Master's thesis

Determinants influencing Safety Risks for Multinational Teams in the Netherlands

The effects of leadership style, uncertainty avoidance, language proficiency, safety consciousness and work environment on safety risks for employees of multinational teams in the Netherlands

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FOREWORD AND ACKNOWLEDGEMENTS

This thesis is written as a completion of my Master's program in Communication and Information Sciences at the Radboud University in Nijmegen, the Netherlands.

It summarizes the research I have conducted on workplace safety in multinational teams in the Netherlands. I was immediately drawn to this subject as I find it extremely interesting when different cultures meet. After reading numerous articles on the specific subject and after my thesis proposal had been approved, I could start collecting data which subsequently allowed me to answer my research questions. Collecting data had gone surprisingly well, thanks to the help of Sander Kock who works for a multinational company in Amsterdam.

It was very exciting to analyze the completed surveys and to see what nationalities some of the respondents have. All in all, I have really enjoyed writing this thesis as I was able to examine something that I believed was very interesting and important. I have learned much about the subject and about writing a scientific text.

I would like to thank the Bachelor's group for sharing the responses to their survey with me. In particular, Kaylee Füssmann was very helpful (BA-thesis study "De discrepanties van het veiligheidsbewustzijn", July 2015). This has allowed me to include additional data in my study for comparative purposes. And of course, I would like to thank my supervisor Marianne Starren for her guidance and my co-reader Ms. Nederstigt for her critical look at my initial proposal.

Have fun reading this thesis!

Dinny Pham

CONTENTS

ABSTRACT

This thesis addresses the issue of diverse nationalities at work and deriving safety risks within multinational teams. Using an online survey questionnaire, this study has examined safety risks among Dutch based multinational teams. The overall question to be answered was to what extent these teams' workplace safety was affected by language proficiency of the corporate language (i.e. English), uncertainty avoidance, leadership style and safety consciousness. A comparison with a parallel research study allowed the inclusion of work environment as an additional variable.

The findings suggest that language proficiency in English reduces safety risks for Dutch employees, and that younger natives (Dutch) are more vulnerable to safety risks than older migrants. In addition, the comparison with the parallel research study revealed that work environment plays a vital role in workplace safety. Multinational teams performing construction work are more involved in accidents at work than multinational teams with office jobs.

These findings are particularly valuable for management as they provide evidence about predictors of safety risks for multinational work teams which should support firms in improving their workplace safety.

1   INTRODUCTION

In today's global world, time and distance barriers seem to have faded away, opening up new opportunities worldwide and leading to an increasing occurrence of multinational work teams. Multinational teams (MNTs) can be defined broadly as "organizational teams consisting of three or more individuals from two or more different countries who are provided with tools and procedures to address certain sets of organizational tasks over a longer period of time" (Hajro & Pudelko, 2010, p. 175).

The concept of cultural diversity in the labor market has been an important topic for researchers over the last decades with a great amount of effort devoted to it. One focus is on accidents and/or injuries at the workplace. The safety-specific research on multinational teams has revealed different results for on one hand, the local workers and on the other hand, the migrant workers. It suggests that migrant workers are more vulnerable to safety risks at work than their local colleagues (e.g. Berkhout, 2014).

It is against this backdrop that additional research is needed to understand differences between these two groups of workers and to examine whether and which of these factors are responsible for the different level of involvement in accidents and/or injuries at work. This allows determination of whether higher safety risks at work could be attributed to factors that deal with migrants' national background or to factors unrelated to their migrant status.

The current study, therefore, undertakes a quantitative survey study among multinational teams to examine the link between several factors and safety risks for both local and migrant workers. In particular, this study focuses on the impact of language proficiency of the corporate language (i.e. English), uncertainty avoidance, leadership style and safety consciousness on safety risks for multinational teams in Dutch based organizations. In doing so, multinational firms will be able to better communicate safety risks, rules and procedures and thus, to alleviate this problem for their migrant workers.

This report begins with a literature review related to the variables central to the current study. This includes e.g. explanations of how cultural diversity affects working teams, how safety risks are measured and earlier findings of the effects of the above-mentioned variables on safety risks for multinational teams. The literature review is followed by the methodology section, results of the current study and finally, a conclusion and discussion with remarks regarding the results.

2 LITERATURE REVIEW

In this chapter of the thesis, the theoretical background of the study is explained. Theories on the included variables are essential for understanding the ways in which workplace safety is experienced by employees in multinational teams.

2.1 Cultural diversity in work teams

Today's global economy is featured with a continuously increasing number of employees with different national backgrounds, leading to a high variety in nationalities in work team composition. Studies have shown that members of the same national background, i.e. cultural background, often share common perspectives and may therefore act in similar ways. In contrast, members of different national backgrounds are likely to have different perspectives which could result in different behavior in similar events (Gibson, 2004).

To see whether this phenomenon applies to safety-related situations and specifically, to see what it means for the level of safety risks at work, multinational teams have been the subject for the current study.

2.2 Workplace safety

According to Gibson's (2004) line of thinking, an exclusively shared view by members of one culture may affect their attitude, and subsequently, their behavior (Ajzen, 1991). The question that follows is whether and how this affects safety risks at work. To understand why migrant workers appear to be more involved in accidents and/or injuries at work than their local colleagues (Berkhout, 2014), it is essential to first establish how workplace safety is measured and reported.

Workplace safety (i.e. safety climate) is defined as "a snapshot of safety culture at a given point of time, more specifically, it is the surface and measureable feature of safety culture" (Fan, Lo, Ching & Kan., 2014, p. 388). There are different ways of taking this so-called 'snapshot'. One can rely on organizational safety data, or one can choose to consult self-report injury data.

In their study on the reliability of these two ways of reporting accidents and/or injuries, Eisenberg and McDonald (1988) have found 35% of organizational safety reports to be

misleading data. This means that injuries were either included for invalid reasons or being left out when should have been reported. The same study showed a positive link between self-report data and observations. This finding suggests that consulting perceptions of safety risks provides an accurate assessment of actual safety outcomes, which is why many researchers prefer the attitudinal approach over other approaches (Seo, 2005). The current study therefore assesses perceptions that employees hold about their accidents and/or injuries when determining safety risks at work.

2.2.1   Categories of predictors of safety outcomes

This study inquires factors that can predict safety risks for multinational work teams. Prior research into predictors of safety outcomes show that these can eventually be classified into two different categories, i.e. situation- and person-related factors (Christian et al., 2009). Examples of situation-related factors are leadership, management commitment, HRM practices, job risk and work pressure. Person-related factors are personality characteristics (such as tolerance of uncertainty, extraversion and locus of control) and attitudes toward job and safety. A more detailed overview of antecedents of safety outcomes by Christian et al. (2009) can be found in the appendix.

The same distinction in safety predictors was made by Van Hooff, Smulders and Vroome (2009) who have conducted a large-scale survey research among (23.400) native and migrant workers in Dutch based organizations to investigate the relationship between ethnicity and health was studied. The findings confirmed that migrant workers have indeed worse health outcomes than local workers, which Van Hooff et al. (2009) link to worse working conditions and higher safety risks at work. Van Hooff et al. (2009) suggest that the differences in health outcomes derive from work environments on one hand, and the migrants' characteristics on the other hand.

The current study looks into both categories of predictors, as according to Christian et al. (2009), perceived leadership and work environment as situation-related, and uncertainty avoidance and safety consciousness are person-related. Language proficiency can be regarded as either person- or situation-related. The results of the current study will reveal what category is significantly related to safety risks for multinational teams. Subsequently, this will make it easier for multinational firms to enhance workplace safety for both migrant and local employees.

