



CHALLENGES INFLUENCING THE OCCUPATIONAL HEALTH AND SAFETY OF PAKISTANI MIGRANT WORKERS IN CONSTRUCTION SECTOR: A QUALITATIVE STUDY IN KSA, DUBAI AND OMAN

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Abstract: The construction sector faces numerous accidents, injuries, and deaths, particularly among non-national or migrant workers. The migratory phenomenon has intensified, with the number of foreign migrants growing from 153 to 281 million individuals between 1990 and 2020. This qualitative study investigates the occupational health and safety challenges faced by Pakistani migrant workers in the construction sector in the Kingdom of Saudi Arabia, Dubai, and Oman. The research uses semi-structured interviews and focus group discussions with migrant workers, safety professionals, trainers, and site supervisors to explore multifaceted challenges such as legal status, cultural and language barriers, training effectiveness, working conditions, access to healthcare, pressure to breach safety regulations, and lack of awareness of host country norms and values. The findings reveal that despite economic opportunities, Pakistani migrant workers often face significant health and safety risks, exacerbated by insufficient safety training, language obstacles, and cultural misunderstandings. The study calls for comprehensive policy reforms, enhanced safety training programs, and improved legal protections to ensure the well-being of migrant workers.

Keywords: Construction sector, Migrant workers, Sense-making theory, template analysis, NVIVO software, *gulf nations*.

1. INTRODUCTION:

The construction industry is regarded for being a high-risk industry with several health and safety hazards and it does provide employment opportunities to about 220 million people worldwide. It is also distinguished by a significant population of migrant employees, who have greater accident rates than native workers [9]. The migratory phenomenon has grown steadily more intense and structured over the past few decades, supported by social, economic, and political factors. This has increased its relevance as a research topic for academics across many disciplines, with occupational health and safety playing a significant role. Current global estimates provided in 2022 by the World Health Organization highlight that from 1990 to 2020, the total number of international migrants increased from 153 to 281 million people, and especially in the last decade, the greatest increases were due to family and labor migration [13].

The Arab Gulf states are home to about 30 million migrants, making up 52% of the 58 million people living in the region. Between 70 and 80 percent of these migrants are employed in low-wage industries within the economies of the Gulf states. According to research by human rights organization, about

10,000 migrant workers from South and South-East Asia pass away in Gulf nations each year [8]. According to the survey, more than half of the fatalities go undiagnosed and are frequently attributed to "natural causes" or "cardiac arrest". There is a lack of complete and fragmented information regarding migrant deaths in these Gulf Cooperation Council (GCC) nations. This complicates the analysis of the circumstances and causes of death for migrant workers.

Lack of information about the causes of migrant worker deaths means that governments are not under pressure to enact public health regulations that would improve migrant worker protection and reduce avoidable deaths. It also keeps families from pursuing potential compensation.

In short, Gulf nations are not doing enough to look into the causes of the deaths of so many migrant workers [8]. Despite the fact that, challenges which are being faced by the migrants' workers in Construction sector of gulf countries are growing day by day, still there is little research done in this regard. This study focuses on discovering how these challenges influence their occupational health and safety and what are the best solutions to prevent accidents and incidents.

The two main benefits of this research are as follows: Firstly, most of the researches which have been conducted so far in gulf countries, were mainly addressing challenges and opportunities for native workers, only few researches are on the perceptions of senior management regarding occupational health and safety of migrant workers[7]. This significance gap in these researches highlighted the need to explore the challenges of migrant workers in detail and finding best solutions for them. Therefore, in this study I had taken steps not only to explore the challenges influencing the health and safety of migrant workers in construction sector of three main gulf countries (KSA, Dubai & Oman) but also to address training issues faced by them (as these trainings are considered as only way to prevent 80% of accidents and incidents in construction sector [5].

Secondly, most of studies were focused on adopting positive quantitative approach and qualitative research was need of the hour [2]. This research is based on the sense-making theory whose fundamental tenet is that sense-making is a process through which individuals add significance to their own perceptions [6] The advent of the sense-making viewpoint signifies a change in the focus of organization studies from how decisions affect organizations to how meaning motivates organizing. Organizational culture is developed via procedures that make sense of common experiences rather than through the creation of shared meaning. Although we might never reach an understanding, so the sense-making process might enable us to share common experiences. The four occupational groups were selected, including trainers, occupational health professionals, supervisors, native and migrant labor, observes differences between how native and migrant workers exhibit safety behaviors differently in the workplace, leading to near-miss accidents, injuries, and accidents. Focus groups and interviews were employed in the study to examine how to explore their sense-making.

1.1 Challenges of migrant construction workers:

All areas of industry are affected by health and safety, but it's crucial for the construction industry [12]. Due to the fact that it is one of the industries with the greatest exposure to occupational accidents. It has always been a significant problem. Although in some nations, the performance of health and safety has improved, the construction sector is still behind the majority of other industries. The truth is that the construction sector is always one of the most dangerous industries in the country based on injury and mortality data [4]. By reviewing the existing literature, the key challenges explored so far are the following:

1.1.1 Unsafe working environments for migrant workers:

The majority of construction accidents in these selected nations are mostly caused by risky working conditions and poor safety performance. Most of such kind of occurrences are attributable to improper work practices, hazardous working conditions, or both [10]. It is common for migrant workers to enter the labor force at the lowest feasible level, making them more susceptible to discrimination, which can seriously jeopardize their safety on the job. Compared to native workers, migrant workers are

frequently assigned riskier responsibilities on the job site, which increases the pressure on them to work fast and use shortcuts.

