RELATIONSHIP BETWEEN NATIONAL CULTURE AND SAFETY CLIMATE OF MULTICULTURAL CONSTRUCTION WORKFORCE IN ABU DHABI

By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chair : **Professor Shamsul Bahri bin Hj. Mohd Tamrin, PhD**
Faculty : **Medicine and Health Sciences**

The high prevalence of accidents in migrant workers and poor safety climate in construction companies of Abu Dhabi is a continuous concern, especially because of multicultural workforce. These workers who originate from different countries brings different national cultures that may have impact on safety climate of the companies. United Arab Emirates is a country with 91% migrant population, and in the absence of any comprehensive study in past in this country, this study has proposed that national culture dimensions of migrant workers have a relationship with safety climate of the companies.

The primary objective of this study is to find out relationship between national culture and safety climate, compare national culture dimensions, and the impact of national culture dimensions on safety climate. Furthermore, this study was conducted among Bangladeshi, Indian and Pakistani workers who make up almost 50% of the total migrant workforce in construction industry of Abu Dhabi. A stratified purposive sampling method was used in this cross-sectional study to survey construction workers in six selected construction companies in Mussafah Industrial area and Al Ain industrial area. A total of 128 respondents participated in answering an adapted questionnaire in the language of their choice. This originally English language questionnaire having two parts, Value survey model (VSM) and Nordic safety climate questionnaire (NOSACQ), that was translated into Bengali, Hindi and Urdu, was used to collect national culture dimension information and safety climate perception respectively.

For statistical analysis, Statistical Package for the Social Sciences (SPSS) was used. All of the workers were male, with more than half Indian (54.7%), secondly Pakistani (28.1%) and remaining (17.2%) Bangladeshi. 51.6% of them were unskilled or semi-skilled. Overall safety climate for all nationalities was found (Mean=2.36, SD=0.40) with comparison of safety climate perception among

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different nationals, F-value (0.858), (p = 0.427) at a given level of alpha. Hence, among different nationalities, safety climate was found to be same. The comparison of national culture dimensions between different nationalities was found on individualism $F_{(2,125)} = 5.929$, p=.003, masculinity $F_{(2,125)} = 5.113$, p=.007, Long term orientation $F_{(2,125)} = 3.116$, p=.048, and indulgence vs restraint $F_{(2,125)} = 3.526$, p=.032 dimensions. Furthermore, the relationship between safety climate and power distance was 0.381 (p = 0.01), between safety climate and long-term orientation was 0.344 (p = 0.01), between safety climate and individualism was 0.196 (p < 0.05), between safety climate and indulgence vs restraint was 0.068 (p = 0.01), between safety climate and uncertainty avoidance was -0.099 (p = 0.01), and between safety climate and masculinity was 0.163 (p = 0.066).

Abu Dhabi's construction workers have a poor safety climate. Bangladeshi, Pakistani, and Indian workers differ significantly in their cultural dimensions of individualism, masculinity, long-term orientation, and indulgence vs restraint. Among these cultural dimensions, power distance, individualism, and long-term orientation were positively related to safety climate, while indulgence, masculinity, and uncertainty avoidance had no significant relationship with safety climate. Power distance and long-term orientation were the most significant contributors to the variation in safety climate.

Keywords: National culture, Safety climate, Power distance, Individualism, Masculinity,

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

**HUBUNGAN ANTARA BUDAYA KEBANGSAAN DENGAN IKLIM
KESELAMATAN TENAGA KERJA PEMBINAAN PELBAGAI BUDAYA DI
ABU DHABI**

Oleh

MUHAMMAD AHSAN

Mei 2023

Pengerusi : **Profesor Shamsul Bahri bin Hj. Mohd Tamrin, PhD**
Fakulti : **Perubatan dan Sains Kesihatan**

Kejadian kemalangan yang tinggi dalam kalangan pekerja migran dan iklim
keselamatan yang lemah dalam syarikat-syarikat pembinaan di Abu Dhabi
merupakan keprihatinan berterusan, terutamanya disebabkan oleh pekerja
berbilang budaya. Pekerja-pekerja ini berasal dari negara-negara yang berbeza
dan membawa budaya kebangsaan yang berbeza yang mungkin mempengaruhi
iklim keselamatan syarikat-syarikat tersebut. Emiriah Arab Bersatu merupakan
negara dengan 91% penduduk migran, dan dalam ketiadaan kajian menyeluruh
dalam negara ini sebelum ini, kajian ini mengusulkan bahawa dimensi budaya
kebangsaan pekerja migran mempunyai hubungan dengan iklim keselamatan
syarikat-syarikat tersebut.

Objektif utama kajian ini adalah untuk mencari hubungan antara budaya
kebangsaan dan iklim keselamatan, membandingkan dimensi budaya
kebangsaan, dan impak dimensi budaya kebangsaan terhadap iklim
keselamatan. Selain itu, kajian ini dijalankan di kalangan pekerja Bangladesh,
India dan Pakistan yang membentuk hampir 50% daripada tenaga kerja
pendatang dalam industri pembinaan di Abu Dhabi. Abstrak merupakan
ringkasan keseluruhan tesis dan wajib diberi perhatian rapi sepertimana
bahagian tesis yang lain. Abstrak tidak mengandungi bahan rujukan. Nama
singkatan atau akronim mesti didahului dengan terminology penuh pada
penggunaan kali pertama.