2.3   **Leadership in multinational teams**

Research has shown that leadership quality is critical to the ongoing success of any multinational team. It is believed that a shared nationality between a leader and its members benefits a multicultural team's functioning (Schubert & Dijkstra, 2009) and that this also involves a multicultural team's workplace safety. This section of the thesis study dwells on leaders' aspects that are in dealing with cultural differences regarding workplace safety. In this line of thinking, leadership style may benefit workplace safety as some leaders are capable of effectively communicating safety regulations. Subsequently, safety risks at work can then be mitigated.

2.3.1   Intercultural leadership competences

In their study on the effectiveness of multinational teams, Schweiger, Atamer and Calori (2003) have found leadership skills often to be the key in solving problems faced by organizations. Van der Zee and Van Oudenhoven (2001) have specifically identified intercultural leadership competences that should help leaders to effectively manage their multinational teams. These competences include *cultural empathy*, *open-mindedness*, *social initiative, emotional stability* and *flexibility*.

Cultural empathy refers to the capacity to understand what another person is experiencing from the other person's cultural frame of reference. Open-mindedness refers to an unprejudiced way of approaches other people's views. Social initiative is the tendency to take the first step in approaching others in social situations. Emotional stability is the tendency to be calm in stressful situations. Lastly, flexibility refers to the ability to positively view the unknown as interesting and challenging (Van der Zee & Van Oudenhoven, 2001).

These competences are cross-cultural specific and show similarities with the aspects of transformational leadership. *Transformational leadership* is defined as "a process whereby leaders and followers raise one another to higher levels of morality and motivation" (Burns, 1978, p. 19). According to Bass & Avolio (1989), transformational leadership consists of four components: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

The first component of transformational leadership, idealized influence, is reflected in charismatic leadership. These leaders have a clear vision and can act in certain ways which will make their followers respect, trust and admire them. One could say that these leaders are

considered to be role models to their followers. The second component is inspirational motivation. Leaders who possess this component have a natural way of uplifting and inspiring their followers to get on board. They display enthusiasm and optimism, and eventually create 'team spirit'. The third component is intellectual stimulation and means that transformational leaders encourage their followers to be critical and creative. The last component, individualized consideration, entails that transformational leaders take individual needs into consideration and encourage personal development. Thus, one can say that this type of leadership can be defined based on its influence on the followers.

Hajro & Pudelko (2010) have also examined effective MNT leader qualities. They have interviewed 70 leaders of five different multinational corporations to explore what competences successful MNT leaders should possess. The results indicated that MNT leaders should be 'cross-cultural aware' in order to effectively lead multinational teams. Cross-cultural awareness is conceptualized as "understanding values and beliefs of people from various cultures and be willing to adapt their own behavior to different contexts" (Hajro & Pudelko, 2010, p. 185). One could say that both competences are interconnected, as cross-cultural awareness is a condition for MNT leaders to integrate different cultural viewpoints.

Not only is adequate leadership critical in the effectiveness of multinational teams, leaders are also in the position to positively influence employees' safety behavior and outcomes (Christian et al., 2009; Fernandez-Muñiz et al., 2014). In their study on safety leadership, risk management and safety performance in Spanish firms, Fernandez-Muñiz et al. (2014) found effects that suggest employees are more motivated to engage in safety-related behaviors when they consider that the management, i.e. leader, is concerned about their well-being. Thus, it is favorable if leaders adopt a proactive attitude toward safety and risk management.

2.3.2 *Safety-specific transformational leadership (SSTL)*

Drawing from this conceptualization, Barling et al. (2002) have identified a safety-specific transformational leadership style. A safety-specific transformational leader (SSTL) is defined as "a manager has the ability to inspire employees, challenge employees at the intellectual level, engage employees in ensuring the overall safety of the work floor, and pro-actively manages safety issues" (De Koster et al., 2011, p. 759). Recent studies have shown that SSTL can serve as an important predictor of safety performance (De Koster et al., 2011; Inness, Turner, Barling and Stride, 2010). Innes et al. (2011), for instance, investigated the impact of transformational leaders on safety performance of employees with two jobs. Their findings

revealed that transformational leadership was clearly related to safety participation, and therefore safety performance. According to this line of thinking, SSTL is related to workplace safety in that it can reduce safety risks for employees. The characteristics are believed to transcend cultural boundaries, and the safety-specific benefits of SSTL therefore also apply to multicultural teams.

Just as with safety risks, the measurement of leadership style requires an attitudinal approach (Christian et al., 2009). Biggart and Hamilton (1987) explain that leadership is rooted in the minds of the employees and cannot be fully understood apart from the context in which it exists. Therefore, when assessing leadership in multinational teams, this study is interested in the perceptions that the employees hold regarding their leader ("perceived leadership style").

2.4   Tolerance of uncertainty

Although the antecedents of safety outcomes described by Christian et al. (2009) (see Appendix A) do not include national culture as one of them, the main issue in the current study is that people with different national backgrounds are proven to be disproportionately more involved in accidents and/or injuries at work than natives (Guldenmund et al., 2013; Starren et al., 2013). To learn more about this, further examination on the relationship between migrants' characteristics and potential threats to workplace safety is required.

This chapter is called 'tolerance of uncertainty' as it covers multiple theories (i.e. uncertainy avoidance, anxiety/uncertainy management theory and tolerance of ambiguity) on dealing with uncertainty and/or ambiguity in an (organizational) team setting.

2.4.1   Hofstede's cultural dimensions

Before we learn how uncertainty is a relevant cultural dimension in predicting workplace safety, it is important to understand the role of national culture in multinational teams. Research into cross-cultural practices has demonstrated that culture largely frames the ways in which people interpret events and express themselves (e.g. Hofstede, 1980; Trompenaars, 1997). Hofstede (1980, p. 24), widely regarded as a pioneer of contemporary culture resarch, defined *culture* as "the collective programming of the human mind that distinguishes the members of one human group from those of another".

This definition also applies to *national culture*, in which members of 'nations or societies' are distinguished from another (Hofstede, 1991, p.12). Studies have shown that a

substantial part of variation in attitudes (i.e. 25-50%) can be explained by one's national background (Gannon, 1994), which is why this study also looks into the home countries of its respondents to investigate the existence of certain effects that are suggested by earlier research.

In order to measure (and compare) different 'collective programs' of members of certain groups, Hofstede (1980; 2001) has developed a model to do so. This model distinguishes five different (national) culture dimensions: power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance and long-term vs. short-term orientation. Each national culture is reflected in specific values on these dimensions, hierarchically ranging from relatively unimportant (0) to values which are considered more important (100). Thus, a value is "a broad tendency to prefer certain states of affairs over others" (Hofstede, 1980, p. 19).

2.4.2   *Uncertainty avoidance*

Uncertainty avoidance is defined as "the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity" (Hofstede, 1997; 2001). It is one of the five cultural dimensions by Hofstede (1980), whose cultural model will be further elaborated in section 2.4.1. The uncertainty avoidance dimension states that individuals from strong UAI cultures feel less comfortable with uncertainty and ambiguity than people from cultures exhibiting weak UAI (Hofstede, 2001, p. 148). Uncertainty avoidance is one of the independent variables in the current study as it incorporates national culture and has particular relevance as a potential predictor for safety outcomes (e.g. Burke, Chan-Serafin, Salvador, Smith & Sarpy, 2008; Starren et al., 2013).

Shackleton and Ali (1990) elaborate that uncertainty avoidance is highly associated with formalization and procedural consistency, resulting in well-documented safety rules and procedures. Burke, Holman and Birdi (2006) point out the fact that organizations in strong UAI cultures often provide more structured training, in which employees are given the opportunity to e.g. ask questions. This enables employees to engage more in safety issues and to develop more comprehensive understanding of safety procedures within their organization. In addition, employees from strong UAI cultures are expected to be naturally more inclined to abide by the workplace safety rules and procedures than their colleagues from weak UAI countries (Starren et al., 2013). Employees from strong UAI cultures also seem to be more willing to carry out risky behavior first, if that means they can ultimately reduce or eliminate ambiguities (Schubert & Dijkstra, 2009). These statements suggest that high uncertainty avoidance could result in less vulnerability in the workplace and better safety outcomes.

