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Occupational accidents in immigrant workers in Spain: The complex role of culture



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ABSTRACT

Although the work accident rates in immigrants are usually higher than that of native workers, little research has been done on this topic from a cultural perspective. This study explores whether differences in language, the cultural distance between countries, and national cultural values can explain the accident rate and its variability in different economic sectors (agriculture, industry, construction and services). Accident rates of immigrant workers from 34 countries in Spain were analysed. The cultural distance between countries (countries of origin and host – Spain) was estimated and regression analysis was used to test linear, curvilinear and interaction associations. Results show that speaking a different language and being culturally different does not influence accidents in immigrants, except in agriculture where speak a different language is associated with fewer accidents. National cultural values (individualism, power distance, uncertainty avoidance, masculinity and long-term orientation) are related to accidents, either linearly (uncertainty avoidance in agriculture, and long-term orientation in industry, construction and services) or quadratically (power distance and uncertainty avoidance, in construction and services), or modulates on each other (power distance modulates individualism in industry). Cultural values by themselves, instead of language or cultural distance between countries, are better predictors of the variance of work accidents in immigrants. The similarities and differences between the economic sectors are analysed and proposals are made to improve intervention programmes to prevent accidents.

1. Introduction

Occupational accidents are a complex problem that generates enormous suffering and economic losses. Since it is a multi-causal phenomenon that involves many variables, the complexity of this topic (Clarke, 2010) increases if it is analysed from the perspective of immigrant population. Although it is not clear, whether immigrant population is usually involved in a greater number of accidents than local people the topic deserves to be studied in depth. The research findings are inconclusive. While some studies indicate that immigrants are more likely to become injured (Ahonen and Benavides, 2017; Rubiales-Gutiérrez et al., 2010), other studies did not find similar evidence (Redelmeier et al., 2011), or they pointed out that the relationship between immigrants and accidents is not always homogeneous depending on socio-demographic or occupational factors (Colao et al., 2006; Rubiales-Gutiérrez et al., 2010). These inconsistencies suggest studying other variables that may be influencing (Gelfand et al., 2017). In this line, the research has highlighted the importance of considering the following issues. First, immigrants often have limited verbal and written language communication skills with respect to the host country,

a condition that may push the occurrence of accidents (Anastasiou et al., 2015; Paul, 2013). Second, higher accident rates in immigrants may be related to differences between the home and the host country culture (Romano et al., 2013). Third, research on several major drive accidents suggests that cultural values could play a role in the causes of accidents (Strauch, 2010). Fourth, the occupational risk levels are also associated with the activities and tasks workers perform, and significant variations on accident rates involving immigrants depending on the economic sector have been found (Colao et al., 2006). Guldenmund et al. (2013) analyse the safety of immigrant workers in three EU countries. They examine whether the safety of immigrant workers especially those from Eastern European countries - is related to the cultural values and customs of their country of origin or whether it is a matter of cultural adjustment or differences in language and communication problems. Based on their results, these authors conclude that immigrants are a vulnerable group. This vulnerability in security is mainly explained by the differences in the language and communication difficulties, by the lack of knowledge of the security norms, and by the precarious conditions in which they usually work, and cultural influence does not play a decisive role, although it may explain certain

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J.A. García-Arroyo and A. Osca Segovia Safety Science 121 (2020) 507–515

behaviours.

The objective of this study is twofold. First, we aim to explore cultural differences between the host country—Spain in this case—and the home countries of immigrants considering language and cultural distance, and to analyse whether these differences are associated with their work accident rates. Second, we hope to test the linear, quadratic and interactive effects of cultural values, assessed by the Hofstede's model (2001), on work-accidents according to the economic sector.

This is the first study in Spain addressing occupational accidents in immigrants from the cultural values perspective. Spain represents the gateway to Europe for Latin American and African immigrants and is the recipient of many immigrants from countries in Eastern Europe, the Middle East, and Asia. In addition, Spain has suffered, especially in recent years, the effects of the global financial crisis with the consequences that these effects have on occupational safety and health (Boustras and Guldenmund, 2018; Fernández-Muñiz et al., 2018), as well as on migratory movements-qualified local workers migrate to other countries looking for better opportunities, and workers from third countries arrive fleeing from financial, social and political crises in their countries of origin. According to the Annual Report on Migration (Ministry of Employment and Social Security, 2016), the foreign population registered at the end of 2015 was 4,601,272 representing 9.89% of the total population. This percentage of the immigrant population is similar to other Mediterranean countries as Greece (Anastasiou et al., 2015) or Italy. Of these, 49% come mainly from EU states, 21% from African countries, and 17% from Latin American countries. According to the Annual Report on Accidents at Work, workrelated accidents with sick leave involving immigrant workers were 43,661, meaning 9.3% of the total of work accidents. This percentage has hardly changed in the last 5 years remaining around 9.5%. (Ministry of Employment and Social Security, 2016a). In other words, the percentage of immigrants compared to the Spanish population is very similar to the percentage of accidents in immigrants compared to accidents in Spaniards, close to 9.5% in both cases.