Kaedah pensampelan berstrata tujuan digunakan dalam kajian rentas seksyen
ini untuk menjalankan tinjauan terhadap pekerja pembinaan di enam syarikat
pembinaan terpilih di kawasan industri Mussafah dan kawasan industri Al Ain.
Sejumlah 128 responden mengambil bahagian dalam menjawab soal selidik
yang telah diadaptasikan dalam bahasa pilihan mereka. Soal selidik yang asal

dalam bahasa Inggeris mempunyai dua bahagian, iaitu model kaji nilai (VSM) dan soal selidik iklim keselamatan Nordic (NOSACQ), yang diterjemahkan ke dalam bahasa Bengali, Hindi dan Urdu, digunakan untuk mengumpul maklumat dimensi budaya kebangsaan dan persepsi iklim keselamatan masing-masing.

Untuk analisis statistik, Pakej Statistik bagi Sains Sosial (SPSS) telah digunakan. Semua pekerja adalah lelaki, dengan lebih separuh dari mereka adalah India (54.7%), diikuti oleh Pakistan (28.1%) dan selebihnya (17.2%) dari Bangladesh. 51.6% daripada mereka adalah pekerja tidak terlatih atau separa terlatih. Secara keseluruhan, iklim keselamatan bagi semua warganegara telah ditemui (Min=2.36, SD=0.40) dengan perbandingan persepsi iklim keselamatan di kalangan warganegara yang berbeza, nilai F (0.858), (p = 0.427) pada tahap alfa yang ditentukan. Oleh itu, di antara warganegara yang berbeza, iklim keselamatan dianggap sama. Perbandingan dimensi budaya kebangsaan antara warganegara yang berbeza didapati pada individualisme $F_{(2,125)} = 5.929$, p=.003, maskuliniti $F_{(2,125)} = 5.113$, p=.007, orientasi jangka panjang $F_{(2,125)} = 3.116$, p=.048, dan keberlepasan vs kawalan $F_{(2,125)} = 3.526$, p=.032. Selain itu, hubungan antara iklim keselamatan dan jarak kuasa adalah 0.381 (p = 0.01), antara iklim keselamatan dan orientasi jangka panjang adalah 0.344 (p = 0.01), antara iklim keselamatan dan individualisme adalah 0.196 (p < 0.05), antara iklim keselamatan dan keberlepasan vs kawalan adalah 0.068 (p = 0.01), antara iklim keselamatan dan pengelakan ketidakpastian adalah -0.099 (p = 0.01), dan antara iklim keselamatan dan maskuliniti adalah 0.163 (p = 0.066).

Pekerja pembinaan di Abu Dhabi mempunyai iklim keselamatan yang buruk. Pekerja dari Bangladesh, Pakistan, dan India berbeza secara signifikan dalam dimensi budaya mereka iaitu individualisme, maskuliniti, orientasi jangka panjang, dan keberlepasan vs kawalan. Di antara dimensi budaya ini, jarak kuasa, individualisme, dan orientasi jangka panjang berkaitan secara positif dengan iklim keselamatan, manakala keberlepasan, maskuliniti, dan pengelakan ketidakpastian tidak mempunyai hubungan yang signifikan dengan iklim keselamatan. Jarak kuasa dan orientasi jangka panjang merupakan penyumbang yang paling signifikan terhadap variasi dalam iklim keselamatan.

Kata Kunci: Budaya kebangsaan, Iklim keselamatan, Jarak kuasa, Individualisme, Maskuliniti

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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Date: 14 December 2023

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
DoH	Department of Health
GCC	Gulf cooperation council
GDP	Gross Domestic Product
GLOBE	Global Leadership and Organizational Behavior Effectiveness
HSE	Health Safety Environment
ILO	International Labor Organization
NOSACQ	Noridc Safety Climate Questionnaire
OHS	Occupational Health and Safety
OSCQ	Occupational Safety Climate Questionnaire
UAE	United Arab Emirate
UPM	Universiti Putra Malaysia

CHAPTER 1

INTRODUCTION

1.1   Health and Safety in Construction Industry

It is widely believed that there are moral, legal and financial reasons to manage health and safety in all industries and workplace. Without having proper health and safety management, there can be more accidents and ultimately poor safety performance. International Labor Organization (ILO) estimates that there are around 340 million workplace accidents annually with 6000 deaths every single day around the world (International Labor organization, n.d.). Furthermore, ILO estimates that there are 60,000 fatal accidents annually on construction sites around the world. These accidents incur heavy cost on the construction companies, hence, proving the safety importance (Saifi et al., 2022). These numbers show that construction sites are still dangerous because of number of accidents as mentioned by Kines, et al., (2007). It also shows the magnitude of construction industry in the world. This booming construction industry with increasingly global workforce and international projects, is at the center of health and safety scrutiny by the regulators.

Having multinational workforce with diverse values, beliefs, education, training and attitudes, organizations have additional challenges of maintaining health and safety. Therefore, it is a matter of great concern for every organization to focus on health and safety to avoid accidents and reduce legal and financial liabilities. The dangerous and risky nature of work compels organization to take necessary proactive and counter measures for the safety considering it as a necessity for their operations. To achieve the common goal of accident free construction sites, academia is also contributing in researching different factors that can help in reducing accidents on sites and improve workplace safety.

