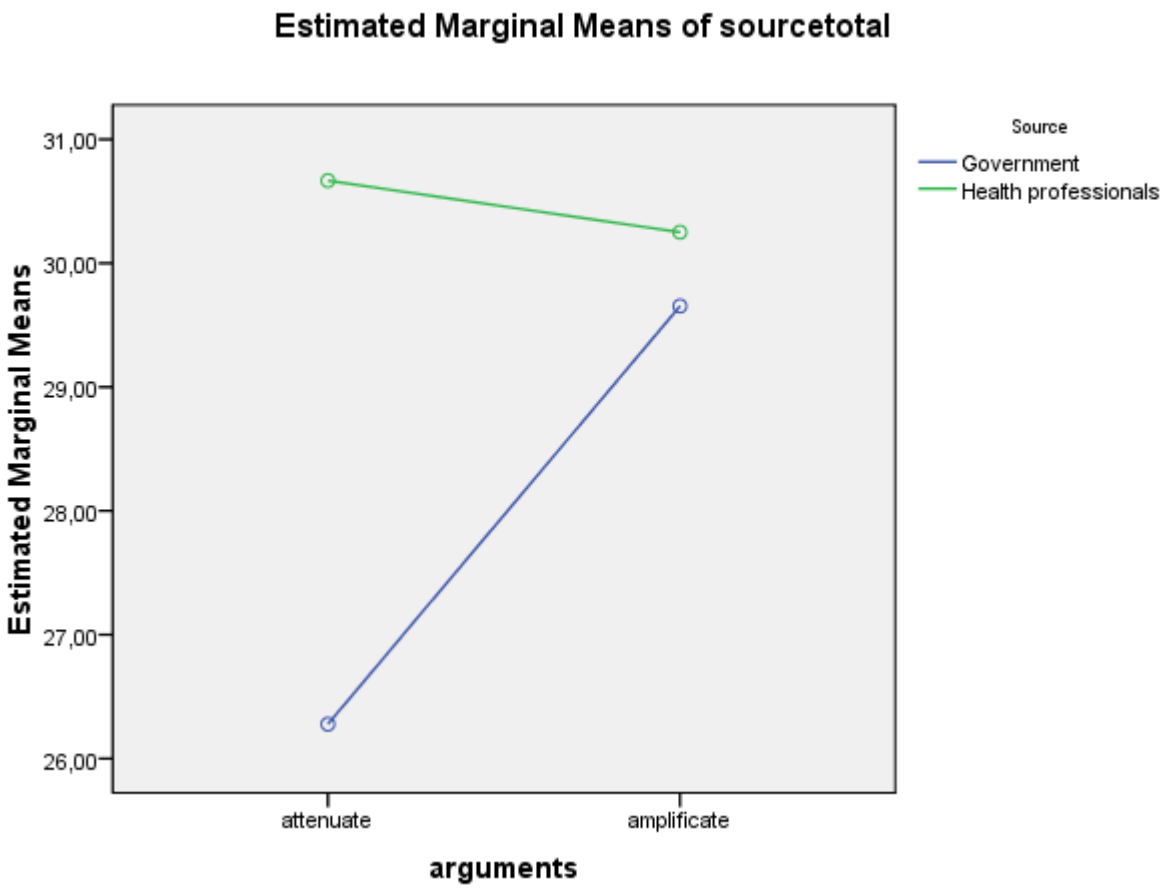
	effect	F-value	dF	p-value		effect	F-value	dF	p-value
Dutch	involvement	0.604	3, 41	0.616	German	involvement	1.451	3, 39	0.243
	arguments	0.808	3, 41	0.497		arguments	4.393	3, 39	0.009
	source	0.975	3, 41	0.788		source	0.207	3, 39	0.891
	Involvement* arguments	2.432	3, 41	0.079		Involvement* arguments	6.365	3, 39	0.001
	Involvement* source	1.829	3, 41	0.157		Involvement* source	0.560	3, 39	0.644
	Arguments * source	0.492	3, 41	0.690		Arguments * source	1.257	3,39	0.302
	Involvement* arguments* source	2.663	3, 41	0.061		Involvement* arguments* source	4.185	3, 39	0.012

Single ANOVA analysis did reveal that there is no evidence for an interaction effect of involvement and arguments on risk perception F (3, 105) = 24.407, $p > 0.5$. So we can disapprove hypotheses one.

