Master's Thesis Communication and Information Sciences:

**Communication and Persuasion 2020-2021** 

The influence of a leader's perceived preciseness on employee safety awareness and the

role of cultural values



Rhodée Koers

Date: 16-01-2021

First reader: M.B.P. Starren

Second reader: L.M.C. Faro

Words: 8800

## Preface

This is it: the end product of eighteen years of studying at five different 'schools'. A time in which I have developed myself to the person I am today. With the choice of going to Radboud University to study International Business Communication (bachelor) and Communication & Persuasion (master), I am looking forward to a bright future. I am excited to enter the job market and make myself a contributing member of society.

The product that rounds off my years at the Radboud University lies here before you to read. A master's thesis, for which research has been done to the effect of a leader's communication style on the safety awareness of employees, and the moderating role of cultural values. This research was performed mainly in an attempt to find a solution to industrial accidents caused by employees with differences in cultural backgrounds. A goal which is more important than ever with the ongoing flow of labor migrants.

The realization of this master's thesis would not have been possible without the help of certain people. First, I would like to thank Marianne Starren, my thesis supervisor, for the guidance during this process and for sharing her knowledge in this interesting field with me. Second, I would like to thank Laurie Faro for putting in the time and effort to read and judge this master's thesis. The statistics part of this research would probably not have been correct without the help of Marieke Hoetjes, so I would like to thank her in this way as well.

Furthermore, I would like to thank all the people who have filled in my questionnaire and those who shared it with other people they know. Without these people, I could not have realized the current research. Finding a sufficient amount of Spanish employees seemed easier than it was, so I want to give a great thanks to Bas Logister and Pablo Hernandez of the organization Sika, and Laura Badia Ruiz of the organization Faerch for cooperating with my research and reaching out to employees who were willing to fill in the Spanish questionnaire. In addition, I would like to thank Jaime, my Spanish friend who took the time to check the Spanish translation of the questionnaire.

Last, but definitely not least, I would like to thank my parents, boyfriend, and friends, who helped me through the challenge of doing my master's during the Corona crisis and who supported me writing the current thesis. I hope that you will enjoy reading this piece!

### Abstract

Research shows that non-native employees with different cultural values are involved in, and can cause more industrial accidents. The current research intended to measure the effects of the perceived communication preciseness of leaders on the safety awareness of employees, in an attempt to reduce these industrial accidents caused by differences in cultural values. The effects were measured while comparing two countries: The Netherlands and Spain. The research question that was answered via an online survey was: '*What is the effect of a leader's perceived preciseness on the safety awareness of employees, and what is the role of uncertainty avoidance as a cultural value in this relation?*'. The answer to this question could help to fill the research gap around work safety and communication styles, but could also help society to reduce the number of industrial accidents caused by differences in cultural values. In total, 133 respondents took part in the online survey, of which 77 were Dutch and 56 were Spanish.

The results show that a precise communication style was a significant predictor of safety awareness, regardless of nationality. Furthermore, uncertainty avoidance of employees moderated the relation between preciseness and safety awareness: this relation only existed under the condition of high uncertainty avoidance. Nationality was not a moderator. The results imply that managers in multinationals should take part in training that helps develop a precise communication style, which could especially be beneficial for employees with high uncertainty avoidance. Unfortunately, it was not possible to get one multinational organization to participate in the research, which led to respondents being from different companies. This could reduce the generalizability of the results to multinational organizations. Future research is needed to provide insights in how to reduce industrial accidents caused by differences in cultural values of employees.

Keywords: safety awareness, preciseness, communication style, uncertainty avoidance, multinationals

### Introduction

Partly as a result of globalization and the deriving flow of labor migration, more and more multinational organizations are emerging all around the globe in which employees of many different nationalities work together. Besides all the possible positive outcomes of this multicultural collaboration, employees of different nationalities can cause mutual misunderstandings and even dangerous situations on the work floor of a multinational (Paul, 2013). It has been repeatedly shown that different cultures and languages can have negative influence on the number of accidents in the workplace. For example, the study by Adler (2002) showed that in a multicultural work environment there are, among other things, miscommunication, translation problems, and unclear formulations of matters. These language problems can cause dangerous situations and industrial accidents: Smit, Uijtendaal and Hoeben (2014) showed that 9,12% of the accidents in 2004-2009 and 2012 were caused by non-native employees because of insufficient knowledge of the language. In addition, it was found that non-western foreigners run a greater risk of injury and absenteeism due to work-related accidents (Venema, Den Besten, Van der Klauw & Ybema, 2013).

Various reasons may be responsible for this considerable number of industrial accidents involving non-native employees. First, different cultures think differently about workplace safety, which could lead to more industrial accidents (Starren, 2016). Second, non-Dutch employees feel that they have to work harder to retain their job, which causes them to work more overtime than is officially allowed and often leads to worse working conditions. Third, non-Dutch employees often have insufficient knowledge about the work they do and/or do not receive sufficient training for this work (Paul, 2013). The last and perhaps most important reason is the difference in cultural dimensions between Dutch and non-Dutch employees. It is said that the dimension of uncertainty avoidance (Hofstede, 2001), which reflects whether a particular culture feels comfortable with uncertainty or ambiguity, would particularly be related to safety on the work floor. For example, employees from national cultures with a lower degree of uncertainty avoidance (Starren, Hornikx & Luijters, 2013).

Compliance with rules and procedures can also be linked to the communication style of a task-oriented, or transactional leader. This is because a transactional leader often uses a precise communication style, which is characterized by, among other things, clarity and care (De Vries, Bakker-Pieper and Oostenveld, 2010). On the other hand, there is the transformational leader, who focuses less on adhering to rules and procedures. A transformational leader is more people-oriented and with that inspires and motivates employees. This type of leader uses a less precise communication style. Throughout the paper, the terms 'manager', 'leader' and 'supervisor' will be used interchangeably.

As mentioned above, globalization and labor migration can cause more workplace malpractices in multinationals. Yet, there is a lack of research on how to reduce such malpractices caused by cultural differences (Barling, Loughlin & Kelloway, 2002; Das, Pagell, Behm & Veltri, 2008; Mearns & Yule, 2009; Starren, Hornickx & Luijten, 2013). Solutions such as safety pictograms that do not involve language have been suggested, with the underlying idea that every employee can understand a symbol. However, because of the analytic orientation of western employees and the holistic orientation of non-western employees, pictograms can have a different meaning for these two groups of employees (Nisbett & Miyamoto, 2005).

The current research puts forward a different solution, from a different perspective. The aim of the current research is to explore the relation between a leader's perceived preciseness and employees' safety awareness, and the effects of uncertainty avoidance on this relation. The expectation is that a leader with a precise communication style will improve the safety awareness of employees, and that uncertainty avoidance moderates this relationship. More specifically, a transactional leader with a precise communication style will better meet the communication needs of employees from a culture with high uncertainty avoidance, thus creating more safety awareness in the workplace. On the other hand, employees who come from a culture with low uncertainty avoidance will have a higher safety awareness when they have a transformational leader with a less precise communication style. These hypotheses are tested in the current research on the basis of the following research question: 'What is the effect of a leader's perceived preciseness on the safety awareness of employees, and what is the role of uncertainty avoidance as a cultural value in this relation?'. Spain, with a score of 86 out of 100, is taken as a culture with how uncertainty avoidance, and the Netherlands, with a score of 53 out of 100, as a culture with low uncertainty avoidance (Hofstede, 2001, p. 500).

Data for this study were collected using an online survey in which 133 respondents took part. The findings make an important contribution to the field of internal and international business communication. The results may be especially relevant for managers of multinational organizations. Based on this research, they can gain insights into which type of leadership style is best to maintain with employees with different cultural backgrounds, in order to reduce the number of accidents in the workplace. First, previous research and more information about the topic will be discussed below.

### **Theoretical framework**

### Different cultural dimensions and criticism of Hofstede

In his extensive and groundbreaking research, Hofstede (2001) described five cultural dimensions between which there can be large differences: high vs. low power distance, high vs. low uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and short-term orientation vs. long-term orientation. These dimensions contain the core of attitudes and behavior so that they can also be used to analyze the similarities and differences in cultures.

As mentioned earlier, the dimension uncertainty avoidance in particular is said to be related to safety in the workplace. Employees with a high degree of uncertainty avoidance want certainty in their work and they try to ensure this by following the rules and procedures as closely as possible. Employees from a culture with low uncertainty avoidance, on the other hand, are less fond of rules and more fond of accepting different opinions and/or deviant behavior.