There have been lot of research on workplace safety models such as by Sorensen et al., (2021), Yaris et al., (2020), Mearns, K. (2017), Casey et al., (2017), Beus et. al. (2016), and Hunter et al., (2016). There are certain safety constructs such as safety climate, safety culture, safety behavior, safety performance, migrant workers and communication among others that have been of interest for the above mentioned researchers. Rivera et al (2021) has conducted a research on construction safety and health performance and found 100 factors that have impact on safety and health performance. Among many of the factors, organizational culture, national culture, safety culture and safety climate are some of the factors that are found to be of particular interest in context of this study. Some of the factors are mentioned in the below table 1.1.

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Table 1.1: Factors impacting health and safety performance

1.	Safety rules	2.	Supervisory environment
3.	Rule compliance	4.	Supportive environment
5.	Paperwork of regulations	6.	Leadership
7.	Safety budget	8.	Communication and information
9.	Cost of accidents	10.	Management commitment
11.	Return on investment	12.	Wage
13.	Safety culture	14.	Reward and Penalty
15.	Safety climate	16.	Competence

In the past, there have been research on national culture, such as by Maleki (2014), Hofstede (2012) and on safety climate by Chan et al (2021), Han et al (2021). With the introduction of national culture along with other safety constructs, this study has focused on this national culture construct and its relationship with safety climate in the construction industry of emirate of Abu Dhabi in United Arab Emirates. The influence of a multicultural workforce on safety climate in construction companies is a topic that has been explored in various industries, including healthcare and oil and gas. While there is limited research specifically focused on the construction industry, insights from other sectors can provide valuable insights.

In the healthcare sector, the impact of multicultural workforces on safety climate has been examined. Almutairi Alsalem et al. (2018) questioned the impact of multicultural workforce on safety climate in healthcare settings and concluded that this diversity can adversely affect the quality of care and patient safety. The cultural diversity of the healthcare workforce poses a risk to patient safety as quality and safety competencies may be interpreted differently across cultures and systems (Viken et al., 2018). Similarly, in the oil and gas industry, the presence of a multicultural workforce has been acknowledged. Okezie et al. (2023) highlighted that oil and gas companies working in geographically and culturally diverse areas face challenges due to the different values, beliefs, training, education, and experience of the host country's workforce. This cultural diversity can lead to different levels of perception about safety and organizational factors.

While there is limited research specifically focused on the construction industry, the concept of managing multicultural workforces has been discussed. Loosemore et al. (2011) highlighted the need for managers and supervisors in the construction industry to manage multicultural workforces effectively. They emphasized the importance of addressing the "politics of sameness" and normalizing poor cross-cultural relations.

Furthermore, the construction industry has been recognized for its lack of workforce diversity, particularly in terms of gender diversity (Ramadan et al., 2023). This lack of diversity can contribute to a poor safety climate as it may result in insufficient training, an aging workforce, and industry image problems (Ramadan et al., 2023). In order to establish and maintain a high safety standard, it is crucial to continually promote, change, and improve the safety culture of the

workforce within the construction industry (Sugimoto, 2014). This is particularly challenging in construction due to the dynamic nature of the work, constant changes in work fronts, turnover of human resources, and multicultural workforces (Sugimoto, 2014).

In conclusion, while there is limited research specifically focused on the influence of multicultural workforces on safety climate in the construction industry, insights from other sectors suggest that cultural diversity can have an impact on safety climate. The presence of a multicultural workforce can lead to challenges in interpreting safety competencies, different levels of perception about safety, and the need for effective management of cross-cultural relations. Addressing these challenges and promoting a strong safety culture is crucial for ensuring a safe working environment in construction companies with multicultural workforces.

1.2 United Arab Emirates and its Construction Industry

The United Arab Emirate (UAE) is a country located in Western Asia, situated to the west of Persian Gulf and its having land borders with Oman and Saudi Arabia. It's the 2nd largest populous country in Gulf cooperation council (GCC). With strategic location in Middle east, it is closer to the developing Asian countries such as Pakistan, China, India and Bangladesh. The UAE is comprised of 7 states namely Abu Dhabi, Dubai, Sharjah, Umm Al Quwain , Fujairah, Ras Al Khaimah and Ajman. It has seen exponential economic growth with boom in petroleum, airlines, construction and maritime industries.

The estimated 9.99 million population of UAE (World Bank, n.d.) has been mostly comprised of expatriate workforce mainly originating from Indian Sub-continent, Philippine, African and other Middle eastern countries. There are 27.49% Indians, 12.69% Pakistanis, 11.48% Emiratis, 7.40% Bangladeshis, 5.56% Filipinos and the remaining 35.38% of the population belongs to other countries (UAE Moments, 2022). Figure 1.1 shows the workforce percentage by nationality for the year 2021.