1.1.2 Cultural factors' impact on the safety of migrant workers and language differences:

Migrant workers come from many nations with unique cultures and languages. Due to the dominance of local standards, culture often shapes a person's fundamental personality [15]. Language also aids in understanding what construction companies are asking of their employees [16]. These two fundamental components are crucial for fostering positive relationships between employers and employees in all fields of employment, but particularly in the construction sector.

Lack of cultural awareness and language barriers creates communication gap between different occupational levels in construction industries, which leads to accidents and incidents.

1.1.3 Lack of access to safety training:

Safety training is a key mechanism for enhancing safety climate and performance for migrant construction workers, thereby reducing accidents and injuries[14]

. First and foremost, problem for migrant worker, is the apparent lack of training available, particularly at lower levels of the subcontracting supply chain, where the majority of workers are self-employed. All challenges faced by migrant workers in obtaining high-quality safety training necessitate a step back to examine how key stakeholders make sense of migrant worker safety training [3]. In order to ascertain the key meanings, they attach to the difficulties and opportunities key stakeholders see in relation to migrant worker safety training in construction sector of gulf countries (KSA, Dubai, Oman).

1.2 Objectives of the Study:

This study aimed to address and understand following key aspects:

1. Identifying Challenges
2. Understanding the Impact on health and safety of Pakistani migrant workers
3. Interpreting experiences and perceptions
4. Addressing cultural, language and communication challenges
5. Raising Awareness

2. MATERIALS AND METHODS:

2.1 Description of the Study Area:

The areas selected to carry out the study were KSA, Dubai and Oman. These were chosen as study areas because of higher accident rates among migrant workers. The gulf construction sector is one of the most hazardous for occupational accidents/injuries, with extensive involvement of migrant workers.

2.2 Participant selection

The method of purposive sampling, which entails looking for "groups, settings, and individuals," was employed to find and choose participants who would offer a comprehensive picture of safety in the construction sector from a variety of angles. The study involved 88 participants from four occupational groups in KSA, Dubai, and the Oman: supervisors, safety experts, trainers, and workers. Individual interviews were conducted with migrant laborers, while focus groups were attended by local site supervisors, safety trainers and safety experts. The 88 participants were mostly older than 30, with ages ranging from 19 to 64. The breakdown of participants by country and roles is shown in the table below:

Table 1: Shows division of participants

Groups	KSA	Dubai	Oman	N	%
Migrant workers	15	12	10	37	42.1
Site Supervisors	10	9	4	23	26.1
Safety Professional	10	6	4	20	22.7
Safety Trainer	4	2	2	8	9.1
Total	39	29	20	88	100

2.3 Data Collection:

37 semi-structured interviews and 7 focus groups were used to gather data between December 2023 and February 2024 in KSA, Dubai, and Oman. These techniques were selected because they are adaptable and allow for the exploration of emerging areas of interest in addition to addressing the same topics with each participant). Individual interviews were conducted with all thirty-seven construction workers. Three focus groups were attended by the 23 supervisors from these selected gulf nations. In a similar vein, each of the 8 safety trainers and the 20 safety experts took part in four focus groups discussions

2.3.1 Document Analysis

The first step involved gathering and analyzing OHS related literature, such as published research articles and review papers, in order to locate pertinent and comparable studies across the globe. The majority of these studies were focused on adopting positive approach to find the causes of increased accident and incident rates. Only few researches were being found adopting qualitative approach based on sense-making theory by Karl Weick (1995). Most of them were focused specifically on solving issues of migrants in European countries. To the best of our knowledge, this is the first study to use qualitative positive approach based on sense-making theory in these selected gulf nations obtaining information from large number of stakeholders from multiple construction sites.

2.3.2 Preparation of semi-structured interview guide

The primary techniques of gathering data were semi-structured interviews and focus group discussions, which yield detailed information based on the individual and real-world experiences of the participants. Participants were able to provide a more in-depth perspective in this way that was not possible with other forms of data collection, like questionnaires or structured interviews. A thorough interview conducted in a more casual setting was the best option for the study's in-depth analysis.

It was believed that semi-structured interviews were a good way to collect data from employees for a number of reasons, including the ability to ensure confidentiality and the ease with which individual interviews could be tailored to the specific requirements and linguistic limitations. Focus groups were deemed suitable for the remaining three groups: supervisors, safety trainers, and safety experts. This was because discussions and viewpoint sharing were crucial components of the data collection process that increased the data's value and richness. There was a total of 13 main questions in the pre-drafted question guide based on the objectives of the study and the previous theoretical review. All interview and focus group discussion questions are mentioned in Appendix A and B.