Employees act according to their own cultural norms and values (Claes & Gerritsen, 2011). This is why conflict is inevitable at times, especially when employees with cultural backgrounds that score differently in dimensions work together. When someone with a high degree of uncertainty avoidance starts working in a country with less clear rules and procedures, it can lead to confusion because they are not sure what the intention is. This also applies the other way around: if someone with low uncertainty avoidance starts working in a country with many rules, resistance may arise (Starren, 2016).

Over the years, however, there has been both praise and criticism of Hofstede's groundbreaking research on cultural dimensions. For example, his approach would be universalist or essentialist (Baskerville, 2003) because he makes generalized statements about individual cultures automatically being the same as the national culture of the country these individualists live in. According to Baskerville, this is not realistic since cultures are not always bound by national borders and there can be several cultures within one country. Hofstede's defense was that nations "are usually the only kind of units available for comparison and better

than nothing" (Hofstede, 2002, p. 2). Furthermore, it is said that Hofstede's insights were not properly obtained at IBM. The data mainly came from men in the computer industry, which makes it unrepresentative of the entire national culture (Baskerville, 2003). Hofstede (2002) replied that the sample was representative because the same questionnaire for data collection was used for all countries.

To control for possible differences in culture within countries, the current research makes a distinction between national and individual culture. To make this comparison possible, it was decided to only look at the cultural dimension uncertainty avoidance, as this is the only cultural dimension of the five that can be applied individually.

### Leaders and communication styles

Managers play an important role in organizations. Holmes, Schnurr and Marra (2007) even referred to managers as the motor and driving force of organizations. For example, the relationship between managers and his or her employees can influence the experienced stress and potential burnouts of employees (Skakon et al., 2010) and good communication from the manager can ensure a reduction in absenteeism and better performance in the workplace (Vercic, Vercic & Sriramesh, 2012). Many researchers also recognize the role of leaders in creating a safe work environment (including Koster, De Stam, and Balk, 2011; Torrance, 2004). Furthermore, a leader's communication style influences the perceptions of employees and therefore their behavior and performance (Howell & Hall-Merenda, 1999). Partly because of these advantages, managers are expected to communicate well with their employees. Schnurr (2005) even calls the communicative behavior of the manager a crucial component in achieving the organizational goals.

The interpersonal communication style is an important element in the relationship between a leader and his employees. The definition of communication style is "the characteristic way in which a person sends verbal, para-verbal and non-verbal signals in social interactions" (De Vries et al., 2010, p. 179). De Vries, Bakker-Pieper and Oostenveld (2010) concluded in their study that a total of seven communication styles are supported: *preciseness*, *reflectivity, expressiveness, supportiveness, emotionality, kindness,* and *verbal aggressiveness*. In this research, we will only look at preciseness as a leader's communication style. Preciseness has the following characteristics: care, clarity, professionalism, expertise, and thoughtfulness (De Vries et al., 2010), because of which precise communicators generally have a higher perceived credibility (De Vries et al., 2009). De Vries et al. (2010) previously mentioned that preciseness is one of the main communication style predictors of knowledge collecting behaviors of subordinates. Based on this information, employees are expected to develop greater safety awareness through a precise leader.

### H1: A precise communication style is positively related to the safety awareness of employees.

Preciseness can be linked to a transactional leader, who is focused on tasks, rules, and the initiation of structure, where the characteristics of the communication style preciseness match (De Vries et al., 2010). On the other hand, there are people- and communication-oriented leaders, also called transformational leaders (Burns, 1978; Keegan & Den Hartog, 2004). Transformational leaders are focused on their employees and take their employees into consideration, while transactional leaders are more focused on tasks, rules, and initiating structure.

	Precise	Less precise
Task-oriented	Transactional	
People-oriented		Transformational

Table 1. The general orientation and communication style of transactional and transformational leaders.

Transformational leaders encourage employees to do more than what is expected of them according to their job description (De Koster, Stam & Balk, 2011; Hater & Bass, 1988). These leaders are more often seen as inspiring and motivating. If a transformational leader focuses on safety within an organization, this can increase the safety awareness of employees (Barling et al., 2002). This is also referred to as safety-specific transformational leadership (SSTL). Research (de Koster, Stam, & Balk, 2011; Mullen, Kelloway & Teed, 2017; De Koster, Balk, Davelaar & Martens, n.d.) also shows that SSTL directly influences safety awareness and safety performance indirectly. Safety awareness focuses on an individual's awareness of safety issues (Barling et al., 2002). Managers who apply SSTL enhance the company's safety performance by being a safety-oriented role model, by communicating a vision about safety, by encouraging employees to think about new safety measures, and by genuinely caring about employee safety (de Koster, Stam, & Balk, 2011; Kelloway & Barling, 2010). Idealized influence, i.e. being a role model, turned out to be a significant predictor of safety awareness (Starren, 2016). Transformational leaders thus increase employee involvement in safety.

However, when it comes to compliance, transactional leadership can be more effective (Clarke, 2013). In conclusion, there is not by definition one type of leadership or communication style that is best, and it is yet to be found out which type of leader will increase safety awareness in a multinational more.

### Culture and communication styles

Employees from different cultures may also have different preferences for leadership type and communication style (Pennebaker, Rimé & Blankenship, 1996). The communication style 'preciseness' can be mainly linked to the cultural dimension uncertainty avoidance. According to Saee (2005), employees from cultures with a high degree of uncertainty avoidance prefer transactional leaders who provide clear task instructions and rules, rather than transformational leaders who appreciate employees participating in decision-making. Because these employees with high uncertainty avoidance need a lot of clarity and certainty, they can better identify with a transactional leader with a precise leadership style (De Vries et al., 2009). Pacleb and Bocarnea (2015) even argue that preciseness arises from high uncertainty avoidance. Because this communication style fits what employees with high uncertainty avoidance are used to and what they need, this will seemingly also result in higher safety awareness.

Based on the above-mentioned studies, it is expected that a transactional leader with a precise communication style will positively influence the safety awareness of employees of the Spanish nationality with higher uncertainty avoidance. By contrast, according to the literature, an employee of Dutch nationality with a lower degree of uncertainty avoidance has less need for rules, procedures, and clarity. Transformational leaders with a less precise leadership style will therefore create more safety awareness among Dutch employees because this type of leader intrinsically motivates and inspires employees. These expectations will be tested by means of the following hypothesis:

H2: Uncertainty avoidance moderates the effect of the communication style 'preciseness' on safety awareness, in the way that the relation between a precise communication style and safety awareness for employees is stronger for cultures with a high uncertainty avoidance (Spain) than for cultures with a lower uncertainty avoidance (The Netherlands).

The overarching research question that will be answered through the hypotheses above is the following: What is the effect of a leader's perceived preciseness on the safety awareness of employees, and what is the role of uncertainty avoidance as a cultural value in this relation?

As mentioned earlier, Hofstede's research only took national culture into account. Since employees can differ in uncertainty avoidance not only across cultures but also within cultures, the current study also takes individual safety awareness into account. National culture and individual culture will both be considered as possible moderators of the relation between preciseness and safety awareness.

## Method

A survey was chosen for this research because the goal was to discover correlations in hard data to be able to generalize, and not to conclude causal relationships. The existing scales that have been used can provide insights into the general characteristics of certain groups. These insights can be used to make important decisions - in this case, about increasing the safety awareness of employees in a multinational organization.

### Instrumentation

The survey consisted of different parts: the perceived communication style of the manager, the degree of uncertainty avoidance of the employees, the safety awareness of the employees, and general demographic questions. The perceived communication style was the independent, nominal variable and safety awareness the dependent, also nominal variable. The degree of uncertainty avoidance was a moderating variable. This variable is also nominal.



Figure 1. The independent variable (preciseness), the dependent variable (safety awareness), and the moderating variable (uncertainty avoidance).

Safety awareness was measured by seven items on a 7-point Likert scale (1 = completely disagree - 7 = completely agree) by Barling et al. (2002). In addition, 3 items have been added around the theme "Coronavirus". This was done so that the survey would be seen as relevant and actual by the respondents and multinational organizations. Examples of the items used are *"I know what to do in the event of a dangerous situation"*, *"I am aware of the security risks associated with my job"* and *"I know what to do if I have corona related symptoms"*. Reliability was calculated using Cronbach's alpha. The reliability of 'safety awareness' comprising ten items was acceptable:  $\alpha = .79$ . Consequently, the mean of all ten items was used to calculate the compound variable 'safety awareness', which was used in further analyses.