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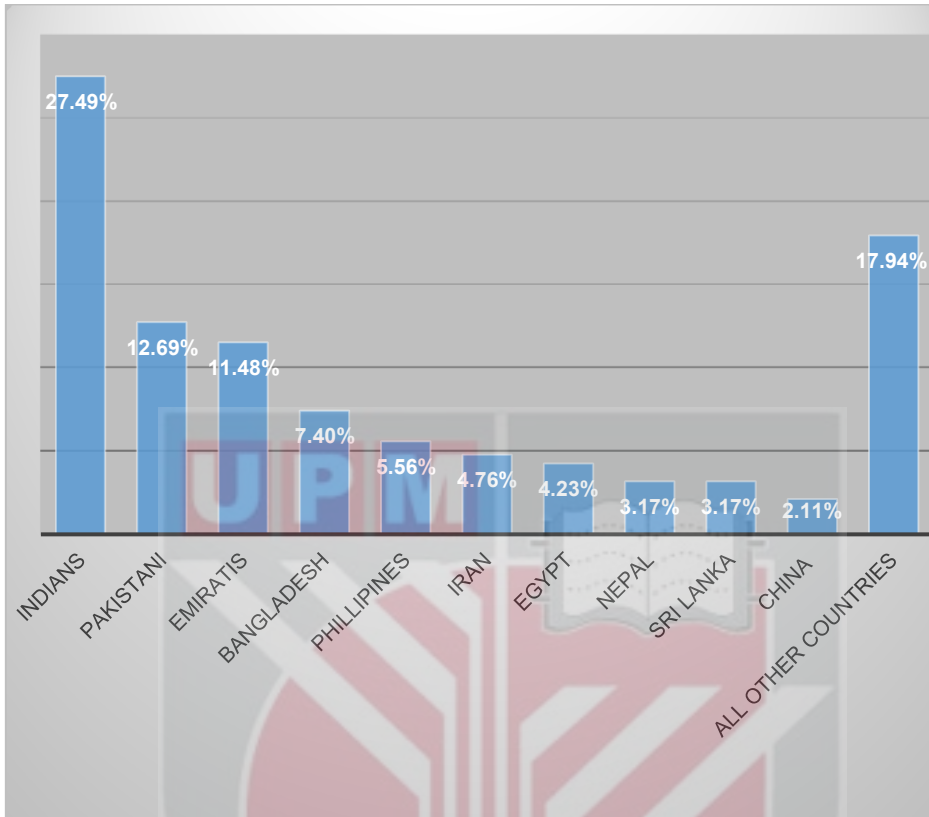
Figure 1.1: Workforce percentage by nationality for the year 2021

As estimated by Janardhan, (2011), the 96% of the workforce population are expats. Having 8.5% share in the gross domestic product (GDP) of UAE, construction industry in Abu Dhabi employs 15.1% of the total workforce (statistic center, Abu Dhabi 2020). The growing labor demand in Abu Dhabi, the largest emirate in UAE has been met by high influx of migrants mostly originating from South East Asian countries for better opportunities. As shown in Figure 1.2, in 2001, these migrants were 75% of the total population and by 2016, they have reached to 81%. Fayez (2020) has mentioned that this migrant ratio has further reached to 90% in 2018.
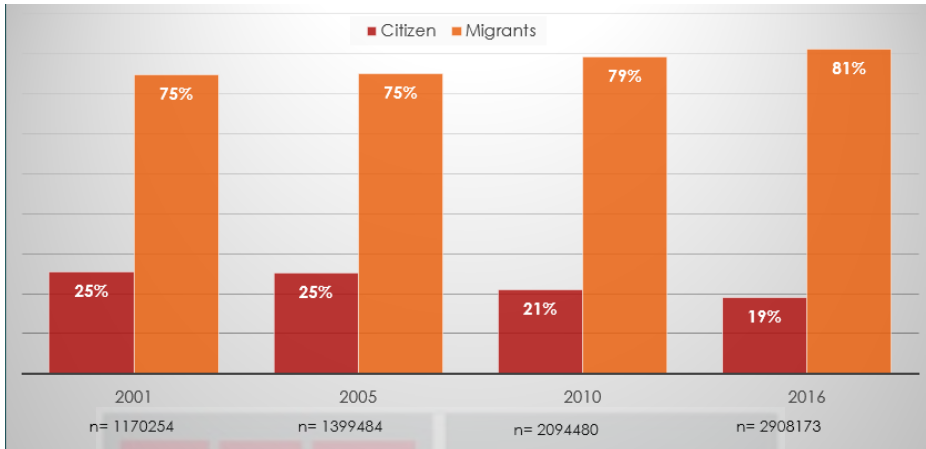
Figure 1.2: Percentage of migrant population of Emirate of Abu Dhabi, UAE

This large percentage of migrant workforce from different countries has a consequence where, from statistical data shows that a large migrant work force is involved in the majority of occupational incidents leading to fatalities and injuries. The occupational fatal injuries and non-fatal injuries data showed 82 deaths and 3700 injuries among expats workers in 2018. The below Figure 1.3 & 1.4 shows the last 4 year's occupational deaths and injuries comparison respectively among UAE national and expat group.
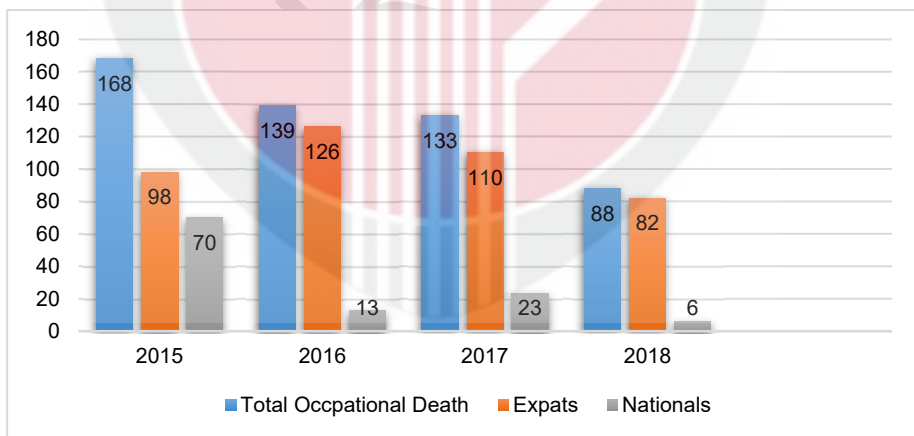
Figure 1.3: Total occupational deaths comparison among Nationals and Expats