There are several cultural values models, but the most extended and popular is Hofstede's model (2001) encompassing five main cultural dimensions: individualism/collectivism, power distance, uncertainty avoidance, masculinity/femininity, and long-term orientation. The review by Taras et al. (2011), examining three decades of research on its influence in the organizational field, concludes that cultural values weigh more than age, experience, sex, race, or educational level in important aspects such as work engagement, interpersonal relationships, communication style, conflict management, involvement with security or preferences for certain leadership styles, variables that has been considered antecedents of accidents (Clarke, 2010).

Additionally, studies have generally focused on looking for direct relationships between cultural values and accidents (f. e. Enomoto and Geisler 2017; Reniers and Gidron, 2013); however, some authors suggest that these relationships could follow non-linear patterns (Gelfand et al., 2017), and several studies have taken this direction. For example, individualism showed curvilinear relationships to well-being (Fischer and Boer, 2011), long-term orientation, and power distance showed curvilinear associations to national wealth (Tang and Koveos, 2008), and moderation effects of cultural values have also been found (Gaygisiz, 2010; Lu et al., 2012). However, there is no previous research, as far as we know, that tests this kind of the relationships between cultural values and occupational accidents.

1.1. Cultural differences and accidents

Language is the first factor that can show the cultural differences between the home country and the host country, and its influence is double. On the one hand, knowing the language of the host country helps to communicate with colleagues and supervisors and eases learning the work norms and the safety standards (Paul, 2013). On the other hand, language is considered a form of cultural programming, and

the differences between languages are considered a measure of cultural distance (Boisso and Ferrantino, 1997). The effect of language can be explained by the Sapir-Whorf hypothesis, also known as linguistic relativity, that suggests that speakers of different languages think differently for the differences in the construction and functioning of their languages. Since learning a language typically occurs within the context of a culture, people learn to have different associations with and feelings about a particular language.

Cultural values reflect the differences between cultures and have been usually operationalised at the individual level, through perceived cultural distance (Polek et al., 2010), and at country level, through the national cultural distance that can be defined as the extent to which the shared norms and values in one country differ from one another (Hofstede, 2001). Several ways of estimating national cultural distance have been used as an aggregate measure to compare cultural values between countries (f. e. Rejchrt and Higgs, 2015), and it has been found to be related to different measures of organizational efficacy (Kristjánsdóttir et al., 2017; Tadesse and White, 2017). Thus, this study examines cultural distance as an aggregate measure based on the five Hofstede's values (2001) and estimates according to Kogut and Singh (1988) methodology. This approach will allow us to compare the cultural differences between the cultures of the home countries of immigrant workers and the host country (Spain). In general terms, we expect to find that the greater the cultural difference between the country of origin of the worker and Spain, the higher the accident rate.

1.2. Cultural values and occupational accidents

Accidents are multi-causal phenomena that have been analysed from a macro perspective: institutional, technological, and macro-economic factors (Rodríguez-López et al., 2016), but few studies have analysed occupational accidents from a cultural perspective, and fewer have focused on the accidents in immigrant workers.

Strauch (2010) argued that differences in accident prevalence involving immigrants are associated with cultural values. Variables such as uncertainty avoidance, power distance, or individualism-collectivism can help explain aspects that can be related to work accidents including differences in risk perception, communication problems, or involvement with security measures. Additionally, Starren et al. (2013) highlight how national culture may play a role in important antecedents of safety.

The individualism/collectivism (IND) dimension focuses on the relationship between the individual and their peers. Mearns and Yule (2009) pointed that a high IND is related to more direct communication and speaking out about issues, an attribute that is particularly important in developing a positive safety culture, but the results do not always go in the same direction. For example, Reniers and Gidron (2013) found that IND was negatively related to fatal work injuries in 22 European countries, and Enomoto and Geisler (2017) found that pilots from nations with high IND scores tend to have fewer plane accidents. However, it is also possible that there is more pressure to follow safety rules and procedures in less individualistic groups, and, therefore, there is less chance of being injured. For example, Reader et al. (2015) found that pilots from countries with high IND tend to be independent and flexible when following procedures, which can increase the chance of getting injured. On the contrary, it has been observed that workers from less individualistic countries follow safety rules and procedures better (Mohamed et al., 2009) and make fewer mistakes (Lu

The power distance (PD) dimension explains how a society faces inequality among its members. In societies with PD, people accept inequality and hierarchy, and subordinates obey the instructions of their supervisors and follow safety regulations easily to avoid accidents. For example, Håvold (2007) found that it is more common for sailors with high PD to follow orders and observe established procedures than sailors with different cultural values. In the same line, Reader et al. (2015)

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