The communicative styles of the manager are determined by the perception of employees. For this reason, employees of the multinational completed the questionnaire about the communication style of their manager. In the questionnaire, the Dimensions of Communication Styles of De Vries et al. (2009b) were used. This questionnaire consists of 39 items and examines the seven communication dimensions that a manager can possess. In the current study, only the communication style 'preciseness' was questioned. This part of the questionnaire consisted of six items that provide insight into the communication style 'preciseness' of a manager and is questioned on the basis of 7-point Likert scales (1 = never - 7 = always). Examples of the statements are "*My manager expresses himself in a precise way*" and "*My manager blunders in contact with employees*". The reliability of 'communication style' comprising six items was unacceptable:  $\alpha = .21$ . Consequently, three items were not included in the calculation (items 4, 5, and 6). The reliability of 'preciseness' comprising 3 items was good:  $\alpha = .90$ . The mean of these three items was used to calculate the compound variable 'preciseness', which was used in further analyses.

In the survey, Hofstede's questionnaire for uncertainty avoidance was deliberately not used, as the current study also tried to measure uncertainty avoidance at an individual level and not only at a group level. Instead, the uncertainty avoidance variable was measured following the example of Dorfman and Howel (1988), whose questionnaire was tested by Culpepper and Watts (1999). For this purpose, 5 items on a 7-point Likert scale were used (1 = completely disagree - 7 = completely agree). Examples of the statements are "*It is important to have job descriptions and instructions described in detail so that I know what is expected of me at all times*" and "*Work instructions are important to me during my work*". The reliability of 'uncertainty avoidance' comprising five items was good:  $\alpha = .87$ . Consequently, the mean of all five items was used to calculate the compound variable 'uncertainty avoidance', which was used in further analyses.

The general demographic questions in the questionnaire asked for gender, age, place of residence, the highest level of education, position in the company, labor sector, type of employment contract, average number of working hours per week, size of the team, whether flexible workplaces are used and the length of work in years of the employees. These questions have been formulated based on of the National Labor Conditions Survey (TNO, 2015a).

The questionnaires were administered in the native language of the respondents. The Dutch questionnaire has been drawn up and translated into Spanish. Both questionnaires were checked by two native speakers of the language in which the questionnaire was written.

### **Respondents**

For this study, both men and women were asked to participate. There was no specific age requirement; all persons from the age of 18 could participate. The only eligibility criterium required individuals to have a (side) job and a manager at their job. The respondents came from all over The Netherlands and Spain so that the individual uncertainty avoidance of the respondents could be measured and compared. A significant number of the Spanish respondents were employees of the companies Sika and Faerch.

The initial sample consisted of 180 Dutch and Spanish respondents. Of these 180 respondents, 47 respondents did not complete the survey or did not fill it in seriously and were excluded from the analysis. The final 133 respondents consisted of 64 men (48,1%) and 69 women (51,9%). 77 of the respondents were Dutch (57,9%) and 56 were Spanish (42,1%). Of the Dutch respondents, 41 were male (53,2%) and 36 were female (46,8%). Of the Spanish respondents, 23 were male (41,1%) and 33 were female (58,9%). A Chi-square test showed no significant relation between gender and nationality (X2 (1) = 1.93, p = .165). Men and women were equally distributed in the two nationalities.

All respondents were between the ages of 19 and 72, with a mean age of 34,32, a mode of 23, and a median of 27. A one-way analysis of variance showed a significant effect of age on nationality (F (1, 131) = 14.28, p < .001). Spanish respondents (M = 39.29, SD = 14,79) had a higher average age than Dutch respondents (M = 30.70, SD = 11.41).

The level of education cannot be compared between the Netherlands and Spain, since both countries wield a different education system. All educational levels were given as answers at least once, except for primary education for the Spanish respondents. The most common level of education in the Netherlands were both 'HBO' (higher education) and 'WO' (university) with each 32 responses (41,6%), while the most common level of education in Spain was 'Estudios universitatios' (university) with 37 responses (66,1%).

Place of residence could not be compared either; while The Netherlands has the regions North, Center, and South, Spain has the regions North, Center, South, and East. For the specific cities and towns mentioned, the region was sought at Rijksoverheid.nl for the Dutch sample and at spanjevoorjou.com for the Spanish sample, since an official site was not known for Spain. Of the Dutch respondents, 8 lived in the north (10.4%), 27 lived in the center (35.1%), and 41 lived in the south of the Netherlands (53.2%). 1 respondent lived outside of the Netherlands at the time of the data collection (1.3%). Of the Spanish respondents, 4 lived in the north of Spain (7.2%), 15 lived in the Center (26.8%), 19 lived in the east (33.9%), and 1 in the South (1.8%). 5 respondents mentioned only 'Spain' as their current place of residence (8.9%) and 12 Spanish respondents answered that they did not live in Spain at the time of the data collection (21.4%).

76 of the respondents had a permanent contract at their company (57,1%), 33 of the respondents had a temporary contract (24,8%), 17 had a zero-hour contract (12,8%) and 7 answered to have a different kind of contract (5,3%).

The responses to the question in which sector they work were divergent; all twelve sectors were filled in as answers at least once. 20 respondents worked in a production company/factory (15%), 16 respondents worked in a health or care center (12%), 11 respondents worked at an educational institution (8,3%), 10 respondents worked at a (web) shop, a wholesaler or a market stall (7,5%), 8 respondents worked at a government agency (6%), 8 respondents worked at a catering facility (6%), 6 respondents worked at a financial institution (4,5%), 5 respondents worked at a construction company (3,8%), 5 respondents worked at an ICT company (3,8%), 2 respondents worked in a private household (1,5%), and 1 respondent worked at a transport company (0,8%). The majority of 41 respondents answered that they work in a different sector (30,8%).

16 respondents worked 0 to 8 hours per week (12%), 18 respondents worked 8 to 16 hours per week (13,5%), and 13 respondents worked 16 to 32 hours per week (9,8%). The majority of the respondents (86) worked 32 hours or more per week (64,7%).

In addition, 63 of the respondents worked in a relatively small team with 1 to 10 others (47,4%), 34 respondents worked in a team with 10 to 20 others (25,6%), 29 respondents worked in a team with 20 others or more (21,8%), and 7 respondents did not work in a team (5,3%).

Furthermore, 48 respondents filled in that their team does not work with flexible workplaces (36,1%), while 50 stated that everyone in their team works flexibly (37,6%). 21 respondents mentioned that a few of their team members work flexibly (15,8%), and 14 mentioned that a small part of their team members work flexibly and that the others work in a fixed (office) place (10,5%).

Lastly, most of the respondents started working for their current employer in 2020 (40 respondents, 30.1%). 18 started their current job in 2019 (13.5%), 21 started their current job in 2018 (15.8%) and 10 started their current job in 2017 (7.5%). 41 respondents started their job between 1984 and 2016 (30.8%). 3 respondents were not clear in their answer when they started working for their current employer (2.3%).

#### Procedure

An online questionnaire was used to collect data from the respondents. This questionnaire was made in the program Qualtrics and was administered in the native language of the respondents (see appendix D and E). The respondents were recruited by an anonymous link distributed via Instagram, Facebook, Linkedin, Whatsapp, Email, SurveySwap, and SurveyCircle with the message that they would help the researcher graduate and also help gain more insight into safety on the work floor. To get a sufficient amount of participants, the technique of snowball sampling was used in which existing participants recruited new individuals from their network. The study was conducted in November and December 2020. Prior to commencing the survey, respondents read specific instructions about the research. They were also reminded in advance that completion would be completely anonymous, that they would have all the time they needed to fill in the survey and that there were no wrong answers. Furthermore, they read that the data would only be used for the current master's thesis and that they could withdraw at any point. The survey was filled in individually and the procedure was the same for all respondents. The respondents did not get any form of reward or incentive. They were thanked with a note at the end of the survey. No debriefing took place afterwards. Completing the questionnaire roughly took 5 minutes.