However, there are studies that suggest the contrary. Opposing views argue that these high structured trainings and procedures lead to rigidness among employees and therefore, an inability to anticipate and respond to unexpected emergency situations regarding safety (Burke et al., 2008; Starren et al., 2013). This means that a high level of uncertainty avoidance would negatively affect safety outcomes. For example, an employee from Germany, who is expected to have a reasonable high uncertainty avoidance compared to someone from e.g. Denmark, is used to plan everything carefully and proceed with changes step by step. This leaves him/her less capable of responding to unexpected situations with regard to workplace safety. On the other hand, the employee from Denmark may experience fewer difficulties anticipating the unexpected event and is more capable responding accordingly.

As a result of above-mentioned studies, the current study expects there is a relationship between uncertainty avoidance and safety risks at work. According to this line of thinking, different national scores on Hofstede's Uncertainty Avoidance may lead to different safety risks for multinational teams. However, because there is evidence advocating both directions in this relationship, the current study does not raise expectations about the specific effects of uncertainty avoidance on safety risks.

2.4.3 *Anxiety/uncertainty Management (AUM) Theory*

To enhance comprehensibility regarding workplace safety, migrant workers can choose to engage with their (local) colleagues. That way, migrants can actively learn about safety policies and procedures. However, studies have shown that it can be difficult to interact with someone new, especially with individuals from other cultures than your own (Duronto, Nishida & Nakayama, 2005).

The Anxiety/uncertainty Management (AUM) Theory, introduced by Gudykunst (1995), suggests that the effectiveness of interpersonal and intergroup communication (a message is understood by the receiver) is dependent on the extent to which individuals are able to manage their anxiety and uncertainty in social situations. Guerro and Gudykunst (1996) conceptualize *uncertainty* as "an inability to predict others' feelings, thoughts and behavior" (p. 43), of which *anxiety* is the affective equivalent (Gudykunst, 1998).

According to this theory, anxiety is reflected in information processing. Whenever the level of anxiety is either very low or very high, individuals are less capable of processing information rightfully. When experiencing a very low amount of anxiety, individuals lack

13

motivation to properly communicate with one another. At a very high level of anxiety, individuals process information in a (too) simplified manner, relying on heuristics and cues.

The level of uncertainty is affiliated with predictability and novelty. Both ends of the uncertainty-spectrum lead to inability to correctly predict others' thoughts and behavior. This is due to the lack of confidence in very high levels of uncertainty and overconfidence in very low levels of uncertainty.

For individuals to communicate in an effective and satisfying way, Gudykunst (1998) suggest that these amounts of anxiety and uncertainty should not exceed their minimum and maximum allowed levels. In this theory, he refers to these levels as so called thresholds.

The same logic holds true for intercultural dialogue (e.g. Gudykunst & Nishida, 2001). In an experimental study, Samochowiec and Florack (2010) tested the impact of anxiety and uncertainty on the willingness to interact with members from other cultures. The participants in this study (Swiss students) were presented with scenarios in which they had the chance to spend time with individuals from foreign cultures. The results show that the students were more willing to interact with a member of a foreign culture whenever this other individual was easy to predict.

This is in line with the reasoning of the AUM theory, and can be applied in the current study to examine communication practices in multicultural teams. The AUM theory is relevant to fully grasp the concept of tolerance of uncertainty.

2.4.4   Tolerance of ambiguity

The concept of tolerance of ambiguity (AT) refers to "the way an individual (or group) perceives and processes information about ambiguous situations or stimuli when confronted by an array of unfamiliar, complex, or incongruent clues (Furnham & Ribchester, 1995, p. 179). Furnham and Ribchester (1995) explain that uncertainty and ambiguity show similarity but are not equivalents. Specifically, ambiguity can be seen as a part of uncertainty. Uncertainty is therefore a bigger concept compared to ambiguity.

2.5   Language proficiency in corporate language

Language proficiency in the common corporate language has proven to be a serious barrier for multinational teams to deal with (Paul, 2013; Trajkovski & Loosemore, 2005; Wozniak, 2010). Some researchers have linked the problem to safety issues in multinational

work settings (e.g. Starren et al., 2013; Trajkovski & Loosemore, 2005), which means that employees with limited language comprehension and fluency have more difficulties understanding safety rules and procedures which in turn, makes them more exposed to safety risks at work. Other consequences for employees who are less capable of expressing their opinions in the common corporate language include being excluded from group interactions, communications and decision-making (Janssens & Brett, 2006).

The importance of language proficiency in multinational teams has been underlined in an exploratory study on workplace safety in firms working with foreign contractors and personnel. Schubert and Dijkstra (2009) interviewed safety experts to gain sharper insight into everyday complications and best practices experienced by multinational companies in the agro, gas and chemical industry in the Northern Netherlands. Based on the outcomes of these interviews, Schubert and Dijkstra (2009) were able to cluster the common problems for multinational firms into five problematic areas, with language being one of them.

Barner-Rasmussen and Björkman (2007) have also investigated the significance of language in multinational work teams. Their study investigated the relationship between language fluency and socialization mechanisms in multinational corporations in China and Finland. Language fluency was conceptualized as "the extent to which persons from one multinational corporation unit, when communicating with another unit, are able to speak or write easily and accurately in the language in which the communication takes place" (p. 106). This description is considerably the same as how language proficiency is conceptualized in the current study, except we include a safety-specific focus. Language proficiency with regard to workplace safety is therefore referred to as an individual's capability to understand a language in a way that allows them to understand safety risks, rules and procedures. The results showed that language fluency is significantly related to a shared vision and perceived trustworthiness in both Chinese and Finnish subsidiaries. Once again, the importance of language fluency/proficiency in cross-cultural communication is being stressed.

To understand how language proficiency could affect workplace safety, it is important to first understand the potential communication problems to arise in multinational teams. Triandis (1972) explain that sharing a common corporate language is often positively related with shared perceptions of rules and collective norms, roles and values. This is in line with the Sapir-Whorf hypothesis which states that in linguistics, the way individuals think is strongly affected by their native language(s) (Zander, Mockaitis & Harzing, 2010). The Sapir-Whorf hypothesis implies that certain perspectives can only be understood by individuals who share the same native language.

15

With regard to workplace safety, this means that team members who share a native language are likely to also share the same perspectives and understandings on safety rules and procedures. Moreover, it is plausible that safety rules and procedures communicated in one common corporate language (e.g. English) are less understood by those who live in another language.

A multinational firm then has the choice of either implementing a common corporate language that is comprehensive for all employees (or only hire employees with adequate language comprehension and fluency) or communicating safety risks, rules and procedures in the migrants' native language(s). Both communication strategies have their drawbacks.

Implementing a common corporate language strategy and even providing language trainings does not necessarily eliminate linguistic differences. Some migrant workers are only staying in their host countries for a temporary period of time, leaving them with little desire to learn the native language (Paul, 2013).

Communicating safety issues in the migrants' native language would require a firm to translate its safety guidelines. When doing so, there are a few implications that multinational firms should take into account. Especially since multinational firms usually have more than then different spoken languages amongst the workforce (Starren et al., 2013). For instance, Marschan-Piekkari, Welch and Welch (1999) have come across misunderstandings that are often inevitable when filtering and translating (safety) information. This means that the true meaning of words and sentences often gets lost in the translation, ultimately missing its purpose of effectively communicating safety issues to the employees.