Analysis of the so called knowledge test should reveal whether people in the high involvement group answered more questions right than did people in the low involvement group (cutting point 3 good answers). ANOVA analysis revealed that this was not the case F_{german} (1, 51) = 0.218, $p > 0.6$, F_{dutch} (1, 55), $p > 0.9$. Also scores on the knowledge test are not significantly higher in the sample which received the arguments from the government than those who received the message from the health professionals, neither in the German F (1, 51) = 0.791, $p > 0.3$, nor in the Dutch sample F (1, 55) = 0.503, $p > 0.2$. This means that groups did not differ concerning their motivation to elaborate; consequently we can conclude that the second hypothesis is wrong.

The third hypotheses asked the question whether trust into the government is lower than trust into the health professionals. ANOVA revealed that this was not the case, F (1, 49) = 3.855, p (1-0.055)/2= $p > 0.4$ for the German sample, F (1, 55) = 3.124, p (1-0.083)/2 = $p > 0.4$ for the Dutch sample.
Also the interaction effect from arguments given and the source on the perception of risk is not significant, neither in the German F (1, 41) = 0.219, $p > 0.6$, nor in the Dutch sample F (1, 43) = 0.89, $p > 0.7$. This means that hypotheses four has to be disapproved.

A quite interesting effect was found when analyzing trust into the source in relation to arguments and the source which gave the arguments. Single ANOVA analysis revealed a main effect for the source and the arguments, and though the interaction effect did not reach significance, it seems that trust into the government is lower when they give attenuation arguments.



Effect from source and arguments on trust into the source.

Table 5
Main and interaction effects of arguments and source

	df	F-value	p-value
Arguments	1, 104	1.898	0.171
source	1, 104	5.386	0.022
Arguments* source	1, 104	3.118	0.080

This study addressed the question which factors such as message, source and involvement influence risk perception. The leading idea behind this study was that if people knew more about factors that influence how people elaborate on messages, communication could be adapted to these findings to make it more effective. This study could not find significant effects for the influence of involvement on risk perception. However, this could be due to the original issue, which already poses a significant health threat. This kind of theme alone could make people more involved into this issue. Also it has to be kept in mind, that although the survey asked participants to name the university they study on, most people did not gave that information. The involvement manipulation was highly based on this kind of information, because it was crucial to see whether the manipulation worked. For example, someone studying in Twente should perceive him or herself as highly involved, if the MRSA virus appeared at his/her university. But because of this missing information this could not be traced back, so we do not know which people study were. Consequently it could be, that the manipulation could not work, because we do not know who really was highly involved or not. An additional factor here is that the universities named in the text are not that far away, between 150 and 360 kilometres. Maybe this could not be enough to calm down people in the "low involvement" group. In a next study this could be solved by controlling the assignment of participants to groups, and by choosing universities which are more far away. The author suggests choosing only one country (for example the Netherlands) and manipulating involvement by choosing one university in that country and one in another (for example: Africa). Low and high involvement groups can be secured by giving the survey to students of just this one university. So treatment conditions are better controlled and the manipulation should be more effective.

Probably this is also the reason why the involvement manipulation did work in the Dutch sample but not in the German one. Students in the Dutch sample mainly were (former) students of the University of Twente, whereas in the German sample students from a lot of different universities participated.

Response rate was very low, and a high percentage of answered surveys had to be excluded from data analysis because they were not complete. So it could be possible that the actual group of respondents were quite selective, and the survey too long (36 Questions). Some feedback from participants also indicated that they felt that the questions all asked quite the same, and that they missed variation. This could have led to response bias, because it could be that participants just clicked themselves through the questions to reach the end as quickly as possible. The problem here is that questions have to be alike to measure the same construct, but that this is kind of boring for participants, because they need more variation to keep them interested and motivated to answer all questions careful. Follow-up research should think about this problem, and find solutions. The author suggests trying to find more appealing formulations to keep respondents interested.

Also the kind of measurement, via internet, has not proven successful. It is surely a possibility if researchers already have a pool of participants they can send the links to, but it did not prove easy to actually find participants via internet. Especially if instruments are not validated, it is hard to control how respondents actually react to the questionnaires. The author suggests not making an internet research if instruments are used for the first time, or if the researcher is not familiar with conducting surveys.