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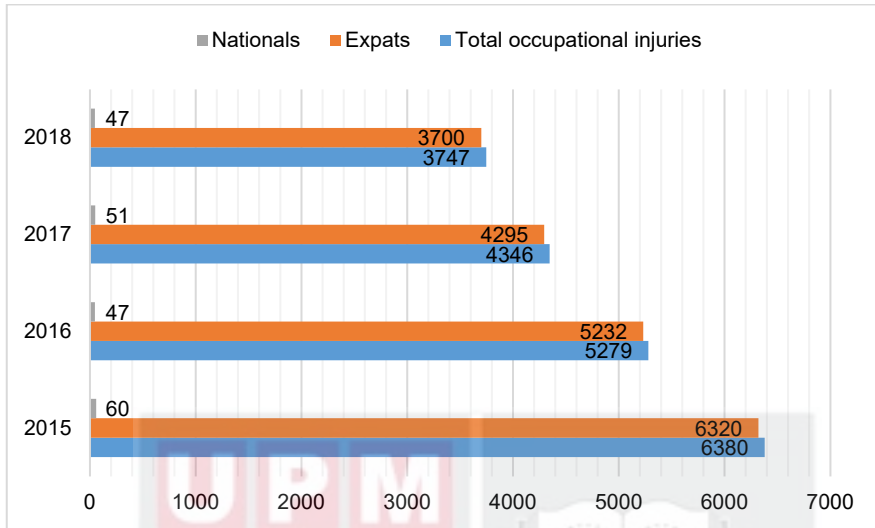
Figure 1.4: Total occupational injuries comparison among Nationals and Expats

The above numbers show that for the year 2018, occupational fatalities and injuries among expats are 93% and 98% respectively. Although the occupational fatalities and injuries rate have decrease year by year, however, the percentage of expats involvement is still very high compared to local workers whose share have decreased significantly (Department of Health - Abu Dhabi, 2019).

1.3   Problem Statement

Occupational accidents result in social and financial problems, so health and safety cannot be ignored. As there are 90% expatriate workers in Abu Dhabi, the above statistics shows that there exists a greater share of these multicultural expats workers in the incidents. This greater share is similar to the global trend as international literature has shown that migrant workers have more risk of getting involved into accidents leading to injuries and fatalities (Giraudo 2017). Many studies such as by Hinze, (2002) shows that safety performance is also impacted by worker's behavior. Other studies such as by Ne'matullah (2021) believes that cross cultural workers bring misunderstanding because of different cultures and behaviors, thus resulting in health and safety problems.

Also there are many epidemiological studies indicating that expat workers are relatively more involved in accidents than natives, and that these accidents are also often more serious in nature (e.g. Kim et al., 2020; Byler et al., 2018; Moyce et al., 2018; Al-Bayati et al., 2018). These multicultural workforce brings different national cultures from their originating countries and the companies employing these workers are influenced by their culture. Furthermore, the national culture

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is represented beyond multiethnic group through the examination of national culture dimensions. Cultural dimension such as power distance have impact on safety climates as lower level of safety awareness because of power distance issues are identified by Oswald et al., (2018). Furthermore, power distance also impacts communication (Dai et al., 2022) which in turns impact safety climate (Huang et al., 2018). Higher power distance can have negative impact on safety climate as lower power distance improves the quality of communication and organizational trust (r = .15, p <.05) as described by Uzun, (2020).

The presence of a multicultural workforce raises concerns regarding potential poor safety climate issues. Despite the high occurrence of accidents and the acknowledged influence of national cultures on safety climate, there is a significant research gap in comprehensively addressing this specific issue. Consequently, it is crucial to conduct an investigation to determine whether construction companies with such a multicultural workforce encounter challenges related to poor safety climate. In safety climate, safety commitment, worker safety priority, communication, and management are key elements. Various research studies provide evidence supporting these elements.

Wang et al. (2018) identified five dimensions of safety climate, including management's commitment, safety behavior and employee involvement, incentives and rewards systems, communication and information systems, and work pressure. Lagerstrom et al. (2019) found that safety climate dimensions included management safety priority and ability, workers' safety commitment, workers' safety priority and risk non-acceptance, peer safety communication, learning and trust in safety ability, and workers' trust in efficacy of safety systems. Peterson et al. (2016) assessed the safety climate dimensions of managerial commitment to safety, management feedback on safety procedures, coworkers' safety norms, worker involvement, and worker safety training.

Kiani et al. (2021) highlighted the correlation between safety climate and management commitment as the key element. Zakaria et al. (2019) identified various factors related to safety climate, including management commitment, communication, safety priority, safety rules procedures, social environment, and top management's commitment and priority. Jorgensen et al. (2007) associated management commitment to safety, performance feedback, humanistic management style, worker involvement in safety, and hygiene practices with workplace safety climate.

Other studies also emphasized the importance of elements such as worker safety priority (Wulandari et al., 2022), safety commitment (Arifin et al., 2019), communication (Deng et al., 2020), and management commitment Sepp (2018) in shaping safety climate.