A popular alternative to communicate safety issues in multinational firms is therefore the use of pictograms (Starren et al., 2013). However, this approach also has its drawbacks. Firstly, not every pictogram is perceived in the same way by people with different cultural backgrounds. Thus, it is mandatory to test these safety pictograms beforehand. Secondly, the messages conveyed by pictograms are restricted. Studies show that pictograms enable workers to recognize safety risks and rules, but do not clearly communicate safety procedures for in dangerous situations (Starren et al., 2013).

Because of the restricted possibilities of pictograms, companies can choose to describe their safety rules and procedures in flyers. Another way for companies to limit, or even eliminate, safety risks is to offer intensive and mandatory safety trainings (possibly also in other languages than only the common corporate language) to their employees – safety trainings that would especially encourage their migrant employees to understand and obey safety precautions.

Starren et al. (2013) explain that this is a way that allows all workers to actively learn about safety rules and procedures.

2.6   Safety consciousness

Studies on workplace safety often include safety consciousness, and it has proven to enhance safety performance (Christian et al., 2009). Barling et al. (2002, p. 489) define safety consciousness as "an individual's own awareness of safety issues" and explain that it applies on different levels. Cognitive-wise, safety consciousness means that an individual is mentally aware of safety issues at work. Behavior-wise, safety consciousness implies being able to safely perform tasks and/or to follow safety procedures.

According to Christian et al. (2009), it is this link between both levels of safety consciousness that forms the precondition for safety consciousness to enhance workplace safety (Christian et al., 2009). The underlying premise is that being aware of safety issues enables employees to foster operational safety and/or to accurately deal with dangerous situations. This reduces their vulnerability at work (Christian et al., 2009; Starren et al., 2013).

In addition, Starren et al. (2013) argue that safety consciousness is influenced by an individual's risk perception and attitude towards these safety risks. Risk perception is described as the extent to which a risky situation is actually perceived as somewhat risky by the individual. The attitude towards a risky situation is linked with one's attitude towards sensation in terms of drug or alcohol abuse.

However, in their study on safety performance in Dutch warehouses, De Koster et al. (2011) did not find support for safety consciousness to contribute to safety performance among employees of warehouses. These contradictory results show that more research is needed on the role of safety consciousness on safety risks at work.

2.7   Work environment

Studies have shown that work environment also plays a role in the vulnerability of migrant workers. Safety problems are generally more present in construction and agriculture than in work offices, but the problem especially accounts for this particular group of employees due to the above-mentioned aspects (Bust, Gibb & Pink, 2008; Guldenmund et al., 2013).

With this aspect in mind, this study compares its results to the results of a parallel study which differs from the current study in terms of work environment. Whereas the current study includes multinational teams with office jobs, the parallel study focuses on multinational teams performing construction work. This allows us to investigate the role of work environment on safety risks at work.

3   RESEARCH DESIGN AND METHODOLOGY

3.1   Research questions

The issues above have been narrowed down to the following research question and sub-questions. The **main research question** is:

To what extents do leadership style, uncertainty avoidance, language proficiency, safety consciousness and work environment predict safety risks for English speaking multinational teams in the Netherlands?

Sub-questions:

1. *To what extent does leadership style affect safety risks for multinational teams in the Netherlands?*

2. *To what extent does uncertainty avoidance affect safety risks for multinational teams in the Netherlands?*

3. *To what extent does language proficiency in English (as common corporate language) affect safety risks for English speaking multinational teams in the Netherlands?*

4. *To what extent does safety consciousness affect safety risks for multinational teams in the Netherlands?*

5. *To what extent does work environment affect safety risks for multinational teams in the Netherlands?*

Note that all questions will be answered from the employees' point of view, not the managers'.

3.2   Research design model
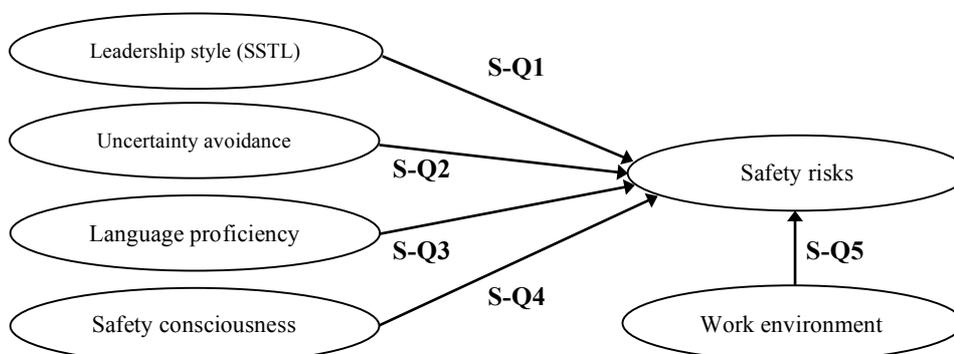
Figure 1.   Research design model

3.3 Instruments

A survey questionnaire, containing a total of 34 questions, was used as data-gathering instrument. It consisted of existing questions used in previous studies to properly determine the perceptions that the respondents hold about the five variables underpinning this study – leadership style, uncertainty avoidance, language proficiency, safety consciousness and safety risks. Additional questions were asked to acquire demographic information about the respondents, i.e. sex, age, education level and home country. Table 1 provides an overview of all variables used in the current study and their basis of validity.

Table 1.   Variables and measures

	Variable	Measure	Value	Based on	Number of items	Cronbach's alpha (α)
	Dependent variable					
1.	Safety risks	Self-report injury data at work	Likert scale from 1 to 7	'National Survey Work Circumstances' by Statistics Netherlands, 2013	3	.67
	Independent variables					
2.	Leadership style (SSTL)	Perceptions of respondents' leaders and their attitude towards safety issues on the work floor	Likert scale from 1 to 7	Christian et al., 2009; De Koster et al., 2011	10	.92
3.	Uncertainty avoidance	An individual's attitude toward uncertainty and ambiguity at work	Likert scale from 1 to 7	Dorfman and Howell (1988); Culpepper and Watts, 1999; Hofstede, 2001	5	.81
4.	Language proficiency (in English)	Self-estimation of an individual's capability to understand English in a way that allows them to understand safety risks, rules and procedures	Likert scale from 1 to 7		3	.98
5.	Safety consciousness	Self-estimation of an individual's knowledge about safety issues at work	Likert scale from 1 to 7	Barling et al. (2002); De Koster et al., 2011	6	.83

*Safety risks w*as measured with question items originated from the National Survey for Work Circumstances ("NEA") by Statistics Netherlands ("CBS") (2013). Because in this study, the *perceived* safety risks is measured (instead of consulting organizational safety reports), it is important to note that the outcome of this variable relied on the perceptions that the employees hold of their working environment, i.e. safety policy and practices (Seo, 2005). An example item is: "In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day". Therefore, a high score on safety risks means a high involvement in accidents at work.

Safety-specific transformational leadership (SSTL) was measured using Barling et al. (2002)'s ten-item scale, which has also been employed by De Koster et al. (2011). The outcome shows to what degree the respondent's manager shows resemblance to a safety-specific transformational leader – someone who "has the ability to inspire employees, challenge employees at the intellectual level, engage employees in ensuring the overall safety of the work floor, and pro-actively manages safety issues" (De Koster et al., 2011, p.759). The questions for SSTL were subdivided into the components that have been conceptualized by Bass and Avolio (1989) – idealized influence, inspirational motivation, intellectual stimulation, individualized consideration and contingent reward. An example item is: "My manager encourages me to express my ideas and opinions about safety at work" (for the component 'intellectual stimulation').