#### Statistical tests

To formulate an answer to the research question, several tests were used. First of all, a simple regression analysis was used to measure the effect of preciseness on safety awareness. Subsequently, several multiple regression analyses were performed to provide insight into the relation between preciseness and safety awareness with uncertainty avoidance as a possible moderator. Uncertainty avoidance has been divided into national culture (nationality) and individual culture. Individual culture has been analyzed by dividing all respondents into two groups: low or high uncertainty avoidance. These groups were made employing a median split. All respondents with an average uncertainty avoidance of 5.20 or lower were part of the low uncertainty avoidance group, and all respondents who scored higher than 5.20 on average were part of the high uncertainty avoidance group. Furthermore, three different t-tests have been performed to investigate the possible differences between Spanish and Dutch respondents in terms of perceived preciseness, uncertainty avoidance, and safety awareness. Data management and analysis were performed using SPSS (version 27.0).

## Results

In this section, the results of the statistical tests will be described that were performed to test the hypotheses and to answer the research question. First, the relation between preciseness and safety awareness will be looked at. Subsequently, the moderation effects of national and individual uncertainty avoidance will be tested. Table 2 below enumerates all means and standard deviations of the data of the Dutch and Spanish respondents for all three variables.

	М	SD	
Uncertainty Avoidance total	5.10	1.31	
The Netherlands	4.69	1.20	
Spain	5.67	1.26	
(median split on 5.20)			
Median split low $(N = 67)$			
Median split high $(N = 66)$			
Preciseness total	5.41	1.30	
The Netherlands	5.43	1.11	
Spain	5.38	1.53	
Safety Awareness total	5.78	.87	
The Netherlands	5.66	.85	
Spain	5.95	.88	

Table 2. Means and standard deviations of the variables total (N = 133) and per nationality, The Netherlands (N = 77) and Spain (N = 56).

A simple regression analysis showed that the variable preciseness explained 8% of the variance in safety awareness (F(1, 131) = 12.95, p < .001). Preciseness was shown to be a significant predictor of safety awareness ( $\beta = .30$ , p < .001), see table 3 below. Safety awareness increases with .30 *SD* for each increase of 1 *SD* of preciseness, given that all other variables are kept constant. This means H1 can be accepted; a precise communication style is positively related to safety awareness.

Table 3.	Simple	regression	analysis	for	preciseness	as	a	predictor	of	safety	awareness	of	employees
( <i>N</i> =133)													

Variable	В	SE B	β
Intercept	4.69	.31	
Preciseness	.20	.06	.30*
<i>R</i> <sup>2</sup>	.08		
F	12.95		

\* p < .001

The first multiple regression analysis showed that the two variables entered, nationality and preciseness, explained 10% of the variance in safety awareness (F(3, 129) = 5.96, p = .001). Nationality ( $\beta = .05, p = .884$ ) and preciseness ( $\beta = .13, p = .631$ ) were not significant predictors of safety awareness. Furthermore, the interaction of preciseness and nationality was not significant ( $\beta = .28, p = .522$ ), see table 4 below.

Table 4. Multiple regression analysis for preciseness, nationality, and the interaction as predictors of safety awareness of employees (N=133)

Variable	В	SE B	β
Intercept	4.87	1.04	
Preciseness	.09	.19	.13
Nationality	.09	.63	.05
Interaction preciseness x			
Nationality	.07	.11	.28
$R^2$	.10		
F	5.96		

A precise communication style did not cause a significantly higher safety awareness in this model and neither did nationality. An independent samples t-test also showed no significant difference between Dutch or Spanish respondents with regard to safety awareness (t (131) = 1.91, p = .059). Spanish respondents (M = 5.95, SD = .88) were not shown to have a higher safety awareness than Dutch respondents (M = 5.66, SD = .85). A second independent samples t-test showed no significant difference between Dutch or Spanish respondents with regard to communication style (t (131) < 1, p = .821). Dutch respondents (M = 5.43, SD = 1.11) were shown to experience the same amount of preciseness of their supervisor as Spanish respondents (M = 5.38, SD = 1.53). However, a third independent samples t-test for nationality and uncertainty avoidance showed a significant difference between Dutch and Spanish respondents (t (131) = 4.56, p < .001). Spanish participants (M = 5.67, SD = 1.26) were shown to have a higher uncertainty avoidance than Dutch participants (M = 4.69, SD = 1.20)(see table 1).

For the next multiple regression, two groups of uncertainty avoidance have been made employing a median split, for which the median was 5.20. The group with low uncertainty avoidance consisted of 50 Dutch and 17 Spanish respondents. The group with high uncertainty avoidance consisted of 27 Dutch and 39 Spanish respondents.

The second multiple regression analysis showed that the two variables entered, high- or low uncertainty avoidance and preciseness, explained 12% of the variance in safety awareness (F(3, 129) = 7.16, p < .001). However, high/low uncertainty avoidance ( $\beta = .52, p = .143$ ) and preciseness ( $\beta = .21, p = .415$ ) were not significant predictors of safety awareness. Nonetheless, the interaction of preciseness and high/low uncertainty avoidance was significant ( $\beta = .91, p = .049$ ), see table 5 below.

Variable	В	SE B	β
Intercept	6.11	.96	
Preciseness	.14	.18	.21
High/low uncertainty avoidance	.91	.62	.52
Interaction preciseness x			
High/low uncertainty avoidance	.22	.11	.91*
<i>R</i> <sup>2</sup>	.12		
F	7.16		

Table 5. Multiple regression analysis for preciseness, high/low uncertainty avoidance, and the interaction as predictors of safety awareness of employees (N=133)

\* *p* < .05

A precise communication style or high/low uncertainty avoidance were no significant predictors of safety awareness in this model. However, the moderation effect of uncertainty avoidance on the relation between preciseness and safety awareness could be demonstrated. A follow-up moderation analysis for preciseness with a split file on high- or low uncertainty avoidance demonstrated that for respondents with low uncertainty avoidance, preciseness explained 0% of the variance in safety awareness (F(1, 65) < 1, p = .385), while preciseness explained 22% of the variance in safety awareness (F(1, 64) = 18.96, p < .001) in the case of high uncertainty avoidance. Preciseness was not a significant predictor of safety awareness in the condition of low uncertainty avoidance ( $\beta = .11, p = .385$ ), but it was in the condition of high uncertainty avoidance ( $\beta = .48, p < .001$ ). See table 6 below. This finding confirms H2.

Variable	В	SE B	β
Low uncertainty avoidance	2		
Intercept	5.21	.47	
Preciseness	.08	.09	.11
<i>R</i> <sup>2</sup>	.00		
F	.77		
High uncertainty avoidance	re		
Intercept	4.30	.39	
Preciseness	.30	.07	.48*
<i>R</i> <sup>2</sup>	.22		
F	18.96		
* <i>p</i> < .001			

Table 6. Simple regression analysis for preciseness as a predictor of safety awareness of employees, with a split file on high- or low uncertainty avoidance (N=133)

## Conclusion

In this section, the results related to the hypotheses will be discussed in ascending order. One of the aims of this research was to investigate the direct relationship between the communication style 'preciseness' of a leader and the safety awareness of employees. The analyses have shown that this relationship is significant; preciseness emerged as a reliable predictor of safety awareness. The more precisely a supervisor is perceived by his employees, the higher the safety awareness among these employees. This is regardless of nationality or individual culture. This finding confirms H1.

Another aim of this study was to see whether the aforementioned relationship between preciseness and safety awareness would be moderated by uncertainty avoidance, in the sense that employees with a high uncertainty avoidance (low uncertainty avoidance) would develop a higher safety awareness with a leader who uses a (less) precise communication style. Spain was expected to have a high uncertainty avoidance culture, and the Netherlands to have a low uncertainty avoidance culture. This expectation has been confirmed by a t-test in the current study: Spanish respondents had a significantly higher uncertainty avoidance than Dutch respondents. Even though preciseness and high- or low uncertainty avoidance were not predictors of safety awareness, the interaction was; preciseness was only a significant predictor of safety awareness for employees under the condition of high uncertainty avoidance. The relation between preciseness and safety awareness was not demonstrated for employees with a low degree of uncertainty avoidance. This finding confirms H2.

This while nationality or preciseness were not predictors of safety awareness, and there was no interaction between nationality and preciseness. Besides that Spanish employees have a higher uncertainty avoidance, there were no differences between Dutch and Spanish respondents in terms of perceived preciseness of their supervisor or their safety awareness. This means individual uncertainty avoidance has more of an influence on the relation between preciseness and safety awareness than national culture does present day.