Maybe another obstacle to this study lies in the original formulation of the questions and hypothesis. Results showed significance when analysing trust into the message and trust into the source, but could not find any significant results concerning risk perception. As said above this could relate to the theme, but also this could be due to the formulation of the text and questionnaires. Follow-up research should carefully consider this point.

But still this study found that under high involvement conditions the arguments and the source become important and determine whether one trusts the source. It seems that the government may not underestimate the risk a certain health threat poses, whereas this is okay for health professionals. This is an interesting point for further research.

Besides all these obstacles, the author still thinks that this is an interesting theme that is worth further exploration. Risk communication is an important field that should not be neglected. Knowing more about the factors that influence the amount of trust and acceptance people put into a message, or a source is crucial for the future of effective risk communication.

Appendix – overview

Appendix A: Survey Germany

Appendix B : Survey Netherlands

Appendix C: Litterature

Appendix A : Survey Germany

Du wirst gleich einen Zeitungsartikel lesen und dazu einige Fragen beantworten. Bitte beantworte die Fragen ehrlich
und spontan, es gibt hier keine "richtigen" oder "falsche" Antworten. Bitte waehle nicht mehr als eine Antwortmoeglichkeit. Darueber hinaus ist es wichtig, dass du alle Fragen beantwortest.

1. Geschlecht
2. Alter
3. Nationalitaet
4. Beruf (Studenten bitte angeben welche Universitaet)

Bielefeld, 12 Februar 2008
Die Bedrohung durch die MRSA Bakterie, das so genannte „Krankenhausbakterium“ ist schon seit geraumer Zeit ein
Begriff für Ärzte und Patienten.
Heute Morgen gab das Gesundheitsministerium eine Pressekonferenz zum Thema MRSA.
Allein im letzten Jahr infizierten sich 12.500 Menschen mit dem hoch ansteckenden Bakterium, das vor allem in
Krankenhäusern vorkommt, und deswegen auch die „Krankenhausbakterie“ genannt wird, ungefähr 610 Menschen
starben an den Folgen.
Bislang ist dieses Bakterium nur in Krankenhäusern nachgewiesen worden, doch Anfang Januar wurde es auch an der
Universität Berlin entdeckt. Dieser Fund wird als sehr gefährliche Entwicklung angesehen, da an einer Universität
täglich tausende verschiedene Menschen zusammen kommen, zum Beispiel in der Bibliothek.
„Die Bedrohung die von dem MRSA Bakterium ausgeht ist eine sehr reale und formt ein Problem für die deutsche
Volksgesundheit.“ So äußerte sich unsere Gesundheitsministerin Schmidt.
„MRSA ist die Abkürzung für Metizillin-resistentes Staphylococcus aureus. Wie der Name nahe legt ist das
grundlegende Problem, dass das MRSA Bakterium sehr schnell resistent wird gegen Antibiotika und deswegen fast
unbehandelbar ist.
Zu den Risikogruppen gehören vor allem Menschen mit einem schwachen Immunsystem, die eine Operation, oder
einen längeren Krankenhausaufenthalt hinter sich haben. Die Folgen einer Ansteckung sind schwere Infektionen und
Lungenentzündungen die bei einem von 20 Infizierten zum Tode

Außerdem kann ein infizierter Patient jeden Menschen anstecken, den er anfasst.
Und wie sieht Ministerin Schmidt die Bedrohung durch das MRSA Bakterium und vor durch allem seine Entdeckung an
der Universität Berlin? „ich denke, dass das Risiko das von dem MRSA Bakterium ausgeht maßlos überschätzt wird."
So Zypris, „Es ist ein sehr seltenes Bakterium und ist nur für Menschen mit einem sehr schwachen Immunsystem
wirklich gefährlich. Nach einer Operation, oder bei bejahrten Menschen. Wo das Risiko für junge, gesunde Studenten
ist, das müssen sie mir wirklich erklären."
Deswegen, so die Gesundheitsministerin, stellt das MRSA Bakterium keine Gefahr dar, für die Studenten in Berlin.

BITTE NICHT ZURUECKSCROLLEN ("prev" nicht benutzen!!!)