Uncertainty avoidance was measured using question items developed by Dorfman and Howell (1988) and tested by Culpepper and Watts (1999). Because this variable also needed to be measured on the individual level, it was important to use items that allowed us to do so. Hofstede's study measures uncertainty avoidance at the societal level which is why his question items would not have been the proper measure for this study. An example item is: "Rules and regulations are important because they inform employees what the organization expects of them".

Language proficiency was measured with a three-item scale regarding a respondent's capability of reading, listening, understanding and responding to safety regulations in English, which was the common corporate language for the multinational teams. An example item is: "I am capable of listening to English safety regulations and then speak in response".

Safety consciousness was measured with a six-item scale developed by Barling et al. (2002), which has also been applied in De Koster et al. (2011). An example of an item is: "I am well aware of the safety risks involved in my job".

Reliability estimates for the current study's variables were $\alpha = .67$ for safety risks, $\alpha = .92$ for SSTL, $\alpha = .81$ for uncertainty avoidance, $\alpha = .98$ for language proficiency and $\alpha = .83$ for safety consciousness. As these Cronbach's Alpha values are above the generally agreed upon lower limit of .70, with the small exception of safety risks, the internal consistency reliabilities are considered to be acceptable. The reliability of safety risks ($\alpha = .67$) is, however, also acceptable as Cronbach's alpha may decrease to .60 in exploratory research (Hair, Black, Babin & Anderson, 2010, p. 123), which is what the current study is.

All question items for all variables were assessed using a seven-point Likert scale, ranging from 1 "I strongly disagree" to 7 "I strongly agree". The consistency in scaling technique allowed an accurate and easy comparative analysis of responses with the use of statistics for data interpretation.

For an overview of all items measuring the five variables, see Appendix B.

3.4 Procedure and respondents

Invitations to participate in the online survey were sent via email and social media to employees of multinationals that were located in the Netherlands. The employees had to be part of multinational teams, which according to the literature, are teams that consist of three or more individuals that are from two or more different countries (Earley & Gibson, 2002).

Survey results were collected over a two-week period, resulting in a total of 62 respondents. These 62 respondents were all members of multinational teams and all had office jobs. Among these respondents, 40 were male (64.50%) and 22 were female (35.50%). The mean age was 30.13 years, with a range of 21 to 57.

3.4.1 Parallel research study

In a parallel research study, the same variables were measured on 194 respondents in multinational teams in a different work setting, i.e. construction work. Among these 194 respondents were 141 males (72.70%), 52 females (26.80%) and one person missing the gender indication (0.50%). The mean age was 38.02 years, with a range of 20 to 65. The responses to this parallel study were included for comparative purposes.

The descriptive statistics show that the respondents of the two studies (office jobs vs. construction work) mainly differed in education level. The majority in the main study (office jobs) held a Master's or PhD degree (70.97%), whereas the majority in the parallel study

(construction work) had only completed high school (40.20%). A complete overview of the respondents' education level is provided in Table 2.

Table 2.   Education level of respondents for both the main study (*N*=62) and the parallel study (*N*=194)

Education level	**Main study (office jobs)**	**Parallel study (construction work)**
	Number of respondents	
1. Less than high school	0	25
2. High school graduate	0	78
3. Some college, no degree	1	61
4. Bachelor's degree	17	24
5. Master's degree	41	0
6. PhD degree	3	0

Note: in the parallel study, there were six persons missing the education level indication

As for gender, a chi-square test between work environment and gender showed no significant relationship (χ^2 (1) = 1.66, *p* = .197).

3.5   Statistical analyses

In the first analysis, Pearson's correlations were assessed to determine the relationships between the variables. Next, the collected data were interpreted by applying multiple regression analyses. Then, a one-way ANOVA analysis was performed to find significant differences between groups of respondents. Finally, an independent t-test was performed to compare the responses of the current study to those of the parallel study, which was different from the current study in terms of work environment (office jobs vs. construction work).

4 RESULTS

4.1 Intercorrelations among study variables

A Pearson's correlation analysis showed that uncertainty avoidance significantly correlated with age (r (62) = -.35, p = .005) and SSTL (r (62) = .44, p < .001). Safety consciousness correlated significantly with SSTL (r (62) = .44, p < .001) and uncertainty avoidance (r (62) = .42, p = .001). Also, a significant correlation was found between safety risks and age (r (62) = -.25, p = .050). Therefore, these relationships require further examination.

An overview of all intercorrelations among the study variables for the sample as a whole is presented in Table 3.

Table 3. Correlations (r) between age, sex, education, SSTL, uncertainty avoidance, language proficiency, safety consciousness and safety risks for multinational teams (office jobs) (N=62)

Variable	Age	Sex	Education	SSTL	Uncertainty avoidance	Language proficiency	Safety consciousness	Safety risks
Age								
Sex	-.21							
Education	.18	.22						
SSTL	-.22	-.02	-.17					
Uncertainty avoidance	-.35**	.15	-.05	.44**				
Language proficiency	.10	-.06	.02	.15	-.04			
Safety consciousness	-.23	-.20	-.06	.44**	.42**	-.03		
Safety risks	-.25*	.02	-.11	.09	.10	-.21	.07	

* p < .05, ** p < .01

To prevent multicollinearity from impacting the regression model, the independent variables have been mean-centered (Hair et al., 2010, p. 161). This allows maximum prediction in this multiple regression equation.

4.2 Determinants influencing safety risks for multinational teams

A multiple regression analysis was then employed to obtain a fuller understanding of what and how the independent variables contribute to a regression equation. It showed that none of the variance of safety risks could be explained by the independent variables (F (4, 57) = .92, p = .460). No variable was found to be a significant predictor for safety risks at work (see Table 4) (sub-questions 1-4).

The relatively large number of Dutch respondents compared to respondents from other companies (36 out of 62 respondents) called for an assessment of the specific effects for this group of respondents. This has led to a new analysis with additional variables. The variable 'home country' (see Appendix C) was recoded into 1 = the Netherlands, and 0 = 'everything else'. A second new variable was an interaction variable between all Dutch respondents and their level of language proficiency. The second multiple regression analysis, in which the original variables were complemented with the two additional variables, produced an increase to 19% in explained variance in safety risks (F (6, 55) = 3.33, p = .007). The interaction variable between Dutch respondents and their level of English proficiency turned out to be a significant predictor of safety risks (ß = -.50, p < .001), but the other variables did not.

Table 4.   Results of multiple regression analyses on safety risks in multinational teams with office jobs (*N*=62)

Variable	Step 1			Step 2		
	B	*SE B*	*B*	*B*	*SE B*	*β*
Step 1						
SSTL	.08	.12	.10	.01	.11	.02
Uncertainty avoidance	.03	.11	.04	.07	.10	.10
Language proficiency	-.20	.12	-.22	.01	.12	.01
Safety consciousness	.00	.10	.00	-.00	.09	-.01
Step 2						
NLD[a]				.23	.19	.15
NLD*Language proficiency				-.98	.26	-.50***
R²	-.01			.19		
F	.92			3.33**		

[a]All other included countries = 0, The Netherlands = 1
** *p* < .010, *** *p* < .001

4.2.1 Interaction effect Dutch respondents and language proficiency

To further examine the interaction effect between Dutch respondents and their level of language proficiency, a split sample analysis was conducted (see Table 5). All data were split by home country and two subgroups were created: (1) Dutch respondents and (2) respondents from other countries included in this study (see Appendix C).

A multiple regression analysis performed for these two groups demonstrated that for Dutch respondents, 30% of the variance of safety risks was explained by the independent variables (F (4, 31) = 4.77, p = .004). Language proficiency was negatively related to safety risks for Dutch respondents (ß = -.59, p < .001). This means that low language proficiency is correlated with higher safety risks. Language proficiency, therefore, contributes to lower involvement in accidents at work for Dutch employees (sub-question 3).