Table 2: The prepared semi structured interview and focus group discussion guide

Serial no.	Interview main Questions
1	"Have you experienced any form of discrimination or bias at work or in the community due to your migrant status? "
2	"How would you describe your current working conditions, including hours, pay, and job security? Can you give some more details of the rules and regulations that being followed by the workers? Have you witnessed any accident or incident, if yes, can you please describe that? "
3	"Can you tell about your journey to this country and what led you to work in the construction sector? "(Source: Migration theories focusing on push-pull factors in labor migration.)
4	"What has been your experience in integrating into the local community and culture? "(Source: Occupational Safety and Health Administration (OSHA) guidelines and safety standards.)
5	"How do you cope with the challenges you face, and do you have a support network you rely on? "(Source: Psychological research on coping mechanisms and social support in migrant communities.)
6	"How is your experience with the safety training?"
7	"Do you think your company could do something to help workers who have language problems?" (Source: Challenges influencing the health safety of migrant worker in construction sector: A qualitative study in Italy, Spain and the UK by Rose Shepherd in 2021)
8	"How does your supervisor ensure that there is a good communication between colleagues?"
Serial no	Focus group discussion main questions
1	"From your perspective, what are the primary challenges faced by migrant workers on construction sites? "(Source: General observations and reports on migrant labor in the construction sector.)
2	"Could you point out good practices in terms of safety that are usually found on a daily basis on construction sites?" (Source: Challenges influencing the health safety of migrant worker in construction sector: A qualitative study in Italy, Spain and the UK by Rose Shepherd in 2021)
3	"What impact do legal and policy frameworks have on the safety and well-being of migrant workers?"
4	"How do you think training could be improved to overcome the barriers that language can pose?"
5	"What challenges do you face in training migrant workers, and how effective do you find the current training programs?"

2.3.3 Conducting Interviews and focus group discussions

Email or mobile phones were used to get in touch with the selected participants. A time for the interview and focus group was set after getting a positive response, based on the participant's availability. Zoom or phone interviews and focus group were performed. After getting the respondents' consent, these interviews and focus groups were also recorded. The interviews and focus groups subjects were previously apprised of the aim of the study. For the respondent's convenience, interview questions were occasionally emailed prior to the interview. As the interviews went on, the use of snowball sampling assisted in finding additional participants. Prior to conducting interviews, confidentiality was guaranteed to each and every one of the respondents. After conducting 31

interviews and 7 focus group discussions in total, information saturation was attained. The duration of the interviews and focus group ranged from 25 to 60 minutes.

2.4 Data analysis

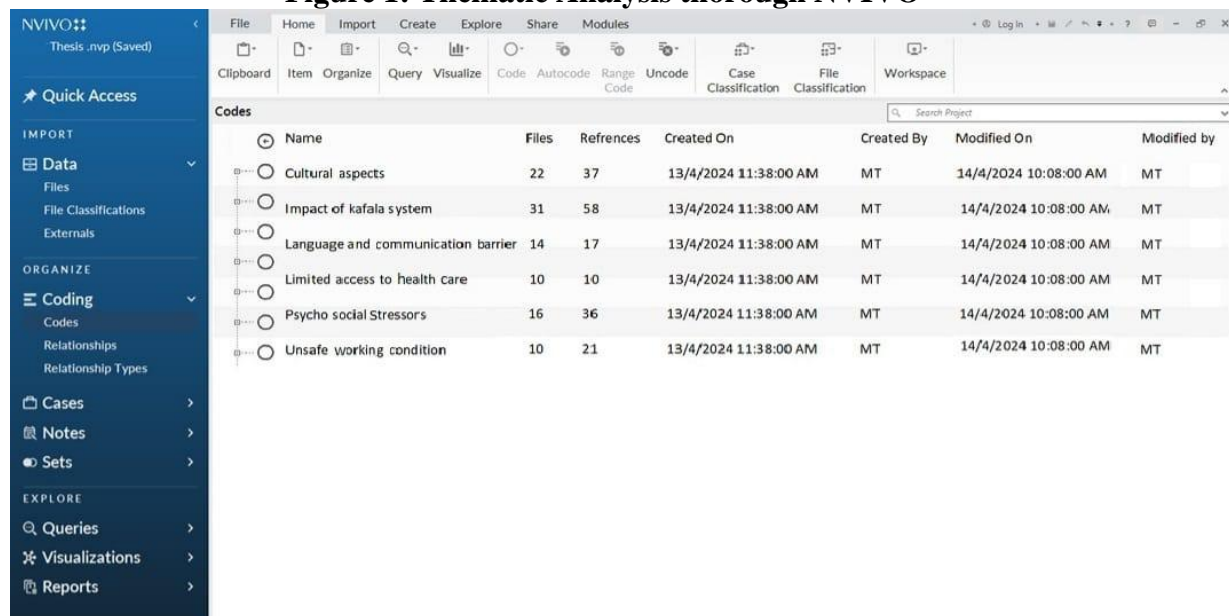
The interview and focus group transcripts in each of the three nations were analyzed using a template analysis. Both deductive and inductive methods can be used with this kind of analysis.

3.6.1 Thematic Analysis through NVIVO

In accordance with Ozoike-Dennis, NVIVO software version 1.6.1 was employed to conduct a thorough and effective analysis of the data.

In order to identify "thought units," the transcripts were read and reread to become familiar with the data. Thought units, which can range in length from one to multiple sentences, encompass a comprehensive idea or thought pertaining to the safety training or obstacles faced by migrant workers. Based on our review of the literature on the conditions of migrant workers, the thought units were identified within three general themes: working conditions, cultural aspects, language barriers, and thought units regarding safety training. Next, in order to extract concepts from the transcripts, these were methodically analyzed. Reading, rereading, and analyzing the thought units led to the development of concepts. In the subsequent analytical stage, these were classified statements pertaining to analogous categories into concepts and allocated these elucidative labels, also known as codes. It was kept classifying until saturation was achieved and each concept had been given a relevant thought unit. In the third step, codes categorized ideas into six broad themes that captured the opportunities and difficulties encountered by migrant workers within the four main issues that the literature review had identified (i.e., safety training, language barriers, cultural aspects, and working conditions).