In the current study, the following research question was central: *What is the effect of a leader's perceived preciseness on the safety awareness of employees, and what is the role of uncertainty avoidance as a cultural value in this relation?*. The results reveal that perceived preciseness of a leader has a positive effect on safety awareness. A high uncertainty avoidance

moderates this relationship, but only uncertainty avoidance on an individual level. There was no moderation effect of the uncertainty avoidance embedded in national culture.

### Discussion

As previous researchers already acknowledged, leaders play a very important role in organizations (e.g., Skakon et al., 2010; Vercic, Vercic & Sriramesh, 2012; Schnurr, 2005). They have also recognized the role of leaders in creating a safe work environment (Koster, De Stam, and Balk, 2011; Torrance, 2004). The current research adds to this by demonstrating that the perceived preciseness of a leader is a significant predictor of the safety awareness of employees, which confirms the assumption that preciseness is to a great extent responsible for the knowledge that an employee takes in (De Vries et al., 2009).

However, the model with preciseness as a predictor of safety awareness explained only 8% of the safety awareness of employees. This means a large percentage is still unexplained with this model; other factors influence safety awareness as well. One of these factors could be the safety climate within a company. For example, Kapp (2012) demonstrates that the relationship between leadership practices of first-line supervisors and safety compliance is moderated by safety climate. Safety awareness, and as a result safety compliance, could thus be improved not only through good leadership practices, but also through a strong group safety climate within a corporation.

The importance of the cultural dimension uncertainty avoidance, often related to workplace safety, was emphasized in the past. These researches stated that employees with a higher uncertainty avoidance would develop more safety awareness through a leader with a precise communication style, so a transactional leader (Starren, Hornikx & Luijters, 2013; Saee, 2005; De Vries et al., 2009). The current research confirms this once more. Uncertainty avoidance moderated the relation between preciseness and safety awareness, in the sense that, as expected, this relation was only present for employees with high uncertainty avoidance. Even though employees with higher uncertainty avoidance are probably naturally more aware of safety risks, they still need more clarity and professionalism in order to be aware of safety risks, which they get from a precise leader.

The current research has shown that, as expected, Spaniards generally have a higher degree of uncertainty avoidance than the Dutch. Spaniards would thus in particular develop a higher safety awareness through a precise leader. In line with the literature, this means that Spanish employees benefit more from a transactional leader and Dutch employees more from a transformational leader. These results also imply that there is room for improvement of safety awareness. This could be the case because not many of the respondents that took part in the current research have a 'dangerous' job for which they have taken part in a special safety training. There is still much to learn about safety, and a precise leader could help employees make aware of this; (Spanish) employees with high uncertainty avoidance in particular. Since the current research included three items about safety awareness regarding the Coronavirus, a cautious conclusion can be drawn for businesses to improve safety awareness and possibly safety behavior for the measures taken regarding the Coronavirus. Leaders should try to act upon these differences. Employees with high uncertainty avoidance will need more preciseness from a leader than employees with low uncertainty avoidance.

While there was a moderation effect of uncertainty avoidance, nationality was not a predictor of safety awareness, and there was no interaction between nationality and preciseness. Besides that Spanish employees have a higher uncertainty avoidance, there were no differences between Dutch and Spanish respondents in terms of safety awareness or perceived preciseness of their supervisor. This means that, present day, individual uncertainty avoidance has more influence on the relation between preciseness and safety awareness than national culture does. This also implies that the critique on Hofstede might be partially fair; even though the results of his research might still be correct and Spanish employees still have a higher uncertainty avoidance than Dutch employees, culture is not bound to national borders. However, it is to be noted that many Spanish respondents (17 of the 56) lived and worked outside of Spain at the time of the data collection. It might thus be because Spanish respondents had external cultural influences that there were no significant results found of nationality. On the other hand, so many Spanish respondents living outside of their mother country also strengthens the critique of Hofstede; due to globalization and external cultural influences, the lines between the cultures of nationalities get blurred. Along these lines, there appears to be both an argument for and an argument against Hofstede's research: Spain does indeed score higher on the dimension of uncertainty avoidance, but national culture does not play a significant role in present research.

Since this is a considerably weighty counterargument, a new measuring instrument that takes individual culture more into account should be introduced.

### Limitations

This research intended to perform the analyses with data from respondents whom all worked in the same multinational organization with a branch in The Netherlands and in Spain. The contact letter is included in appendix B. Because of the limited possibilities to contact multinationals, three items about safety awareness related to the Coronavirus were included in the questionnaire to make the research more valuable in these times, and hopefully more attractive to participate. Unfortunately, it still appeared impossible to find a multinational willing to cooperate. Therefore, it has been decided to perform the research with working Dutch and Spanish respondents who worked in different organizations. However, this could have declined the generalizability for multinational companies and could have made the recommendations less valid than if the research were performed within a multinational.

Besides, there was no control on where and in which conditions the respondents filled in the questionnaire. The answers given can differ depending on the location where the respondents filled in the questionnaire (e.g. at home or at work). In addition, there was no information required about the relationship between the supervisor and the employee. If an employee were on a bad foot with his or her supervisor, it could be the case that this employee filled in the questions about their supervisor extra negatively. The other way around is also possible: employees might have had the feeling that they had to fill in that same part extra positively because they were at work or because they liked their supervisor that much.

Even though preciseness had a direct effect on safety awareness, it is possible that the way of computing the variable preciseness affected the results. This variable went from six to three items since Cronbach's alpha was unacceptable. Only after deleting three items, the Cronbach's alpha was good and the variable was reliable enough to perform tests with. A possible reason for the unreliability of the scale was that the meaning of sentences was lost in translation from Dutch to Spanish. For example, item four stated (in Dutch): "*Mijn leidinggevende ouwehoert in contact met zijn medewerkers*". There was no suitable translation of 'ouwehoert' in Spanish, so this became 'informal contact' which is not entirely the same.

#### A precise communication style: the key to reducing industrial accidents?

As to the ages of the respondents, it appeared by a one-way ANOVA that Spanish respondents had a higher average age than Dutch respondents. This may have biased the results since older employees also have more work experience and thus more experience with leaders. Their frame of reference may have caused them to compare their current leader with other leaders in the past and thus answer the questions about preciseness more relatively.

Furthermore, a large part of the respondents just started their current job this year, in 2020. This could imply that they have not yet had enough contact with their employer to know accurately how precise he or she is.

Educational systems are set up differently in Spain than they are in The Netherlands. This made it not possible to merge the two educational systems in order to perform a chi-square for education and nationality. It is thus not known if the educational levels of respondents were divided equally between the Spanish and Dutch nationality. However, looking at the percentages, it seems that these were equally divided. If they would not be, it would probably not matter significantly for the results.

Lastly, a limitation could be the number of respondents. Since an online questionnaire requires many respondents to be able to make generalized statements, the number of respondents in the current study could be insufficient. It would be better to have had more respondents to enlarge the generalizability of this research.

### **Practical implications**

Important findings of this research are that the perceived preciseness of a leader improves safety awareness in general and that this relationship is especially established for employees with high uncertainty avoidance. A recommendation would therefore be for a manager to use a precise communication style, especially for employees with a high degree of uncertainty avoidance. Not everyone is born as a transactional leader, which is why companies would do good by giving managers the option to follow training for communicating with care, clarity, professionalism, expertise, and thoughtfulness – the characteristics of the communication style 'preciseness'.

Furthermore, to find out which employees have high uncertainty avoidance and which employees have low uncertainty avoidance, a one-time questionnaire should be completed by all (new) employees to find out which employees require extra preciseness in the top-down communication. Present research has shown that Spaniards generally have a higher degree of uncertainty avoidance than the Dutch, so Spaniards would in particular develop a higher safety awareness through a precise leader. On the other hand, it would be better for employees with a lower degree of uncertainty avoidance, like the Dutch, to have a transformational leader who applies Safety-Specific Transformational Leadership. These employees need to be inspired and motivated by a role model; in this case that would be a transformational leader.

#### Future research

The lack of research on how to reduce industrial accidents caused by differences in cultural values has previously been highlighted (Barling, Loughlin & Kelloway, 2002; Das, Pagell, Behm & Veltri, 2008; Means & Jule, 2009; Starren, Hornickx & Luijten, 2013). The current research tried to fill this gap by investigating the relation between preciseness and safety awareness and the moderation effect of uncertainty avoidance, with Spain and The Netherlands as a target group. Despite the promising results, future research is required to gain more knowledge about how to reduce industrial accidents caused by cultural differences. Recommendations for future research will be discussed below.