The other study variables (SSTL, uncertainty avoidance and safety consciousness) did not significantly relate to safety risks for Dutch respondents (ß = -.22, p = .234; ß = .16, p = .338; ß = .12, p = .462). For non-Dutch respondents, 6% of the variance of safety risks could be explained by the independent variables (F (4, 21) = .66, p = .628). No variable was found to be a significant predictor for safety risks for this subgroup.

Table 5.   Results of a split sample multiple regression analysis for Dutch respondents (*N*=36) and non-Dutch respondents (*N*=26) with office jobs on safety risk

Variable	Dutch-respondents			Non-Dutch respondents		
	B	*SE B*	*B*	*B*	*SE B*	*β*
SSTL	-.21	.17	-.22	.20	.14	.33
Uncertainty avoidance	.13	.14	.16	.08	.16	.14
Language proficiency	-.98	.24	-.59***	-.04	.12	-.08
Safety consciousness	.09	.13	.12	-.09	.15	-.18
R²	.30			-.06		
F	4.77**			.66		

** p < .010, *** p < .001

4.3   Interpreting high and low scores for safety risks

To further examine the responses to the survey, a closer look was given to safety risks (dependent variable) specifically. The data show that only 11 out of the 62 respondents (17.74%) scored relatively high (3 or higher) on safety risks. This means that these 11 respondents have been involved in (near) accidents at work in the past 12 months, and perceive safety risks as rather low. To gain more understanding as to what these 11 respondents have in common, a closer look was given into their demographic information (i.e. age, gender and education level) and a comparison has been made on demographic and study variables between these respondents and the respondents with rather low scores on safety risks.

With regard to gender, eight respondents were male (72.73%) and three were female (27.27%). Among the respondents with low scores on safety risks 32 were male (62.70%) and 19 were female (37.30%). With regard to education level, no major differences were apparent between the two groups. Both the majority of the group with high scores on safety risks (63.64%) and the low scores on safety risks (72.55%) held a Master's or PhD degree.

A one-way ANOVA analysis for age with score on safety risks as factor revealed that respondents with high scores on safety risks are significantly younger compared to respondents with low scores on safety risks (F (1, 60) = 4.00, p = .050). One-way ANOVA analyses for study variables SSTL, uncertainty avoidance, language proficiency and safety consciousness with score on safety risks as factor showed no significant differences between the two groups. This is reported in Table 6.

Table 6.   Means and Standard Deviations of the demographic and study variables for respondents with high and low scores on safety risks

Variable	Respondents with high scores on safety risks (*N*=11)		Respondents with low scores on safety risks (*N*=51)		ANOVA	
	M	*SD*	*M*	*SD*	*F*	*p*
Age	25.55	2.91	31.12	9.08	4.00	.050
SSTL	.42	1.33	-.09	.90	2.39	.128
Uncertainty avoidance	.44	1.06	-.09	1.09	2.15	.148
Language proficiency	-.25	.74	.05	.89	1.13	.291
Safety consciousness	.48	1.29	-.10	1.14	2.30	.135

In addition, 8 out of the 11 respondents with high scores on safety risks were from the Netherlands (72.73%). Other home countries included for these respondents were China (1/11), Greece (1/11) and South Africa (1/11).

The dependent variable 'safety risks' was measured using three question items. Table 7 shows that item 3 received the highest scores on safety risks for these respondents ($M = 4.09$, $SD = 1.51$). Item 3 was: "In the past 12 months, I have been involved in a near-accident at work". Item 1 was: "In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day" ($M = 1.91$, $SD = 1.22$); and item 2 was: "In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day" ($M = 2.45$, $SD = 1.75$). All question items for all variables are included in the appendix.

Table 7.   Question items for dependent variable 'safety risks'

Question item	N	M	SD
1. In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day.	11	1.91	1.22
2. In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day	11	2.45	1.75
3. In the past 12 months, I have been involved in a near-accident at work.	11	4.09	1.51

4.4   Compared to a parallel research study (construction work)

This section of the thesis study covers the comparison with the results of a parallel research study conducted by Bachelors' students, e.g. Kaylee Füssmann ("De discrepanties van het veiligheidsbewustzijn", July 2015). Table 8 shows the results of the independent t-test in which multinational teams with office jobs and multinational teams in construction work are compared. The t-test demonstrated that the multinational teams in different work settings showed significant differences in all study variables.

Language proficiency (in English) was significantly higher in multinational teams with office jobs ($M = 6.65$, $SD = .86$) than in multinational teams performing construction work (M

= 5.79, *SD* = 1.96). Multinational teams performing construction work, however, reported significantly higher SSTL (*M* = 4.26, *SD* = 1.00; *M* = 5.50, *SD* = 1.00), uncertainty avoidance (*M* = 6.00, *SD* = 1.07; *M* = 4.55, *SD* = 1.10), safety consciousness (*M* = 6.16, *SD* = .88; *M* = 4.79, *SD* = 1.18) and safety risks (*M* = 2.82, *SD* = 2.49; *M* = 1.34, *SD* .77) (sub-question 5).

As was mentioned in the method section, a notable difference in education level was detected between the two groups (see section 3.4.1).

Table 8.   T-test, comparison of multinational teams with office jobs and multinational teams in construction work on included measures

Variable	Office jobs/ Construction work	*N*	*M*	*SD*	t	df	*p*
SSTL	Office jobs	62	4.26	1.00	-7.70	254	.000
	Construction work	194	5.50	1.09			
Uncertainty avoidance	Office jobs	62	4.55	1.10	-9.12	254	.000
	Construction work	194	6.00	1.07			
Language proficiency	Office jobs	62	6.65	.86	4.79	230.34	.000
	Construction work	194	5.79	1.96			
Safety consciousness	Office jobs	62	4.79	1.18	-8.43	84.20	.000
	Construction work	194	6.16	.88			
Safety risks	Office jobs	62	1.34	.77	-7.24	253.90	.000
	Construction work	194	2.82	2.49			

A multiple regression analysis for the survey results of both the main and parallel study combined showed that 18% of the variance of safety risks can be explained by the independent variables (*F* (5, 250) = 11.88, *p* < .001). Table 9 shows that language proficiency (in English) (ß = -.34, *p* < .001) and work environment (ß = .05, *p* = .002) are significant predictors for safety risks, but the other variables are not (ß = -.05, *p* = .505; ß = .04, *p* = .568; ß = -.02, *p* = .743).

Table 9.   Results of multiple regression analysis on safety risks in multinational teams in different work settings, i.e. at offices and in construction work (*N*=256)

Variable	*B*	*SE B*	β
SSTL	-.09	.14	-.05
Uncertainty avoidance	.08	.14	.04
Language proficiency	-.43	.08	-.34***
Safety consciousness	-.05	.15	-.03
Work environment	.09	.14	.05**
R²	.18		
F	11.88***		

** *p* < .010, *** *p* < .001

A chi-square test between work environment and gender showed no significant relationship (χ^2 (1) = 1.66, *p* = .197).

With regard to age, it appears that the mean age for the respondents from the main study (office jobs) is lower (*M* = 30.13 years, *SD* = 8.58) than the mean age for the respondents from the parallel study (construction work) (*M* = 38.02 years, *SD* = 11.79). More demographic information on the respondents is given in section 3.4.

5   CONCLUSION AND DISCUSSION

This research study was set out to measure safety risks within multinational teams in the Netherlands, and to establish which factors can predict these risks. This chapter of the thesis discusses the findings with regard to the research questions (see section 3.1). Furthermore, limitations and recommendations for further research are included at the end.

Being vulnerable at work may seem as an inescapable fact, yet the findings of this study suggest that safety risks for employees of multinational teams in the Netherlands can be reduced by: (1) language proficiency in English and (2) a certain work environment.