There are other factors as well on health and safety when multicultural workers are employed. Poor working conditions because of small construction

companies employed as sub-contractors (Rose et al., 2021; Oswald 2020), lower level of safety awareness because of power distance issues, (Oswald et al., 2018), challenging technical communication barriers (Oswald et al., 2019), less obedience towards safety regulations (Guldenmund et al., 2010) are reasons to have more accidents. Eagrenss to earn more money leading to ingornace of safety procedures was mentioned by Guldenmund et al., (2010). Lastly, migrant workers believe their health is not under their control because accidents occur due to natural causes or "God's" will (Arcury et al., 2010).

The high prevalence of accidents among migrant workers in construction companies in Abu Dhabi is also a conceren in term of safety climate. In addition to the high prevalence of accidents among migrant workers, another key problem is the difficulty in obtaining accurate statistics on these workers from the government, which poses a challenge in assessing and addressing their safety needs. Given the multicultural workforce comprising migrant workers from different countries, it is crucial to understand the relationship between their national culture dimensions and the safety climate within these companies. However, despite the United Arab Emirates having a migrant population of 91%, there is a lack of comprehensive studies addressing this issue within the country.

In the Gulf region, which comprises of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates, migrant workers make up the bulk of the national labor force and experience the majority of workplace fatalities. South Asian employees, who are commonly employed in construction or domestic work, are susceptible to dangerous living and working conditions (ILO, 2018b). As per the report of Brian (2021), published for international organization for migration, approximately 34,000 Indian workers passed away in the Gulf region from 2014 to 2019, equivalent to roughly 16 deaths per day (Government of India, 2019). The annual death rate of Nepali workers abroad has been about 678 since 2008, or about 2 deaths per day (Government of Nepal, 2020). Over 37,000 Bangladeshi workers' bodies have been sent back to the country since 2000 (Government of Bangladesh, n.d.). While information on death rates is limited, some attempts have been made to compare deaths abroad to the death rates of similar age groups in the home country with varying results (Pradhan et al., 2019).

This research aims to bridge this gap by investigating the influence of national culture dimensions on the safety climate of construction companies in Abu Dhabi. By examining the perceptions, attitudes, and beliefs regarding safety within these organizations, the study seeks to determine whether the cultural backgrounds of migrant workers impact the overall safety climate.

The findings of this study will provide valuable insights into the factors influencing safety climate in the construction industry, particularly in the context of a multicultural workforce. Understanding the relationship between national culture dimensions and safety climate will enable construction companies to develop targeted strategies for improving safety practices and reducing accidents among

migrant workers. Ultimately, this research aims to contribute to the enhancement of safety standards and the well-being of workers in the construction industry in Abu Dhabi.

1.4   Study Justification

This study will provide the insight of worker's perception of health and safety situation in their respective companies. In other words, this study will provide the safety climate situation in the construction companies of Abu Dhabi employing multicultural workers. It is very important to get insight of this because high ratio of multicultural expat workers is being employed in the construction industry. Understanding the safety perceptions of multicultural expat workers helps to reduce injuries and improve their safety performance as it is said that positive safety climate is indicator of good health and safety performance (Sharifah et al., 2022).

These migrant workers originate from different countries and they have been programmed to a certain mindset based on the national culture of the country of their origin (Holden et. al., 2021). This national culture has different dimension and are large versus small power distance, individualism versus collectivism, strong versus weak uncertainty avoidance, masculinity versus femininity, short-term versus long-term orientation and indulgence vs restraint (Hofstede et al. 2010). Hofstede et. al., (2010) have found differences in these dimensions among group of participant belonging from different countries. As the workers employed in construction companies of Abu Dhabi are majorly from Bangladesh, India and Pakistan, therefore, this study also compared the national culture dimensions among these migrant workers.

Moreover, all these dimensions have been found to have relationship with the safety perception of the individuals. This relationship can be both positive or negative. In case of power distance, Keiser (2017) had found positive relationship with safety climate (ρ = .51, k = 4). Masculinity was having a positive relationship with safety climate (ρ = .47, k = 4). It was also found that uncertainty avoidance had a negative relationship with the safety climate, (ρ = -.25, k = 4), (Keiser, 2017). In case of long term orientation, Keiser (2017) found no relationship with safety climate (ρ = -.02, k = 4) and individualism was also unrelated to safety climate (ρ = -.01, k = 4).

Therefore, this study has not only measured and compared the national culture dimensions among migrant workers, it is also of much importance to find out the relationship of measured national culture dimension with safety climate. This will be beneficial for UAE construction industry considering the argument that 90% of workforce is multicultural migrant, with further division as per nationality. Okolie et. al., (2012) has also worked on determining the influence of these dimensions on safety climate and have found that not all dimensions have the same significant relationship. They found four dimensions having significant

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relationship with safety climate namely, power distance, collectivism, femininity and uncertainty avoidance.

Considering all these facts in mind, this research has looked for the relationship between national culture dimensions and safety climate using sample population from three major nationalities i.e. Bangladeshi, Indian and Pakistani worker. This study also looked on the overall impact of these national culture dimensions on safety climate. The study's justification lies in its potential to provide valuable insights and recommendations that can contribute to improving OSH practices and outcomes in the following areas:

Hiring Workers: Understanding the influence of national culture dimensions on safety climate can guide construction companies in implementing more effective hiring practices. By considering cultural factors during the recruitment process, companies can identify and select workers who possess a strong safety commitment, prioritize worker safety, and exhibit effective communication and management skills. This can lead to a safer work environment and reduced accidents among migrant workers.