1. Nenne bitte spontan alles, was dir zum Thema MRSA einfällt.

1. Wie viele Menschen sterben pro Jahr an einer Infektion mit dem MRSA Bakteriums?

520
700
610
1100

1. In Deutschland werden ungefähr _____ Personen mit dem MRSA Bakterium infiziert

20.000
12.500
2000
15.000

1. Das Risiko an einer MRSA Infektion zu sterben liegt bei _____ %

10
15
5
3

1. Was ist das Größte Problem der Behandelbarkeit einer MRSA Infektion?

Das MRSA Bakterium ist resistent gegen die meisten Antibiotika

Viele Ärzte wissen nicht, wie sie diese Infektion behandeln müssen

Eine MRSA Infektion wird meistens mit einer anderen Krankheit verwechselt

Antibiotika sind sehr teuer und kaum vorrätig

1. Für welche Menschen ist eine MRSA Infektion besonders gefährlich?

Bejahrte Menschen

Kinder und Jugendliche

Menschen, mit einem schwachen Immunsystem

Ärzte und Krankenhauspersonal

1= Ich stimme überhaupt nicht überein
2= Ich stimme nicht überein
3= Neutral, keine Meinung
4= Ich stimme mit der Aussage überein
5= Ich stimme sehr mit der Aussage überein

1. Ich würde es sehr schlimm finden mit dem MRSA-bakterium infiziert zu werden

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich denke dass eine MRSA Infektion ernste Folgen für mich hätte

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich wäre sehr ängstlich im Falle einer Infektion

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde dass diesem Thema zu viel Aufmerksamkeit gewidmet wird

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich fühle mich gut informiert über das Thema MRSA

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde dieses Thema persönlich relevant

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde, dass diesem Thema zu wenig Aufmerksamkeit gewidmet wird

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde es wichtig dass die Bürger über dieses Thema aufgeklärt werden

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde dass das MRSA Bakterium ein wichtiges Thema ist

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde dass das MRSA Bakterium eine große Bedrohung darstellt

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde dass das MRSA Bakterium eine reale Bedrohung darstellt

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Das MRSA Bakterium stellt eine Bedrohung für Patienten da

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Im Falle einer Aufnahme in ein Krankenhaus würde ich mit dem Bakterium infiziert werden

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1= Ich stimme überhaupt nicht überein
2= Ich stimme nicht überein
3= neutral, keine Meinung
4= ich stimme mit der Aussage überein
5= ich stimme sehr mit der Aussage überein

1. Ich habe Vertrauen in das Gesundheitsministerium

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich denke dass die Gesundheit der Menschen für das Gesundheitsministerium wichtig ist

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich denke dass das Gesundheitsministerium alles tut um die Menschen gut über Krankheiten zu informieren

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich denke dass das Gesundheitsministerium vor allem auf seinen eigenen Vorteil bedacht ist

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Das Gesundheitsministerium kommuniziert ehrlich mit den Bürgern

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde das Gesundheitsministerium glaubwürdig

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde den Patientenverbund vertrauenswürdig.

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Das Gesundheitsministerium kümmert sich nicht um den einzelnen Menschen

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich denke dass das Gesundheitsministerium wichtige Information zurückhält

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

Gib auf einer Skala von 1-5 an, wie sehr du mit den folgenden Aussagen übereinstimmst
1= Ich stimme überhaupt nicht überein
2= Ich stimme nicht überein
3= neutral, keine Meinung
4= ich stimme mit der Aussage überein
5= ich stimme sehr mit der Aussage überein

1. Ich fühle mich gut informiert

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich habe Vertrauen in die Richtigkeit der Information

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde diese Information wichtig

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

1. Ich finde die Information deutlich

Ich stimme überhaupt nicht überein

Ich stimme nicht überein

Neutral, keine Meinung

Ich stimme mit der Aussage überein

Ich stimme sehr mit der Aussage überein

⚜ ⚜
1. Ich fühle mich jetzt besser informiert als vorher

Ich stimme überhaupt nicht überein
⚜ ⚜
Ich stimme nicht überein
⚜ ⚜
Neutral, keine Meinung
⚜ ⚜
Ich stimme mit der Aussage überein
⚜ ⚜
Ich stimme sehr mit der Aussage überein
⚜ ⚜
1. Ich habe kein Vertrauen in die Richtigkeit dieser Information