Figure 1: Thematic Analysis thorough NVIVO



The screenshot displays the NVIVO software interface. On the left is a dark blue sidebar with navigation options: Quick Access, IMPORT (Data, Files, File Classifications, Externals), ORGANIZE (Coding, Codes, Relationships, Relationship Types), Cases, Notes, Sets, and EXPLORE (Queries, Visualizations, Reports). The main window shows the 'Codes' list. At the top, there's a search bar and a table with columns: Name, Files, References, Created On, Created By, Modified On, and Modified by. The table lists six codes: Cultural aspects, Impact of kafala system, Language and communication barrier, Limited access to health care, Psycho social Stressors, and Unsafe working condition, each with corresponding file and reference counts and timestamps.

Name	Files	References	Created On	Created By	Modified On	Modified by
Cultural aspects	22	37	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT
Impact of kafala system	31	58	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT
Language and communication barrier	14	17	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT
Limited access to health care	10	10	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT
Psycho social Stressors	16	36	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT
Unsafe working condition	10	21	13/4/2024 11:38:00 AM	MT	14/4/2024 10:08:00 AM	MT

Table 3: Challenges relating to migrant workers' health and safety in construction (Source: Results of NVIVO software)

Overarching themes	Concepts	Representative quotes (Thought units)	Country
Unsafe working conditions	Rapid urbanization and construction boom	<i>"The construction boom is a double-edged sword. While it offers employment opportunities, it also exposes us to greater dangers with each new skyscraper." (KSA, Migrant worker)</i>	All countries
	Inadequate regulations and enforcement	<i>"Inadequate regulations and enforcement create a culture of impunity where employers feel emboldened to prioritize profits over our well-being. It's a recipe for disaster." (Dubai, Migrant worker)</i>	All countries
	Subcontracting and outsourcing practices	<i>"The subcontracting chain is a breeding ground for exploitation and abuse. We're paid less, work longer hours, and receive little to no protection." (KSA, Migrant worker)</i> <i>"Outsourcing means we have no direct relationship with the main contractor, making it harder to voice our concerns or demand better conditions." (Oman, Migrant worker)</i>	All countries
Language and communication barriers	Misunderstandings and Misinterpretations	<i>"Misunderstandings about the importance of safety measures can arise when workers prioritize productivity over their own well-being, highlighting the need for a cultural shift towards prioritizing safety." (Dubai, Trainer)</i>	All countries
	Ineffective communication	<i>"Miscommunication on the worksite is a daily struggle. We often find ourselves unsure of what's expected of us, leading to confusion and mistakes." (Dubai, Migrant worker)</i>	All countries
	Difficulty in seeking help	<i>"Without proper channels for reporting safety concerns, we're left feeling powerless and vulnerable. Our lives are seen as expendable in the pursuit of progress." (KSA, Migrant worker)</i>	All countries
Cultural aspects	Cultural diversity	<i>"Managing a diverse workforce is both a challenge and an opportunity. Cultural differences bring unique perspectives but also require careful navigation to ensure everyone's safety." (KSA, Supervisor)</i>	All countries
	Attitude towards risk and safety	<i>"Many Pakistani migrant workers come from backgrounds where safety standards may not be as stringent as in Gulf nations. Adjusting to new safety practices can be challenging, especially when faced with tight deadlines and financial pressures." (Dubai, Safety expert)</i>	All countries

Overarching themes	Concepts	Representative quotes (Thought units)	Country
Psychosocial stressors	Work ethics and practices	<i>"There's a sense of pride in their work among Pakistani migrant workers, but this can also lead to a reluctance to speak up about safety concerns for fear of appearing incompetent or lazy." (Dubai, Supervisor)</i>	All countries
	Social support networks and community dynamics	<i>"There's a sense of disconnect among Pakistani migrant workers, with little cohesion or solidarity to address the challenges we face on the job. We're fragmented and powerless." (KSA, Migrant worker)</i>	All countries
	Stress and anxiety	<i>"The fear of losing our jobs or being deported adds an extra layer of stress to an already challenging situation. We're constantly on edge, worried about what the future holds." (Dubai, Migrant worker)</i>	All countries
	Distraction and disengagement	<i>"When workers are distracted or disengaged, their focus shifts away from safety protocols, increasing the risk of accidents and injuries". (Oman, Supervisor)</i>	All countries
	Impaired decision making	<i>"Cultural differences can also play a role in impaired decision-making, as migrant workers may come from backgrounds where safety standards are different or less stringent. Employers must provide clear and consistent guidance to ensure that all workers understand and adhere to safety protocols." (Oman, Safety expert)</i>	All countries
	Risk taking behavior	<i>"Risk-taking behavior is a significant concern on construction sites, especially among migrant workers who may be willing to take risks to meet deadlines or prove themselves. It's crucial for supervisors to actively manage and mitigate these risks." (KSA, Trainer)</i>	All countries
	Stigma barrier to seeking help	<i>"Migrant workers may face cultural and social barriers to seeking help for occupational health and safety concerns, including fear of judgment or reprisal from employers or colleagues. It's essential to address these barriers through education and awareness initiatives." (Oman, Safety expert)</i>	All countries
	Social withdrawal and isolation	<i>"When workers withdraw socially or isolate themselves, it can impact their mental well-being and their ability to communicate effectively with colleagues and supervisors, which in turn can</i>	All countries