Communicating with Workers: The research findings can shed light on the cultural aspects that impact communication within a multicultural workforce. By recognizing the communication barriers and preferences of different cultural groups, construction companies can develop tailored communication strategies. This may include providing multilingual safety training, adopting culturally appropriate communication channels, and promoting open dialogues that foster understanding and collaboration among workers of diverse backgrounds.

Improving Government Regulations: The study can provide evidence to support the revision and development of existing laws and policies related to OSH in Abu Dhabi. By considering the specific needs and challenges faced by a multicultural workforce, policymakers can shape regulations that require companies to implement culturally sensitive safety measures, ensure the provision of adequate safety training and resources, and establish mechanisms for reporting and addressing safety concerns raised by migrant workers.

Enhancing Worker Protection: The research findings can contribute to the creation of a safer and more inclusive work environment by identifying gaps in current OSH regulations and practices. Recommendations can be made to strengthen worker protection measures, such as improving enforcement mechanisms, promoting worker participation in safety committees, and establishing support mechanisms for workers who face barriers in accessing OSH information or reporting incidents.

Since, there is lack of similar studies in UAE, the study has filled up the literature gap.

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1.5 Research Questions

1. Are there poor safety climate issues faced by construction companies having multicultural workforce comprising of Bangladeshi, Indian and Pakistani nationals?

2. Is there difference in national culture between Bangladeshi, Indian and Pakistani workers?

3. What is the relationship between national culture dimensions and safety climate?

4. Which national culture dimensions of these nationals are then one that influence safety climate?

1.6 Research Objectives

1.6.1 General Objectives

The primary objective is to determine the relationship between national culture dimensions and safety climate of construction companies of Abu Dhabi, UAE having workforce comprising of Bangladeshi, Indian and Pakistani nationals.

1.6.2 Specific Objectives

Following are the specific objectives of this study:

i. Determine socio-demographics and work information of multicultural workers employed in construction companies of UAE.

ii. Determine the safety climate of companies employing multicultural workers.

iii. To compare the national culture dimensions of multicultural workers comprising of Bangladeshi, Indian and Pakistani nationals.

iv. Determine the relationship of national culture dimensions, i.e. high power distance, individualism, masculinity, high uncertainty avoidance, short term orientation and Indulgence, with the construction workers' safety climate.

v. Determine the overall impact of national culture dimensions on the safety climate

1.7   Research Hypothesis

H1: There is a poor safety climate in construction companies having multicultural workforce.

H2: There is no difference of national culture dimensions' score between Bangladeshi, Indian and Pakistani workers.

H3: There is a positive relationship between power distance and safety climate, long term orientation and safety climate, and individualism and safety climate.

H4: There is no relationship between Indulgence vs restraint and safety climate, uncertainty avoidance and safety climate, and masculinity and safety climate.

H5: There is a strong overall relationship between the national culture dimensions and safety climate.

1.8   Conceptual Definitions

1.8.1   Safety Climate

Safety climate as defined by Zohar (1980) is "shared employee perceptions of policies, procedures, practices and behavior regarding safety at group level". It is measured on individual level by looking into the perception of employee's safety commitment, safety priority and risk non-acceptance, safety communication, learning and trust in coworker's safety competence, and trust in the efficacy of safety system (Guldenmund et. al., 2013).

1.8.2   National Culture

National culture is defined by Hofstede (2001) as "the collective programing of the mind that distinguishes the members of one group or category of people from another".

1.8.3   Power Distance

"The extent to which the individuals in a society, in institutions and organizations expect and accept that power is distributed unequally" (Hofstede, 1980, 1991). When it comes to individuals with more power, those with a high power distance

are conscious and respectful to them, while those with a low power distance pay less attention. (Hofstede, 2001).

1.8.4 Individualism vs. collectivism

Individualism denotes a society in which the connections between individuals are loose, whereas collectivism denotes a society in which the connections between individuals are tight. In other words, the degree to which a society believes people should look after themselves and be essentially self-sufficient (Hofstede, 2001).

1.8.5 Strong vs. weak uncertainty avoidance

The component of uncertainty avoidance is concerned with people's mental programming in terms of how they respond to ambiguous and uncertain future events. People in a poor uncertainty avoidance culture are more accepting, tolerant, and secure, while confronting a potentially uncertain future. People from a high uncertainty avoidance culture, on the other hand, feel threatened by a potentially unclear future and engage in coping behaviors to minimize their levels of worry and stress (Hofstede, 2001).

1.8.6 Masculinity vs. femininity

This dimension indicates the amount to which the "masculine" ego's values of assertiveness, money, and material triumph over the "feminine" ego's values of nurturing, quality of life, and people (Hofstede, 2001).

1.8.7 Long-term vs. short-term orientation

Long Term Orientation refers to a culture that encourages values that are geared toward future benefits, such as adaptability, perseverance, and thrift. Short Term Orientation is the polar opposite; it represents a culture that values virtues associated with the past, particularly respect for tradition, maintenance of 'face,' and fulfillment of social duties (Hofstede, 2001).