First, for future research, it could be interesting to investigate whether a dissonance between the cultural backgrounds of leaders and their communication styles leads to positive or negative effects. In the current study, the finding was that perceived preciseness leads to safety awareness generally. However, it is not known if that still would be the case if a leader from a cultural background that does not have preciseness as a standard, gets to learn to communicate precisely. The cognitive dissonance leading from this could cause a negative effect.

Second, the current research only investigated uncertainty avoidance as a possible moderator in the relation between preciseness and safety awareness, mainly because it was the only cultural dimension that could be measured on an individual level. It could be the case that other cultural dimensions also have a (moderation) effect on this, such as the dimension of low/high power distance or masculinity vs. femininity. Cultural dimensions of other researchers than Hofstede might also be interesting to look at, such as the high vs. low context dimension of Hall (1976).

#### A precise communication style: the key to reducing industrial accidents?

Third, current research also only looked at the communication style 'preciseness' since this one would be most related to safety on the work floor. However, it cannot be ruled out that one of the other six communication styles also influence safety awareness.

Fourth, The Netherlands does not score extremely high or low on the cultural dimensions of Hofstede. It might be a good option for future research to take two or more countries that have more extreme scores. Possibly a country outside of Europe like Asia, since the ongoing globalization ensures that more and more non-Europeans come to Europe to live or to work. These people know completely different cultures and customs, which could lead to different results.

In addition, different sectors might also influence safety awareness. In the current research, the sectors were fairly evenly divided, there were not necessarily more people working in construction or at a transport company than that there were in an office. It seems logical that people in 'dangerous' professions already have a higher safety awareness than people who work in the office. Future research could specifically compare two different sectors of work to look at differences in safety awareness.

Additional simple regression analyses (see appendix A) show that uncertainty avoidance and high- or low uncertainty avoidance both are predictors of safety awareness, although these models only explain 6% and 3% of the degree to which (individual) uncertainty avoidance ensures safety awareness. It is thus recommended to research the direct effects of (individual) uncertainty avoidance on safety awareness to a further extent.

Furthermore, a supervisor's preciseness in this case was only measured by employee perceptions. It may be interesting to also receive opinions from supervisors and compare them to see if there is a line between the perceptions of employees and supervisors.

Lastly, with the aim of reducing industrial accidents in mind, one might research not only how to improve safety awareness, but also whether there are factors that mediate the relation between safety awareness and industrial accidents. Siu, Phillips and Leung (2004) for example found that psychological distress mediates the relationship between safety attitudes and accident rates. Consequently, not only would an intervention on part of the supervisors' communication styles be needed, an intervention on part of employees' psychological distress and job satisfaction would also be required.

## References

- Adler, N. (2002). International Dimensions of Organizational Behavior. Cincinnati. Ohio: South-Western.
- Barling, J., Loughlin, C., &Kelloway, E. (2002). Development and test of a model linking safety specific transformational leadership and occupational safety. *Journal of Applied Psychology* 87, 488–496.
- Baskerville, R. F. (2003). Hofstede never studied culture. Accounting, organizations and society, 28(1), 1-14. doi: 10.1016/S0361-3682(01)00048-4
- Burns, J.M. (1978) Leadership. New York. Harper & Row.
- Claes, M. T., & Gerritsen, M. (2011). *Culturele waarden en communicatie in internationaal perspectief* (3e druk). Bussum: Coutinho.
- Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviours. *Journal of Occupational and Organizational Psychology*, 86(1), 22-49.
- Culpepper, R., A., & Watts, L. (1999). Measuring cultural dimensions at the individual level: An examination of the Dorfman and Howell (1988) scales and Robertson and Hoffman (1999) scale. Academy of Strategic and Organizational Leadership Journal, 3(1), 22-34.
- Das, A., Pagell, M., Behm, M., & Veltri, A. (2008). Toward a theory of the linkages between safety and quality. *Journal of operations management*, 26(4), 521-535.
- De Vries, R.E., Bakker-Pieper, A. & Oostenveld, W. (2010). Leadership = Communication? The Relations of Leaders' Communication Styles with Leadership Styles, Knowledge Sharing and Leadership Outcomes. *Journal of Business Psychology*, 25, 367–380
- De Vries, R. E., Bakker-Pieper, A., Siberg, R. A., Gameren, K. V., & Vlug, M. (2009). The Content and Dimensionality of Communication Styles. *Communication Research*, *36*(2), 178-206
- Dorfman, P. W., & Howell, J. P. (1988). Dimensions of national culture and effective leadership patterns: Hofstede revisited. *Advances in International Comparative Management*, 3(1), 127-150.
- Hall, E. T. (1976). Beyond culture. Oxford, England: Anchor.
- Hater, J. J., & Bass, B. M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. *Journal of Applied Psychology*, 73(4), 695-702. doi: 10.1037/0021-9010.73.4.695

- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations.* Sage publications.
- Hofstede, G. (2002). Dimensions do not exist: A reply to Brendan McSweeney. *Human Relations*, 55(11), 1355-1361. doi: 10.1177/00187267025511004
- Holmes, J., Schnurr, S., & Marra, M. (2007). Leadership and communication: Discursive evidence of a workplace culture change. *Discourse & Communication*, 1(4), 433-451.
- Howell, J. M., & Hall-Merenda, K. E. (1999). The Ties That Bind: The Impact of Leader-Member Exchange, Transformational and Transactional Leadership, and Distance on Predicting Follower Performance. *Journal of Applied Psychology*, 84, 680.–694.
- Kapp, E. A. (2012). The influence of supervisor leadership practices and perceived group safety climate on employee safety performance. *Safety science*, *50*(4), 1119-1124.
- Keegan, A. E., & Den Hartog, D. M. (2004). Transformational leadership in a project based environment: a comparative study of the leadership styles of project managers and line managers. *International Journal of Project Management*, 22(8), 609-617. doi: 10.1016/j.ijproman.2004.05.005
- Kelloway, E., & Barling, J. (2010). Leadership development as an intervention in occupational health psychology. *Work & Stress: an International Journal of Work, Health & Organisations, 24*(3), 260-279.
- De Koster, R. B. M., Balk, B. M., Davelaar, I., & Martens, M. (z.d.). Accidents will happen. Do safety systems improve warehouse safety performance? Rotterdam School of Management, Erasmus University. Geraadpleegd van https://www.evo.nl/site/bewustveilig-onderzoeken-publicaties/\$FILE/Koster%20-%20Do%20safety%20systems%20improve%20warehouse%20safety%20performance .pdf
- De Koster, R. B., Stam, D., & Balk, B. M. (2011). Accidents happen: The influence of safetyspecific transformational leadership, safety consciousness, and hazard reducing systems on warehouse accidents. *Journal of Operations management*, 29(7-8), 753-765.
- Mearns, K., & Yule, S. (2009). The role of national culture in determining safety performance: Challenges for the global oil and gas industry. Safety Science, 47(6), 777-785. doi: 10.1016/j.ssci.2008.01.009
- Mullen, J., Kelloway, E. K., & Teed, M. (2017). Employer safety obligations, transformational leadership and their interactive effects on employee safety performance. *Safety Science*, *91*, 405-412. doi: 10.1016/j.ssci.2016.09.007
- Pacleb, T. G., & Bocarnea, M. C. (2015). The Relationship between Leadership Styles, Leader Communication Style, and Impact on Leader–Member Exchange Relationship within the Banking Sector in the United States. *Challenges, Performances and Tendencies in Organisation Management*, 275-287. doi: 10.1142/9789814656023\_0030