Overarching themes	Concepts	Representative quotes (Thought units)	Country
		<i>affect safety on the job site." As a supervisor, I pay close attention to changes in behavior among our workers, including signs of social withdrawal or isolation. It's important to address these issues early on to prevent them from escalating."</i> (KSA, Supervisor)	
Impact of kafala system	Employer control and dependency	<i>"The dependency on our employers for sponsorship and residency permits ties us to our jobs and limits our ability to seek alternative employment or challenge unsafe working conditions. This lack of mobility further reinforces our dependency and vulnerability."</i> (KSA, Migrant workers)	All countries
	Restrictions to mobility and autonomy	<i>"The restrictions on our mobility and autonomy contribute to feelings of isolation and alienation from the broader society in Gulf nations. We are marginalized and excluded, denied the opportunity to fully participate in community life."</i> (KSA, Migrant worker)	All countries
	Exploitation, wage theft and abuse	<i>"Exploitation, wage theft, and abuse are unfortunately common experiences for many of us migrant workers in the Gulf nations. We work long hours in hazardous conditions, only to be denied fair compensation for our labor."</i> (Dubai, Migrant worker)	All countries
Limited access to healthcare	Limited healthcare infrastructure	<i>"The lack of healthcare infrastructure also exacerbates existing health disparities among migrant workers. Those of us with chronic conditions or pre-existing health concerns struggle to access the specialized care and treatment we require."</i> (Oman, Migrant worker).	All countries
	Financial barriers	<i>"When I got injured on the job, the first thing that crossed my mind was how I would afford medical treatment. The high cost of healthcare in Gulf nations is a significant barrier for migrant workers like us."</i> (KSA, Migrant worker)	All countries

3. RESULTS

In the Gulf countries, the construction industry is a vital engine of economic expansion, largely due to the contributions of migrant laborers. But beneath the massive infrastructure projects and tall skyscrapers is a complicated web of issues affecting these migrant workers' occupational health and safety. This study attempts to provide light on the various challenges faced by migrant workers in the selected Gulf countries' (KSA, Dubai and Oman) construction industry through thorough investigation and analysis, ultimately advancing our knowledge of the variables influencing their

professional well-being. The main findings of our inquiry, which explores the numerous issues affecting the general welfare, health, and safety of migrant workers in this crucial sector, are presented in this section. Our findings highlight the critical need for targeted interventions and policy reforms to protect the rights and dignity of migrant workers in the Gulf construction sector, given the high rates of occupational injuries and systemic barriers to healthcare access.

3.1 Migrant workers' occupational health and safety challenges

The research on the occupational health and safety of migrant workers in the construction sector of Gulf nations reveals significant obstacles. These include hazardous working conditions, language and communication barriers, and structural inequalities in the kafala sponsorship system. These factors increase the vulnerability of migrant workers to workplace accidents and injuries, and hinder their ability to assert their rights to a safe working environment.

3.1.1 Unsafe Working conditions

The research identified hazardous working conditions prevalent in the construction sector of Gulf nations, posing significant risks to migrant workers' safety. These conditions include exposure to extreme temperatures, precarious scaffolding, and unsafe practices in the operation of heavy machinery. Several factors exacerbate unsafe working conditions for migrants in the construction sector of Gulf nations. These factors contribute to a heightened risk of accidents, injuries, and fatalities among migrant workers. Below is an examination of some key factors exacerbating unsafe conditions:

1. Rapid Urbanization and Construction Boom: Gulf nations have experienced rapid urbanization and a construction boom in recent decades, leading to an increased demand for labor in the construction sector. This rapid expansion has put pressure on construction companies to meet tight deadlines and complete projects quickly, often at the expense of safety measures. The urgency to finish projects on time can lead to shortcuts in safety protocols, inadequate training, and insufficient supervision of migrant workers.

2. Inadequate Safety Regulations and Enforcement: While Gulf nations have safety regulations in place to protect workers, enforcement of these regulations can be inconsistent. In some cases, regulatory agencies lack the resources or capacity to conduct regular inspections and ensure compliance with safety standards. As a result, construction companies prioritize cost-cutting measures over safety precautions, putting migrant workers at risk of injury or death. *"Enforcement is lax, if not nonexistent. We're left vulnerable to exploitation and abuse with no recourse for justice."*(Oman, Safety trainer)

Figure 2: NVIVO results for codes highlighted by respondents in Unsafe working conditions

○ Unsafe working condition	10	21
○ Inconsistent enforcement	6	6
○ Rapid Urbanization	9	9
○ Subcontracting practice	6	6

3.1.2 Language and communication barriers

Language barriers significantly affect the ability of migrant workers to understand safety protocols, communicate effectively with supervisors and colleagues, and navigate emergency situations. Here's a detailed examination of the impact of language barriers on safety communication:

1. Misunderstandings and Misinterpretations: Language barriers often lead to misunderstandings and misinterpretations of safety instructions and procedures. Migrant workers with limited proficiency in the local language or English struggle to comprehend verbal instructions or written safety materials, resulting in confusion and potential errors in their work. This lack of clarity increases

the risk of accidents and injuries on construction sites. *"Addressing misunderstandings and misinterpretations requires not only providing clear instructions but also fostering a culture of open communication where workers feel empowered to ask questions and seek clarification."* (KSA, Safety expert)

2. Ineffective Communication of Hazards: Safety communication relies on clear and concise communication of hazards and risks in the workplace. However, language barriers can hinder the effective communication of safety hazards to migrant workers. Supervisors and safety managers find it challenging to convey the severity of hazards or the importance of safety precautions to workers who do not understand the language fully. This lack of effective communication leaves workers unaware of potential dangers and compromises their ability to protect themselves.