1.8.8 Indulgence vs. Restraint

Indulgence represents a society that allows for the relatively unrestricted satisfaction of certain impulses and sentiments. Restraint is the polar side of indulgence, which represents a culture that limits such fulfillment and makes individuals feel less able to enjoy their life (Hofstede, 2001).

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1.9 Conceptual Framework

Figure 1.5 shows the research conceptual framework of this study. As shown in Figure 1.5, there are many factors that are related to safety climate. Ibrahim (2019) has identified 18 factors that can influence safety climate. Leadership commitment as well as competence of the workers are two of the factors that can influence safety climate Ibrahim, (2019). Griffin et. al., (2002) have identified the linkage between safety climate and organizational climate, supportive leadership, safety knowledge and safety motivation. National culture and its six dimensions including power distance, individualism, masculinity, uncertainty avoidance, long term orientation and indulgence have also been found to be in relationship with safety climate by different researchers. Al shahrani et. al., (2014), Guldenmund et. al., (2012) and Ali (2006) have worked on the relationship of national culture dimension with safety climate.

However, in this study, we have considered national culture dimensions as independent variables. These are color coded as cream color. The dependent variable in our study is safety climate. It is color coded as sky blue. There are many other factors as well that can impact safety climate such as worker's education, marital status, social responsibility, migrant status and age.
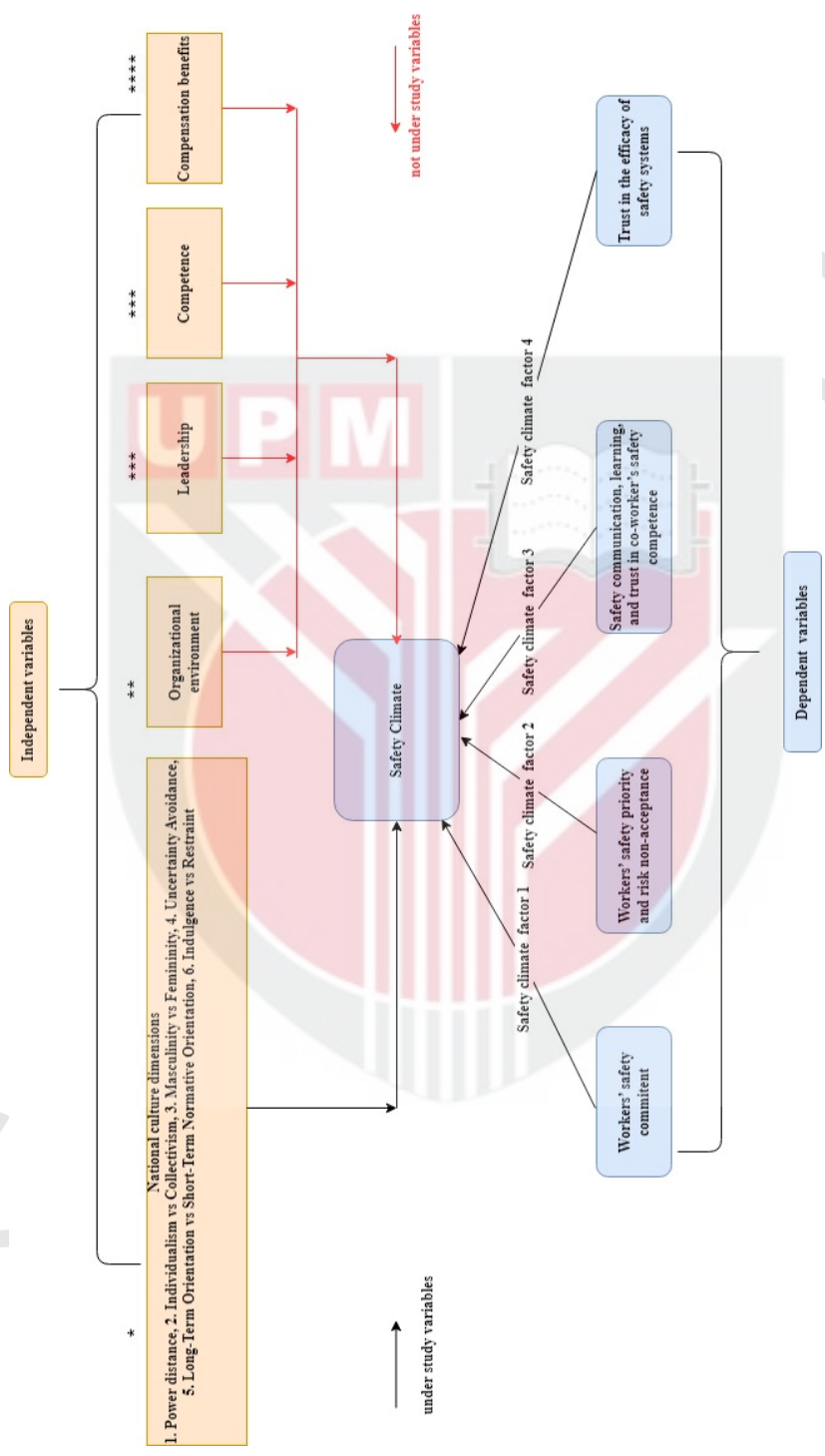
Figure 1.5: Conceptual Framework of national culture dimensions and safety climate
Source: * alshahrani et. al., (2014), ** Griffin et. al., (2002), *** Ibrahim Mosly, 2019, **** Guldenmund et. al., (2013)

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