- Paul, J. (2013). Improving communication with foreign speakers on the shop floor. Safety Science, 52, 65-72.
- Pennebaker, J. W., Rimé, B., & Blankenship, V. E. (1996). Stereotypes of emotional expressiveness of northerners and southerners: A cross-cultural test of Montesquieu's hypotheses. *Journal of Personality and Social Psychology*, 70(2), 372– 380. doi: 10.1037/0022-3514.70.2.372
- Saee, J. (2005). *Managing Organizations in a Global Economy*. An Intercultural Perspective. United States of America: Thomson, South-Western.
- Schnurr, S. (2005). 'Humour and Leadership Discourse in Different Workplace Cultures', unpublished PhD, Victoria University of Wellington, New Zealand, Wellington.
- Siu, O. L., Phillips, D. R., & Leung, T. W. (2004). Safety climate and safety performance among construction workers in Hong Kong: The role of psychological strains as mediators. *Accident Analysis & Prevention*, 36(3), 359-366.
- Skakon, J., Nielsen, K., Borg, V. & Guzman, J. (2010) Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. Work & Stress: An International Journal of Work, Health & Organisations, 24(2), 107-139.
- Smit, M., Uijtendaal, L., & Hoeben, J. (2014). Arbeidsongevallenrapport 2014. Geraadpleegd op 1 september 2020, van http://www.inspectieszw.nl/Images/RapportArbeidsongevallen-2014\_tcm335-363443.pdf
- Starren, M. (2016). Multicultural working teams and safety awareness: how effective leadership can motivate safety behaviour. *Psychology*, 7(7), 1015.
- Starren, A., Hornikx, J., & Luiijters, K. (2013). Occupational safety in multicultural teams and organizations: A research agenda. *Safety Science*, 52(2), 43-49.
- Torrance, J.V.B., (2004). *Globalisation and trends in the international construction industry: a Malaysian perspective*. In: Proceedings of the International Conference on Globalisation and Construction: meeting the Challenges and Reaping the Benefits, 17–19 November, Bangkok.
- Venema, A., Den Besten, H., Van der Klauw, M., & Ybema, J. (2013). Arbeidsongevallen in Nederland 2011. TNO, Hoofddorp.
- Vercic, A. T., Vercic, D., & Sriramesh, K. (2012). Internal communication: Definition, parameters, and the future. Elsevier, 223-230.

## Appendix A. Additional analyses

A simple regression analysis showed that the variable uncertainty avoidance explained 6% of the variance in safety awareness (F(1, 131) = 9.99, p = .002). Uncertainty avoidance was shown to be a significant predictor of safety awareness ( $\beta = .27, p = .002$ ). See table 9 below. Safety awareness increases with .27 *SD* for each increase of 1 *SD* of uncertainty avoidance, given that all other variables are kept constant.

Variable В SE B β Intercept 4.88 .30 Uncertainty avoidance .06 .27\* .18  $R^2$ .06 F 9.99 \* .01 < р

Table 7. Simple regression analysis for uncertainty avoidance as a predictor of safety awareness (N=133)

A simple regression analysis showed that the variable high- or low uncertainty avoidance explained 3% of the variance in safety awareness (F(1, 131) = 5.29, p = .023). High- or low uncertainty avoidance was shown to be a significant predictor of safety awareness ( $\beta = .20, p = .023$ ).

Table 8. Simple regression analysis for high- or low uncertainty avoidance as a predictor of safety awareness (N=133)

Variable	В	SE B	β
Intercept	5.27	.24	
High/low uncertainty avoidance	.34	.15	.20*
<i>R</i> <sup>2</sup>	.03		
F	5.29		
* <i>p</i> < .05			

# Appendix D. Dutch questionnaire

Beste deelnemer,

Hartelijk bedankt voor je interesse om deel te nemen aan deze online vragenlijst. Je draagt hiermee bij aan de kennis over interculturele bedrijfscommunicatie en helpt mij om mijn masterscriptie met succes af te ronden.

Zometeen krijg je verschillende werkgerelateerde vragen te zien over jezelf en je leidinggevende. Hierna volgen wat demografische en persoonlijke (werkgerelateerde) vragen.

De vragenlijst zal ongeveer zes minuten duren, al mag je alle tijd nemen die je nodig hebt. Je kan alles invullen; er zijn geen goede of foute antwoorden.

Als je aan het einde van de vragenlijst nog vragen hebt, kan je altijd contact met mij opnemen via c.koers@student.ru.nl.

Alvast hartelijk bedankt! Rhodée Koers

Het invullen van deze vragenlijst zal geheel anoniem worden gedaan en de gegevens zullen uitsluitend worden gebruikt voor de afdeling Communicatie- en Informatiewetenschappen van Radboud Universiteit NIjmegen. Je mag je, indien gewenst, op elk willekeurig moment terugtrekken uit dit experiment.

Ga je akkoord met bovenstaande voorwaarden?

O Ja (4)

🔾 Nee (5)

Skip To: End of Survey If Het invullen	van deze vragenlijst zal geheel anoniem	worden gedaan en de gegevens
zullen uitsluit = Nee		

**End of Block: Block 4** 

Start of Block: Veiligheidsbewustzijn

## De volgende vragen gaan over veiligheid op uw werk.

Geef telkens aan in hoeverre u het eens bent met de stellingen (van 1 tot en met 7).

	1. Helemaal mee oneens (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. Helemaal mee eens (7)
Ik weet wat ik moet doen in het geval van een gevaarlijke situatie. (1)	0	0	0	0	0	0	$\bigcirc$
Ik weet waar ik veiligheidsrisico's (zoals losse schroefjes) moet melden. (2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
lk weet wat ik moet doen als ik tijdens mijn werk gewond raak. (3)	0	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Ik weet welke veiligheidskleding en/of uitrusting is vereist om mijn werk uit te mogen voeren. (4)	0	0	0	0	0	$\bigcirc$	$\bigcirc$
Ik ben op de hoogte van de veiligheidsrisico's die samengaan met mijn baan. (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Ik weet waar de brandblussers zijn in mijn werkomgeving. (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Ik weet welke benodigdheden/apparatuur ik nodig heb om specifieke taken veilig uit te voeren. (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Ik ben op de hoogte van de 1,5 meter afstand regel. (8)	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Ik weet wat ik moet doen als ik corona gerelateerde klachten heb. (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Ik weet hoeveel mensen tegelijk in één ruimte mogen zijn. (10)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

End of Block: Veiligheidsbewustzijn

**Start of Block: Precisie** 

## De volgende vragen gaan over uw leidinggevende.

Geef telkens aan in hoeverre u het eens bent met de stellingen (van 1 tot en met 7).

	1. Nooit (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. Altijd (7)
Mijn leidinggevende uit zich op een professionele manier. (1)	0	0	0	0	0	$\bigcirc$	0
Mijn leidinggevende uit zich op een deskundige manier. (2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mijn leidinggevende drukt zich uit op een precieze manier. (3)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mijn leidinggevende ouwehoert in contact met zijn medewerkers. (4)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mijn leidinggevende blundert in contact met medewerkers. (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mijn leidinggevende drijft de spot met medewerkers. (6)	0	0	0	0	0	$\bigcirc$	$\bigcirc$

End of Block: Precisie

Start of Block: Onzekerheidsvermijding

## De volgende vragen gaan over uw werk.

Geef telkens aan in hoeverre u het eens bent met de stellingen (van 1 tot en met 7).

	1. Helemaal mee oneens (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. Helemaal mee eens (7)
Het is belangrijk om functiebeschrijvingen en instructies tot in het detail beschreven te hebben, zodat ik te allen tijde weet wat er van mij verwacht wordt. (1)	0	0	0	0	0	0	0
Mijn manager verwacht van mij dat ik de werkinstructies zeer nauwlettend opvolg. (2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Regels en voorschriften zijn belangrijk omdat deze aangeven wat de organisatie van mij verwacht. (3)	0	$\bigcirc$	0	$\bigcirc$	$\bigcirc$	0	0
Voorschriften waar ik dagelijks mee te maken heb, helpen mij in mijn werk. (4)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Werkinstructies zijn belangrijk voor mij tijdens mijn werk. (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

### End of Block: Onzekerheidsvermijding

Start of Block: Demografische vragen

### Wat is uw geslacht?

## A precise communication style: the key to reducing industrial accidents?

Wat is uw leeftijd?
Wat is uw woonplaats?
Wat is uw hoogst genoten opleidingsniveau?
O Basis onderwijs (1)
O Algemeen voortgezet onderwijs (2)
O Middelbaar beroepsonderwijs (3)
O Hoger beroepsonderwijs (4)
O Wetenschappelijk onderwijs (5)
O Anders (6)

### In welke sector bent u werkzaam?

$\bigcirc$	Productiohedriif/fabriek	(1)	
$\bigcirc$	Productiebeuriji/Tabriek	(1)	

- Onderwijsinstelling (2)
- O Bouwbedrijf (3)
- $\bigcirc$  Overheidsinstelling (4)
- Transport- of vervoersbedrijf (5)
- O Financiële instelling (6)
- (Web)winkel / Groothandel / Marktkraam (7)
- O ICT-bedrijf (8)
- O Horecagelegenheid (9)
- O Particulier huishouden (10)
- Gezondheids- of zorginstelling (11)
- O Anders (12)

Wat voor soort arbeidscontract heeft u?