3. Difficulty in Seeking Help During Emergencies: In emergency situations such as accidents, injuries, or medical emergencies, effective communication is crucial for swift response and assistance. However, language barriers can impede migrant workers' ability to seek help or communicate their needs to supervisors or emergency responders. Workers hesitate to report incidents or request assistance due to language barriers, delaying response times and potentially exacerbating the severity of injuries or incidents. *"The long hours and grueling work conditions leave us too exhausted to advocate for ourselves. Seeking help feels like an uphill battle we can't afford to fight."* (KSA, Migrant worker)

Figure 3: NVIVO results for codes highlighted by respondents in Language and communication barrier

○ Language and communication barrier	14	17
○ Difficulty in seeking help	8	8
○ Ineffective communication	4	4
○ Misunderstanding and Misinterpretation	5	5

3.1.3 Impact of the Kafala System

The Kafala system, prevalent in many Gulf nations, is a sponsorship framework governing the employment of migrant workers. Under this system, migrant workers are legally tied to their employers or sponsors, who assume responsibility for their visa, residency, and legal status in the host country. The term "Kafala" translates to "sponsorship" or "guarantee" in Arabic, reflecting the role of the sponsor in providing support and oversight to the migrant worker throughout their employment contract.

Its Implications for Migrant Workers

1. Employer Control and Dependency: One of the key features of the Kafala system is the significant control it grants to employers over migrant workers. Employers have the authority to sponsor workers' visas, control their legal residency status, and determine their ability to enter or exit the country. This system creates a hierarchical relationship between employers and migrant workers, with workers often dependent on their sponsors for their livelihoods and legal status.

2. Restrictions on Mobility and Autonomy: The Kafala system places restrictions on the mobility and autonomy of migrant workers, limiting their ability to change jobs or leave their employment contract without the consent of their sponsor. Workers who attempt to leave their jobs or change employers without permission risk losing their legal status in the country, facing deportation, or even being blacklisted from returning to the Gulf region in the future.

"Without the freedom to move around independently, we are unable to escape from unsafe working conditions or abusive employers. We are forced to endure mistreatment and endanger our health and safety for fear of losing our jobs or residency status." (Dubai migrant worker)

3. Vulnerability to Exploitation and Abuse: The Kafala system exposes migrant workers to exploitation and abuse by unscrupulous employers and recruitment agencies. Workers faces wage theft, unpaid salaries, and other forms of mistreatment with limited legal recourse. Fear of reprisals or deportation often prevents migrant workers from reporting abuse or seeking help, leaving them vulnerable to exploitation and human rights violations. *"Exploitation and abuse not only harm our financial security but also take a toll on our physical and mental health. We endure long hours of hard labor in the hope of providing for our families, only to be cheated out of our rightful wages."*(KSA, Migrant worker)

Figure 4: NVIVO results for codes highlighted by respondents in Impact on Kafala system

○ Impact of kafala system	31	58
○ Employer control	23	23
○ Exploitation and abuse	14	14
○ Restrictions to mobility	21	21

3.1.4 Cultural Aspects

The construction sector in Gulf nations relies heavily on migrant workers, who bring with them a diversity of cultural backgrounds, beliefs, and practices. Understanding how these cultural differences influence occupational health and safety (OHS) challenges is critical for addressing the unique needs and risks faced by migrant workers. This section provides a detailed analysis of our research findings on the role of cultural differences in shaping OHS challenges in the Gulf construction sector.

Cultural Diversity: Migrant workers in the Gulf construction sector come from a wide range of countries and linguistic backgrounds. This diversity can lead to significant language barriers and communication challenges on construction sites, impacting the effectiveness of safety communication, training, and coordination efforts.

Attitudes Towards Risk and Safety:

Cultural Norms: Cultural differences influence workers' attitudes towards risk-taking behaviors and safety practices. Some cultures prioritize productivity and efficiency over safety, while others place a greater emphasis on caution and adherence to rules and regulations.

Risk Perception: Workers from cultures with a higher tolerance for risk-taking be more inclined to engage in hazardous tasks or overlook safety precautions, potentially increasing the likelihood of accidents and injuries. Conversely, workers from cultures that prioritize safety be more cautious and vigilant in identifying and addressing safety hazards.

Work Ethic and Practices:

Cultural Work Ethic: Differences in cultural work ethic and practices can impact safety practices in the construction sector. Some cultures value hard work, perseverance, and self-sacrifice, leading workers to tolerate long hours, fatigue, and unsafe working conditions to fulfill their obligations.

Impact on Safety: Cultural norms around work ethic and practices influence workers' willingness to report safety concerns, take breaks, or prioritize their own well-being.

Social Support Networks:

Community Cohesion: Migrant workers often form close-knit communities within the construction workforce, providing social support, solidarity, and informal networks for sharing information and resources. These community dynamics does influence safety practices and the dissemination of safety-related information among workers.

Impact of Social Networks: Social networks within migrant communities can both facilitate and hinder OHS initiatives. While these networks promote information-sharing and mutual assistance, they can also perpetuate cultural norms or practices that undermine safety, such as peer pressure to engage in risky behaviors or reluctance to report safety violations.

"The absence of proper social support networks perpetuates a cycle of exploitation and vulnerability among Pakistani migrant workers. We're trapped in a system that prioritizes profit over our well-being."(Dubai, Migrant worker)

Figure 5: NVIVO results for codes highlighted by respondents in Cultural Aspects

	Cultural aspects	22	37
	Attitude towards safety	10	10
	Cultural diversity	8	8
	Social Support Network	10	10
	Work Ethics and Practice	9	9

3.1.5 Psychosocial Stressors

Psychosocial stressors for migrant construction workers in Gulf nations are pervasive and multifaceted, stemming from various factors related to their living and working conditions. The following analysis delves into how mental health issues affect the safety practices and behaviors of migrant workers:

1. Stress and Anxiety:

- Migrant workers often experience high levels of stress and anxiety due to various factors such as separation from family, job insecurity, and financial concerns. This chronic stress does impair cognitive functioning and decision-making abilities, leading to lapses in concentration and judgment on construction sites.