Ich stimme überhaupt nicht überein
⚜ ⚜
Ich stimme nicht überein
⚜ ⚜
Neutral, keine Meinung
⚜ ⚜
Ich stimme mit der Aussage überein
⚜ ⚜
Ich stimme sehr mit der Aussage überein
⚜ ⚜
1. Ich finde die Information deutlich

Ich stimme überhaupt nicht überein
⚜ ⚜
Ich stimme nicht überein
⚜ ⚜
Neutral, keine Meinung
⚜ ⚜
Ich stimme mit der Aussage überein
⚜ ⚜
Ich stimme sehr mit der Aussage überein
⚜ ⚜
Falls du nach Ablauf dieser Untersuchung ueber die Ergebnisse informiert werden moechtest, dann hinterlasse bitte
deine Emailadresse

Vielen Dank für deine Teilnahme. Der Zeitungsartikel den du gelesen hast, ist frei erfunden. Es sind niemals Spuren
von dem MRSA Bakterium an der Universität Bielefeld/Berlin gefunden worden, auch die Pressekonferenz und alle in
dem Artikel gemachten Aussprachen sind frei erfunden.

Universiteit Twente
de ondernemende universiteit

Appendix B : Survey Netherlands

Je gaat nu een krantartikel lezen en moet dan een aantal vragen beantwoorden. Geef a.u.b. eerlijke antwoorden, er
bestaan geen “foute” antwoorden. Geef a.u.b. niet meer dan een antwoord op een vraag. Verder is het van belang,
dat je alle vragen beantwoordt.

1. Geslacht
2. Leeftijd
3. Nationaliteit
4. Beroep

Enschede, 12 februari.
De dreiging door MRSA bacteriën, de zogenoemde ziektenhuisbacterie is al lang bekend bij zowel artsen als ook
patiënten in Nederland. Het NederlandseMinisterie van Volksgezondheid hield vanochtend een persconferentie over
dit onderwerp. In het afgelopen jaar werden er ongeveer 2650 patiënten met de bacterie besmet, 125 van hen zijn
eraan overleden.
Tot voor kort bleef het tot de ziekenhuizen beperkt. Begin dit jaar werd de bacterie ook op de Universiteit Tilburg
vastgesteld. Dit is een gevaarlijke ontwikkeling omdat een Universiteit een ideaal plek voor een bacterie is om zich
ongemerkt te verspreiden. Hier komen dagelijks heel veel mensen samen, bijvoorbeeld in een bibliotheek, tijdens
hoorcolleges of in de pc-zalen.
“De bedreiging door de MRSA bacterie is reëel en het is een van de problemen in de Nederlandse gezondheidszorg”
Zo luidde het statement van Meneer Klink, de Minister van Volksgezondheid, op een persconferentie van het
ministerie. MRSA is de afkorting van Meticilline-resistente Staphylococcus aureus. Zoals de naam suggereert is het
probleem met de MRSA bacterie, dat het immuun is tegen antibiotica wat de bestrijding ervan heel moeilijk maakt.
Heel groot is het risico van deze bacterie voor mensen met een zwak immuunsysteem, bijvoorbeeld na een operatie
of een langere periode in het ziekenhuis. Het gevolg zijn erge infecties, of longontstekingen, die kunnen uitmonden in
een coma. Zelfs leidt de infectie tot de dood bij een van 20 geïnfecteerden. En een besmette patient kan iederen die
hij aanraakt op zijn beurt met de bacterie infecteren.
Ziet meneer Klink, de Minister van Volksgezondheid dan een probleem in de MRSA bacterie, en in het bijzonder de
ontdekking ervan op een publieke plaats, zoals de Universiteit Tilburg? “ Ik denk dat het risico van MRSA enorm
overschat wordt.”

Aldus de minister, “ Het is een niet zo vaak voorkomende bacterie en, men mag niet vergeten, dat het, als het optreedt, pas gevaarlijk wordt als het immuunsysteem niet werkt. Na een operatie bijvoorbeeld, of bij
wat bejaarde mensen. Waar het risico voor gezonde, jonge studenten in Tilburg dan ligt- ik weet het niet. “