Language proficiency in English appears to be highly beneficial for the native (i.e. Dutch) employees of the multinational teams, as it has proven to be related to lower safety risks at work. It is important to realize that this finding is true for multinational teams in the Netherlands that have English as the common corporate language as opposed to other languages. Language proficiency in other languages than English was not included in the current study which is why no assertions can be made about other languages besides English. In addition to this finding, a comparison between employees in different work settings has revealed that construction work significantly attracts more safety risks than office work. Referring back to the literature review, in particular section 2.2.1, these findings provide insights for both personal and situation-related predictors of safety outcomes.

The other variables underpinning this study – leadership style, uncertainty avoidance and safety consciousness – did not show significant effects on safety risks **(main research question)**.

A more detailed answer is given by answering all sub-questions in the sections below.

5.1   Part 1: Multinational teams with office jobs

The effects of leadership style, uncertainty avoidance and safety consciousness on safety risks

The multiple regression analyses reported no significant effects for leadership style (SSTL), uncertainty avoidance or safety consciousness on safety risks for multinational teams in the Netherlands with office jobs **(sub-questions 1, 2, 4)**. These results imply that leaders and insight in one's level of uncertainty avoidance and safety consciousness are not critical in fostering safety at work.

For uncertainty avoidance in particular, this means that different national scores on Hofstede's Uncertainty Avoidance dimension did not significantly affects the level of safety risks for multinational teams. It also means that, due to the insignificant effects and specifically for the missing relationship between uncertainty avoidance and level of safety risks at work, it is less relevant to reason the results according to the e.g. AUM theory (Gudykunst, 1995) in which interaction between people from different cultures is encouraged.

Language proficiency reduces safety risks for Dutch employees

The relatively large number of Dutch respondents compared to other nationalities (36 out of 62 respondents were Dutch) allowed a second analysis with a focus on solely these respondents. The results showed a significant negative effect of English proficiency for Dutch respondents on safety risks. This effect implies that Dutch employees with high proficiency in English are less involved with accidents and/or injuries at work, i.e. experience a safer work environment. This makes language proficiency in English a predictor for safety risks at work **(sub-question 3)**.

This finding contains valuable information for Dutch based multinational organizations (that have English as common corporate language) as it underlines the importance of English proficiency for employees' safety at work (e.g. Trajkovski & Loosemore, 2005). Also, it is a clear manner for organizations to improve their workplace safety. Multinational organizations should continue to provide language trainings to employees so that eventually, all employees are capable of reading, listening, understanding and responding to safety regulations in English. Additional research could focus on whether this finding also accounts for other corporate languages than English, e.g. Dutch, French or Spanish.

Younger, native employees more vulnerable to safety risks than older, migrant employees

A closer look at the responses on safety risks (involvement in accidents and/or injuries at work) showed that only a small number of respondents had been involved in a *near accident* or an actual accident at work. It appears that this group of respondents is significantly younger than the group who had reported not to be involved in (near) accidents at work in the past twelve months. Also, the vast majority of the respondents who had been involved in (near) accidents at work appeared to be Dutch.

This finding suggests that native employees are even more vulnerable than migrant employees – especially the younger natives. An explanation for this finding lies in earlier

mentioned theories in which foreign personnel are somewhat reluctant to report (near) accidents (Schubert & Dijkstra, 2009). The same unwillingness to report (near) accidents at work could be the explanation as to why younger employees are reportedly more vulnerable to safety risks at work than older employees. According to this line of thinking, the older employees are the ones to be unwilling to report (near) accidents at work, and the young to have a more critical look at safety risks.

5.2   Part 2: Multinational teams with office and construction work

Based on a comparison between the results from the current and the parallel study (i.e. job office vs. construction work), one can conclude that work environment is a predictor for safety risks **(sub-question 5)**. More specifically, multinational teams performing construction work are said to be more involved in injuries and/or accidents at work than multinational work teams whose members have office jobs. This is in line with what one would expect (e.g. Bust et al., 2008), as employees in construction work settings are usually more exposed to dangerous equipment and/or situations at work.

With regard to the independent variables within this research study, it appears that employees in multinational teams in an office setting have higher language proficiency than employees from the parallel group (construction work setting). This finding is believed to be related to education level, as both groups also differed from each other on this variable – with employees with office jobs having completed an overall higher level of education. However, multinational teams in a construction work setting were found to have higher levels of perceptions of safety-specific transformational leadership (SSTL), uncertainty avoidance, safety consciousness and as was mentioned earlier, safety risks. The latter means that employees performing construction work have been more often involved in (near) accidents at work in the past twelve months.

With regard to the question items of safety risks, a notable difference is the fact that item 3 (indicating *near accidents*) was most occurring among the responses for employees with office jobs whilst the distribution of safety risks was more equal in the group of respondents in construction work.

5.3   Limitations and recommendations for further research

Still, researchers should continue to examine safety risks for preventing unsafe situations when working with individuals with different national (and/or cultural) backgrounds.

Sample size

For instance, this means studying predictors of safety risks for a bigger sample. A limitation of the current study is that the main study included fewer respondents than the parallel study (62 as opposed to 194). This means that in a follow-up study, one could include much more respondents for the work environment 'office jobs'. Additionally, a bigger sample in total would also allow a closer examination of respondents' national backgrounds (Guldenmund et al., 2013). Such diagnosis could then result in cross-national generalizations, which would help multinational organizations uncover more ways to enhance workplace safety for both migrant and native workers.

As for sample size, section 4.3 was dedicated to a total of 11 respondents. This number may seem quite small at first. However, considering the fact that the total number of respondents for the study was only 62, 11 accounts for a substantive part of the included respondents. This demonstrates the relevance of focusing on this particular group, next to its notable scores for safety risks in the first place.

Measurements

It is important to note that the work-specific safety risks have been reported by the employees themselves and no organizational reports have been consulted, which according to Eisenberg and McDonald (1988) contributes to the reliability of the measurement. However, self-reports receive much criticism by other researchers. Reasons to doubt this method is the subjectivity that comes with self-reports (socially acceptable responses) and the assumption that respondents have accurate self-understanding. Therefore, a popular alternative method is discourse analysis. It allows researchers to observe what actually occurs in terms of communication practices in intercultural encounters, with attention to e.g. social context. A follow-up study could use this alternative method to investigate safety risks for multinational work teams. Other ways of dealing with self-reports is to complement them with objective data (organizational reports) or conducting qualitative analyses (e.g. interviews with both employees and managers, forum panels).

A different critic on measuring safety risks is that it was done on a 7-point Likert scale (1 = never; 7 = all the time). Although this was deliberately chosen for comparison purposes – it does not reveal the exact number of times a respondent was involved in (near) accidents during work time. What 'three times being involved in an accident' is a score of 5 for one respondent may very well be a score of 7 to the other. This is an obvious limitation to the current study and can be eliminated by simply asking respondents to also write down absolute numbers.

For a better measurement of safety consciousness, one can include the measurement of risk perception as it is part of safety consciousness (Starren et al., 2013). Therefore, it is wrong to believe that one's risk perception applies for all employees.

Remaining limitations and suggestions for further research includes e.g. the functionality of pictograms for multinational work teams with eye tracking experiments. One could, for example, examine whether there are cultural differences in perceiving and recording safety-specific pictograms.

Also, the current study was aimed at respondents on an individual level, leaving group composition out of the picture while it may very well be important. Group composition may affect either one of the variables underpinning this study, which therefore would be interesting to include in a follow-up study.