"Without access to proper mental health resources, our stress and anxiety only worsen over time. It's a vicious cycle that's hard to break out of."(Dubai, Migrant worker)

2. Distraction and Disengagement:

- Mental health issues cause migrant workers to become distracted or disengaged from their work, increasing the likelihood of errors and accidents. Poor concentration, daydreaming, and preoccupation with personal concerns divert attention away from safety-critical tasks and lead to complacency or risk-taking behavior.

"We must also recognize that distraction and disengagement can be symptoms of larger systemic issues within the construction industry, such as poor working conditions or lack of training. Addressing these root causes is essential for improving occupational health and safety for all workers."(Dubai, Safety expert)

3. Impaired Decision-Making:

- Mental health issues can impair decision-making processes, making it difficult for migrant workers to assess risks accurately and prioritize safety. Cognitive biases, such as overconfidence or pessimism, cloud judgment can lead to suboptimal choices regarding safety practices and hazard avoidance.

4. Risk-Taking Behavior:

- Some migrant workers engage in risk-taking behavior as a coping mechanism for managing stress or asserting control over their circumstances. This propensity for risk-taking, combined with impaired

mental health, increases the likelihood of disregarding safety regulations, taking shortcuts, or ignoring warning signs on construction sites.







"Fatigue can also contribute to risk-taking behavior among workers, especially those working long hours in demanding conditions. It's important for supervisors to monitor workload and provide opportunities for rest and recovery to mitigate these risks."(KSA, Safety Trainer)

5. Stigma and Barriers to Help-Seeking:

- Stigma surrounding mental health issues and cultural barriers deter migrant workers from seeking help or accessing mental health support services. Fear of judgment, discrimination, or repercussions from employers prevent workers from addressing underlying mental health concerns, exacerbating their impact on safety behavior.

"Migrant workers may fear negative consequences, such as job loss or deportation, if they speak up about safety concerns or seek help for workplace injuries. Employers must create an environment where workers feel confident that their rights will be protected and their well-being prioritized."(KSA, Safety expert)

Figure.6: NVIVO results for codes highlighted by respondents in Psychosocial Stressors

	Psychosocial Stressors	16	36
	Distraction and Disengagement	10	10
	Impaired decision making	6	6
	Risk taking behavior	8	8
	Stigma and barrier to help	6	6
	Stress and anxiety	6	6

3.1.6 Limited Access to Healthcare

In our research on the challenges influencing the occupational health and safety of Pakistani migrants in the construction sector of Gulf nations, one significant barrier they face is the limited access to health care. This section provides a detailed examination of this issue:

A. Limited Healthcare Infrastructure:

- Many construction sites and labor camps in Gulf nations lack adequate healthcare infrastructure [1]. Medical facilities, clinics, and hospitals are scarce, particularly in remote areas where construction projects are located. This limited infrastructure hinders migrant workers' access to essential healthcare services

B. Financial Barriers:

- Migrant construction workers often face financial barriers that prevent them from accessing healthcare. High treatment costs, lack of health insurance coverage, and out-of-pocket expenses for medical services is mostly prohibitive for workers with limited income, deterring them from seeking necessary healthcare.

"The fear of incurring medical expenses prevents many of us from seeking timely medical care for work-related injuries or illnesses. We try to tough it out and hope that the pain will go away on its own, rather than risk going into debt." (KSA, Migrant worker)

Figure 4.7: NVIVO results for codes highlighted by respondents in limited access to healthcare

Limited access to the healthcare	10	10
Financial barriers	5	5
Limited healthcare Infrastructure	5	5

4. Discussions

The study on the occupational health and safety (OHS) of Pakistani migrants in the Gulf construction sector highlights the complex interplay of factors affecting their well-being. Key findings include hazardous working conditions, inadequate safety protections, and psychosocial stressors. The pressure to meet deadlines and production targets, along with prioritizing cost efficiency, contributes to a culture of risk-taking and neglect of OHS standards. The lack of social support networks and limited access to mental health services exacerbate these issues. Language and cultural barriers also hinder workers' ability to access essential services and assert their rights. The Kafala sponsorship system ties legal residency and employment status to employers, creating a power imbalance and vulnerability. Finally, lack of access to healthcare services, particularly in remote sites, further exacerbates these issues.

5. Recommendations

The occupational health and safety (OHS) of Pakistani migrants in the Gulf construction sector requires a series of recommendations. These include strengthening OHS regulations, reforming the Kafala sponsorship system, improving access to healthcare services, investing in language and cultural support, promoting worker empowerment and awareness, strengthening international cooperation, monitoring and evaluating OHS practices, and fostering social integration and inclusion. Regulations should prioritize the safety and well-being of all workers, including migrant workers in the construction sector. Employers should invest in language and cultural training programs to bridge communication gaps between migrant workers and supervisors. Civil society organizations and trade unions should empower migrant workers through education and awareness campaigns. International cooperation should be strengthened to address migration root causes, promote ethical recruitment practices, and uphold migrant workers' rights across borders. Regular inspections, audits, and surveys should be conducted to assess the effectiveness of OHS practices. Fostering social integration and inclusion can reduce social isolation and promote a sense of belonging among migrant workers.