1. Noem a.u.b. het eerste wat je te binnen schiet met betrekking tot het thema MRSA in je hoofd komen

1. Hoeveel mensen overlijden ongeveer per jaar aan een infectie met de MRSA bacterie?

20

125

100

300

1. In Nederland worden ongeveer _____ patiënten per jaar met de MRSA bacterie besmet

50

325

7000

2650

1. Hoe groot schat je de kans in, dat een met MRSA geïnfecteerde patiënt(e) daaraan overlijdt?

5 percent

50 percent

25 percent

30 percent

1. Wat is het grootste probleem gezien de behandelbaarheid van een MRSA-infectie

de MRSA bacterie is al immuun tegen de meeste antibiotica

de meeste artsen hebben te weinig kennis over de juiste medicatie

een MRSA-infectie wordt meestaal voor een andere aandoening gehouden

medicatie is duur en nauwelijks beschikbaar

1. Voor welke mensen is de MRSA-bacterie het meest gevaarlijk?

voor oude mensen

voor kinderen

voor mensen met een zwak of niet werkend immuunsysteem

voor artsen en ziekenhuis-medewerkers

1. Hoeveel kans (in percent) heeft een gemiddelde Nederlandse patient(e) om met de bacterie besmet te raken?

1= helemaal mee oneens
2= mee oneens
3= niet oneens, niet eens
4= mee eens
5= helemaal mee eens

1. Als ik besmet zou raken met de MRSA-bacterie, dan zijn de gevolgen daarvan ernstig

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat ik ten gevolge van een MRSA besmetting ernstige schaden zou lijden

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat er te veel aandacht aan het thema wordt besteed

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik zou heel angstig zijn in geval van een infectie

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik ben goed geinformeerd over de MRSA bacterie

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de MRSA bacterie gevaarlijk

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. De MRSA bacterie vormt een dreiging voor patienten

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat er te weinig aandacht aan het thema wordt besteed

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Dit onderwerp is voor mij persoonlijk relevant

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Dit onderwerp is voor mij persoonlijk belangrijk

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat een MRSA infectie ernstige gevolgen heeft

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik zou het erg vinden om met de MRSA bacterie besmet te raken

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Als ik in een ziekenhuis terecht kom, loop ik een grote kans om met de MRSA bacterie besmet te raken

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1= helemaal mee oneens
2= mee oneens
3= niet oneens, niet eens
4= mee eens
5= helemaal mee eens

1. Ik heb vertrouwen in het ministerie van volksgezondheid

helemaal mee oneens
mee oneens
niet oneens, niet eens
mee eens
helemaal mee eens
1. Ik denk dat het welzijn van patienten voor de overheid belangrijk is

helemaal mee oneens
mee oneens
niet oneens, niet eens
mee eens
helemaal mee eens
1. Ik denk dat de overheid er alles voor doet om de mensen goed te informeren

helemaal mee oneens
mee oneens
niet oneens, niet eens
mee eens
helemaal mee eens

1. Ik denk dat de overheid vooral op zijn eigen voordeel uit is

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. De overheid communiceert eerlijk met de burgers

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de overheid geloofwaardig

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de overheid betrouwbaar

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. De overheid geeft niet om de mensen als individuen

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat er belangrijk informatie wordt achtergehouden

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

Geef op een schaal van 1 tot 5 aan, hoe sterk je met de volgenden stellingen eens/oneens bent m.b.t de krantartikel
die je net hebt gelezen.
1= helemaal mee oneens
2= mee oneens
3= niet oneens, niet eens
4= mee eens
5= helemaal mee eens

1. Ik voel mij goed geïnformeerd

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik heb geen vertrouwen in deze boodschap

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat hier eerlijke informatie wordt gegeven

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de gegeven informatie helder

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de gegeven informatie duidelijk

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik vind de gegeven informatie belangrijk

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik heb er vertrouwen in de juistheid van de informatie

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik geloof er niets van

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Ik denk dat ik nu beter ben geïnformeerd dan van tevoren

helemaal mee oneens

mee oneens

niet oneens, niet eens

mee eens

helemaal mee eens

1. Als je na afloop van deze studie over de uitkomsten en bevindingen geïnformeerd wil worden laat dan je email adres achter

Hartelijk bedankt voor je medewerking. Het krantartikel dat jij hebt gelezen was in feite opgemaakt. Er is nooit een
spoor van de MRSA bacterie op de Universiteit Twente/Tilburg aangetroffen. Ook de persconferentie en alle daarin
gemaakte opmerkingen zijn in het geheel opgemaakt.

Universiteit Twente
de ondernemende universiteit

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