- Vast contract (1)
- O Tijdelijk contract (2)
- O-uren contract (3)
- O Anders (4)

Hoeveel uur werkt u gemiddeld per week?

O-8 uur (1)

8-16 uur (2)

16-32 uur (3)

 $\bigcirc$  32 uur of meer (4)

O Anders (5)

\_\_\_\_\_

Hoe groot is het team waarin u werkt?

1-10 anderen (1)
10-20 anderen (2)
20 anderen of meer (3)
n.v.t.: ik werk niet in een team (4)

Werkt uw team met flexibele werkplekken? *Hiermee wordt bedoeld dat teamleden - gedeeltelijk - vrij* worden gelaten in de plek waar zij werken. Voorbeelden zijn thuis, in een ander land, of in een 'flexibel kantoor' werken.

O Nee (1)

◯ Ja, iedereen werkt flexibel (2)

 $\bigcirc$  Ja, een aantal teamleden werken flexibel (3)

 $\bigcirc$  Ja, slechts een klein deel van mijn team werkt flexibel, een aantal werken op een vaste (kantoor)plek. (4)

Welk beroep of welke functie oefent u uit? (Probeer in de omschrijving zo specifiek mogelijk te zijn, bijvoorbeeld door een specialisme of niveau op te geven. Dus niet alleen: Manager of verpleegkundige, maar liever: Manager automatisering, manager zorg of Psychiatrisch verpleegkundige, verpleegkundige niveau 4, verpleegkundige op de spoedeisende hulp, etc.)

Vanaf wanneer werkt u bij uw huidige werkgever?

End of Block: Demografische vragen

# Appendix E. Spanish questionnaire

Querido participante,

Gracias por su interés en participar en este cuestionario. Contribuye al conocimiento de la comunicación empresarial intercultural y me ayuda a completar con éxito mi tesis de maestría.

En un momento se presentará varias preguntas relacionadas con el trabajo sobre usted y su supervisor. A continuación se presentan algunas preguntas demográficas y personales (relacionadas con el trabajo).

El cuestionario le llevará unos seis minutos de su tiempo, aunque puede tomarse todo el tiempo que necesite. Puede rellenar todo; no hay respuestas correctas o incorrectas.

Si tiene alguna pregunta al final del cuestionario, siempre puede contactarme en c.koers@student.ru.nl.

¡Gracias por adelantado! Rhodée Koers

La cumplimentación de este cuestionario se realizará de forma totalmente anónima y los datos solo se utilizarán para el departamento de Ciencias de la Información y la Comunicación de la Universidad Radboud de Nijmegen. Puede retirarse de este experimento en cualquier momento si lo desea.

¿Está de acuerdo con las condiciones anteriores?

O Sí (1)

O No (2)

Skip To: End of Survey If La cumplimentación de este cuestionario se realizará de forma totalmente anónima y los datos solo... = No

End of Block: Default Question Block

Start of Block: Veiligheidsbewustzijn

Las siguientes preguntas se refieren a la seguridad en su trabajo. Indique en qué medida está de acuerdo con las afirmaciones (del 1 al 7).

# A precise communication style: the key to reducing industrial accidents?

	1. totalmente en desacuerdo (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. totalmente de acuerdo (7)
Sé qué hacer en caso de una situación peligrosa. (1)	0	0	0	0	0	0	0
Sé dónde informar los riesgos de seguridad (como tornillos sueltos). (2)	0	$\bigcirc$	0	0	$\bigcirc$	$\bigcirc$	0
Sé qué hacer si me lastimo en el trabajo. (3)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0
Sé qué ropa y / o equipo de seguridad se requiere para realizar mi trabajo. (4)	0	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Soy consciente de los riesgos de seguridad asociados con mi trabajo. (5)	0	0	$\bigcirc$	0	$\bigcirc$	0	0
Sé dónde están los extintores de incendios en mi área de trabajo. (6)	0	0	0	0	$\bigcirc$	$\bigcirc$	$\bigcirc$

## A precise communication style: the key to reducing industrial accidents?

Sé qué suministros / equipo necesito para realizar tareas específicas de manera segura. (7)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Soy consciente de la regla de la distancia de 1,5 metros. (8)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Sé qué hacer si tengo quejas relacionadas con el coronavirus. (9)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Sé cuántas personas pueden estar en un lugar al mismo tiempo. (10)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0

End of Block: Veiligheidsbewustzijn

Start of Block: Presición

## Las siguientes preguntas se refieren a su supervisor.

Indique en qué medida está de acuerdo con las afirmaciones (del 1 al 7).

	1. Nunca (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. Siempre (7)
Mi supervisor se expresa de manera profesional. (1)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mi supervisor se expresa de manera experta. (2)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mi supervisor se expresa de manera precisa. (3)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Mi supervisor tiene conversaciones informales con sus empleados. (4)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
Mi supervisor se equivoca al contactar con los empleados. (5)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0	0
Mi supervisor se burla de los empleados. (6)	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

End of Block: Presición

Start of Block: Evitación de la incertidumbre

## Las siguientes preguntas se refieren a su trabajo.

Indique en qué medida está de acuerdo con las afirmaciones (del 1 al 7).

	1. totalmente en desacuerdo (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7. totalmente de acuerdo (7)
Es importante tener descripciones de trabajo e instrucciones descritas en detalle para saber lo que se espera de mí en todo momento. (1)	0	0	$\bigcirc$	0	0	0	0
Mi supervisor espera que siga las instrucciones de trabajo muy cercanamente. (2)	0	0	$\bigcirc$	0	$\bigcirc$	0	$\bigcirc$
Las reglas y normas son importantes porque indican lo que la organización espera de mí. (3)	0	$\bigcirc$	0	0	0	0	0
Las normas con las que trato todos los días me ayudan en mi trabajo. (4)	0	$\bigcirc$	0	0	0	0	0
Las instrucciones de trabajo son importantes para mí durante mi trabajo. (5)	0	0	$\bigcirc$	0	0	0	0

### A precise communication style: the key to reducing industrial accidents?

End of Block: Evitación de la incertidumbre

Start of Block: Preguntas demográficas

¿Cuál es su sexo? ¿Cuál es su edad? ¿Cuál es su lugar de residencia? ¿Cuál es su nivel educativo más alto? O Educación primaria (1) O Educación secundaria (2) O Bachillerato (3) Estudios universitatios (4) O Diferente (5)

¿En qué sector trabaja?

O Compañía de producción / Fábrica (1)
O Institución educativa (2)
O Compañía de construcción (3)
O Agencia del gobierno (4)
O Empresa de transportes (5)
$\bigcirc$ Institución financiera (6)
$\bigcirc$ (web) tienda / mayorista / puesto de mercado (7)
O Empresa ICT (8)
O Instalación de catering (9)
O Hogar privado (10)
O Centro sanitario (11)

O Diferente (12)

¿Qué tipo de contrato de trabajo tiene?

- O Contrato permanente (1)
- O Contrato temporal (2)
- O Contrato por horas (3)
- O Diferente (4)

¿Cuántas horas en promedio trabaja por semana?

0-8 horas (1)
 8-16 horas (2)
 16-32 horas (3)

32 horas o más (4)

O Diferente (5)

\_\_\_\_\_

¿Cuántos miembros forman el equipo donde trabaja?

1-10 miembros (1)
10-20 miembros (2)
20 miembros o más (3)
n/a: no trabajo en equipo (4)

¿Su equipo trabaja con lugares de trabajo flexibles? Esto significa que los miembros del equipo son, parcialmente, liberados en el lugar donde trabajan. Por ejemplo, trabajar en casa, en otro país o en una 'oficina flexible'.

O No (1)

Sí, todo el mundo trabaja de forma flexible (2)

 $\bigcirc$  Sí, varios miembros del equipo trabajan de manera flexible (3)

 Sí, solo una parte pequeña de mi equipo trabaja de manera flexible, algunos trabajan en una ubicación fija (oficina) (4) ¿Qúe profesión o qué puesto ocupa? (Trata de ser lo más específico posible en la descripción, por ejemplo. especificando una especialidad o nivel. Por lo tanto, no solo: Gerente o enfermera, sino más bien: Gerente de la automatización, gerente de la atención o enfermera psiquiátrica, enfermera de nivel 4, enfermera en el departamento de emergencias, etc.).

¿Desde cuándo empezó a trabajar para su empresa actual?