6. Limitations and Delimitations of the study:

Despite the benefits of our study, there are some drawbacks. Our sample's makeup most likely to have an impact on our results. The bulk of our respondents have migrated from Pakistan to these selected gulf countries so it is probable that they have to face more challenges as they belong to nation where health and safety at work is given least priority. They are under constant pressure to support their families living behind, which bounds them to report any misconduct or discrimination to higher authorities. They are always willing to do any job as it is really difficult for them to secure a job of their relevant domains. The differences among the focus group participants will also be served as a method to "discount" prejudices. Future researches should thoroughly work on migrants from all nations to these countries and may go for more detailed methodological techniques.

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7. CONFLICT OF INTEREST

The Authors declared no conflict of interest.

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APPENDIX A

Semi-structured interview Questions for Respondents (Pakistani migrant construction workers/labor) modified after reviewing researches (Source: General observations and reports on migrant labor in the construction sector; (Moin Uddin, 2022); (Rose Shepherd, 2021)):

1. Can you describe your experience working in the construction sector in Gulf nations as a Pakistani migrant?
2. What are the most common health and safety challenges you have encountered in your workplace?
3. How do language barriers impact communication regarding health and safety protocols on construction sites?
4. Have you received adequate training on occupational health and safety regulations in the Gulf nations?

5. Can you describe any instances where you felt your safety was compromised due to workplace conditions?
6. How do cultural differences influence perceptions and practices related to occupational health and safety in the workplace?
7. What role do employers play in ensuring the occupational health and safety of Pakistani migrant workers?
8. How do subcontracting practices affect the implementation of health and safety measures on construction sites?
9. Are there any differences in safety standards between Gulf nations that you have observed?
10. How do working hours and fatigue impact your ability to work safely on construction sites?
11. Have you encountered any discriminatory practices related to health and safety based on your nationality?
12. Can you describe any instances where you faced challenges accessing medical treatment or assistance after a workplace injury?
13. How do living conditions and accommodations provided by employers impact the overall well-being of migrant workers?
14. Are there any cultural or religious practices that intersect with occupational health and safety concerns in the workplace?
15. How do socioeconomic factors influence access to healthcare and safety resources for migrant workers?
16. Can you describe any barriers to reporting safety concerns or incidents in the workplace?
17. How do power dynamics between employers and workers impact the enforcement of safety regulations?
18. Have you received any support or training on mental health and well-being in the workplace?
19. Can you describe any initiatives or programs aimed at improving occupational health and safety for Pakistani migrant workers?
20. How does the availability of personal protective equipment (PPE) impact your ability to work safely?
21. Can you describe any cultural or language-specific approaches to promoting safety awareness on construction sites?
22. What role do trade unions or worker associations play in advocating for the rights and safety of migrant workers?
23. Have you participated in any safety training or awareness programs provided by your employer?
24. How do transportation and commuting to and from construction sites affect your safety and well-being?
25. In your opinion, what are the most critical steps that employers, governments, and international organizations can take to improve occupational health and safety for Pakistani migrant workers in the construction sector of Gulf nations?

APPENDIX B

Focus group discussion questions for local Site Supervisors, Safety Trainers and Safety Professional modified after reviewing standards and researches (Source: Occupational Safety and Health Administration (OSHA) guidelines and safety standards; (Moin Uddin, 2022); (Rose Shepherd, 2021)) :

1. In your experience, what are the main challenges in ensuring that migrant workers receive adequate safety training?
2. What role do cultural differences play in understanding and implementing safety measures among migrant workers?
3. How do you address the lack of familiarity with local safety regulations among migrant workers?
4. What strategies do you employ to promote a safety culture among diverse teams of migrant workers?

5. Can you share examples of successful safety initiatives tailored specifically for migrant workers?
6. What are the most effective methods for ensuring that safety standards are consistently upheld across construction sites with high migrant worker populations?
7. How do you address the issue of migrant workers feeling reluctant to report safety concerns due to fear of repercussions?
8. What support systems are in place to address the mental health and well-being of migrant workers in the construction sector?
9. How do you ensure that safety equipment and gear are accessible and properly utilized by migrant workers?
10. What measures are taken to integrate migrant workers into safety planning and decision-making processes?
11. How do you collaborate with subcontractors and agencies to ensure migrant workers' safety standards are met?
12. What are the most significant obstacles to enforcing safety regulations on construction sites with diverse migrant worker populations?
13. Can you describe any instances where cultural norms clashed with safety regulations, and how were they addressed?
14. What resources or training programs are available to help migrant workers understand their rights and responsibilities regarding occupational health and safety?
15. How do you address the issue of migrant workers working long hours impacting their ability to stay alert and focused on safety?
16. In your opinion, what are the key areas for improvement in current safety practices for migrant workers in the construction sector?
17. What role does supervision and leadership play in mitigating safety risks for migrant workers?
18. How do you ensure that safety training materials are effectively communicated to workers with varying levels of literacy and education?
19. What measures are in place to provide medical assistance and support to migrant workers in case of accidents or emergencies?
20. How do you engage with migrant workers to gather feedback and insights on safety concerns and improvement opportunities?
21. Can you share any success stories or best practices in promoting a safe and inclusive work environment for migrant workers?
22. What challenges do you face in ensuring that subcontractors and other stakeholders adhere to the same safety standards for migrant workers?
23. How do you envision the future of occupational health and safety for migrant workers in the construction sector, and what steps are needed to achieve it?