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APPENDIX

A: An overview of antecedents of safety outcomes by Christian et al. (2009)

| Situation-related factors |
| Safety motivation / Safety knowledge |
| **Safety performance** / Safety compliance / Safety participation |
| **Safety outcomes** / Accidents / Injuries |
| Person-related factors |
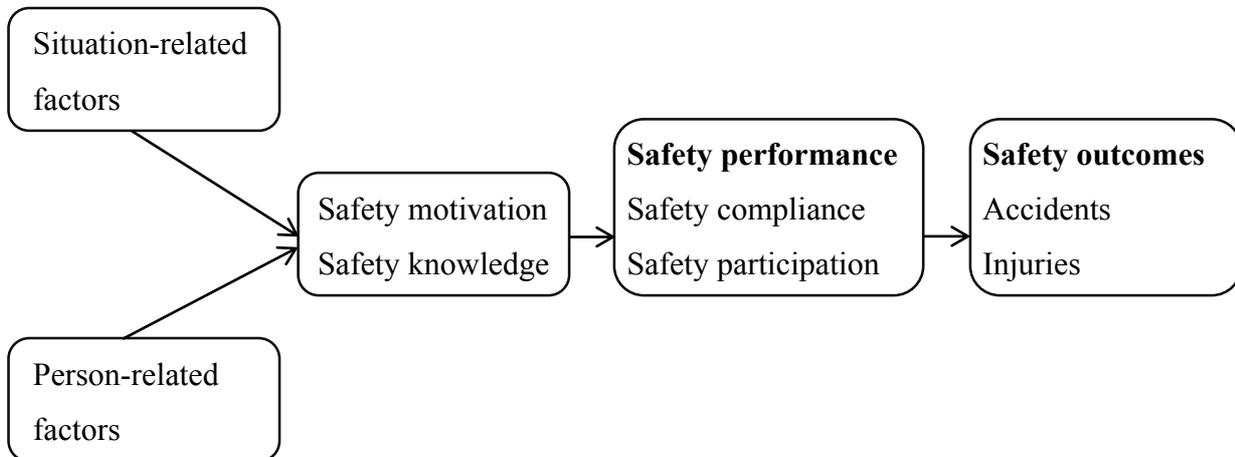
In their meta-analysis on research on workplace safety, Christian et al. (2009) provide an overview of antecedents of safety outcomes. This model states that safety outcomes (i.e. accidents and injuries) can be predicted by safety performance (safety compliance and safety participation). In turn, safety performance can be determined by safety motivation and safety knowledge, which are both dependent on situation- and person-related factors. This means that eventually, all predictors of safety outcomes can be categorized as either personal or situation related. Examples of predicting factors are: leadership, management commitment, HRM practices, safety systems, supervisor support, internal group processes, job risks, work pressures, locus of control and safety attitudes.

B: Survey

Dear Sir/Madam,

You are being invited to take part in the research study for my Master's thesis! I am interested in the role of antecedents of safety risks for multinational teams and would love to hear from you about your perspective.

You can participate by completing this survey which should only take about 5-10 minutes of your time. All responses will be processed anonymously and will only be used for this research study.

If you choose to participate, please answer all questions as honestly as possible and be sure to actually submit it at the end of the survey. If you have any questions, feel free to contact me at dinnypham@student.ru.nl.

I would really appreciate your input!

Yours faithfully,

Dinny Pham
Communication and Information Sciences
Radboud University Nijmegen

To what extent do you agree with the following statements, based on your own work environment? (1 = I strongly disagree, 7 = I strongly agree).

1.	I know what to do when a dangerous situation occurs at work	1	2	3	4	5	6	7
2.	I know where to report safety risks	1	2	3	4	5	6	7
3.	I know what to do if I become injured at work	1	2	3	4	5	6	7
4.	I am well aware of the safety risks involved in my job	1	2	3	4	5	6	7

5.	I know where the fire extinguishers are in my work environment	1	2	3	4	5	6	7
6.	I know what requisites/equipment is needed to safely perform specific tasks	1	2	3	4	5	6	7

Below is a list of statements dealing with your safety in your organization. How often do these statements apply to you? (1 = Never, 7 = All the time).

7.	In the past 12 months, I have been involved in an accident at work that has resulted in an inability to work for at least one day	1	2	3	4	5	6	7
8.	In the past 12 months I have been involved in an accident at my workplace for which I received medical treatment	1	2	3	4	5	6	7
9.	In the past 12 months, I have been involved in a near-accident at work	1	2	3	4	5	6	7

To what extent do you agree with the following statements, based on your own experiences? (1 = I strongly disagree, 7 = I strongly agree).

10.	It is important to have detailed functional descriptions and instructions so that I know what is expected from me at all times	1	2	3	4	5	6	7
11.	My managers expect that I closely follow work instructions	1	2	3	4	5	6	7
12.	Rules and regulations are important because they indicate what is expected from me at work	1	2	3	4	5	6	7
13.	Regulations that I encounter on a daily basis help me do my job	1	2	3	4	5	6	7
14.	Work instructions are important to me during work	1	2	3	4	5	6	7

Below is a list of statements dealing with your manager. To what extent do you agree with the following statements? (1 = I strongly disagree, 7 = I strongly agree).

15.	My manager is determined to preserve a safe work environment	1	2	3	4	5	6	7
16.	My manager shows high involvement in creating a safe work environment	1	2	3	4	5	6	7
17.	My manager expresses his/her opinion about the importance of safety at work	1	2	3	4	5	6	7
18.	My manager sets a good example in working safely and following the rules	1	2	3	4	5	6	7
19.	My manager motivates his/her employees to work safely	1	2	3	4	5	6	7
20.	My manager constantly suggests ways in order to execute my work more safely	1	2	3	4	5	6	7
21.	My manager stimulates new ideas and opinions when it comes to safety at work	1	2	3	4	5	6	7
22.	My manager shows me how to execute my tasks at work the safest	1	2	3	4	5	6	7
23.	My manager listens to my concerns when it comes to workplace safety	1	2	3	4	5	6	7
24.	My manager rewards his/her employees when safety goals have been achieved	1	2	3	4	5	6	7

Below is a list of statements dealing with your language proficiency. To what extent do you agree with the following statements? (1 = I strongly disagree, 7 = I strongly agree).

25.	I am capable of reading safety regulations in English	1	2	3	4	5	6	7
26.	I am capable of listening to English safety regulations and then speak in response	1	2	3	4	5	6	7
27.	I am capable of listening to English safety regulations and to understand them	1	2	3	4	5	6	7

28. What is your sex?   O male   O female

29. What is your age?   _____ years

30. What is the highest degree or level of education that you have completed?

O Less than high school

O High school graduate

O Some college, no degree

O Bachelor's degree

O Master's degree

O Other: _____

31. What is your nationality? _____

32. In what country do you work?

33. Were you born in the Netherlands?

O Yes.

O No, I was born in_____ (continue to question 34)

34. Compared to the organizations in my home country, the company I work for now is:

Much unsafer   *Much safer*

1	2	3	4	5	6	7

Thank you for completing my survey!

C: An overview of respondents' home countries

Home countries of respondents for both the main and the parallel study (*N*=256)

Home country	Main study (*N*=62)		Parallel study (*N*=194)	
	Frequency	Percent	Frequency	Percent
Afghanistan				.50
Aruba				.50
Belgium	6	9.70		
Cambodia				.50
China	2	3.20		
Curacao				.50
Germany	4	6.50		2.10
Greece	2	3.20		
India	3	4.80		
Ireland	1	1.60		
Morocco				.50
Poland				34.50
Portugal	1	1.60		
Romania	1	1.60		2.10
Serbia				.50
Slovakia				.50
Somalia				.50
South Africa	2	3.20		.50
Spain	1	1.60		
Sweden	1	1.60		
Taiwan	1	1.60		
Thailand				1.00
The Netherlands	36	58.10	3	53.10
Turkey	1	1.60		1.50
Vietnam				1.00