

Determining the Occupational Health and Safety of Workers in The Food Manufacturing Sector of Pakistan

Nazia Atiq, Ather Akhlaq***

Abstract

For organizations, conducting work in a safe environment has become mandatory under the provisions and guidelines provided by international and local laws. Occupational health and safety (OHS) standards have become a requisite in almost every industry these days. However, many organizations in developing countries are negligent in adhering to safety measures, and there is also an absence of proper monitoring. This study, therefore, tends to determine the occupational health and safety standards that are prevailing in the food manufacturing sector of Karachi, Pakistan. For this purpose, several food manufacturing companies were approached and interviews were conducted with quality assurance managers and health and safety executives to evaluate and examine the workplace conditions to better understand their OHS practices. The interviews revealed that the export-oriented food manufacturing companies in Pakistan are following occupational health and safety standards as it has now become a necessity; however, the extent to which these measures are implemented and strictly followed varies. Secondly, certain issues arise when companies try to follow and implement OHS practices, these problems also vary from company to company however, most of them relate to worker adaptability, costs, and training needs. The situation in local firms is pathetic. Most of them do not have HSE officers, no concept of toolbox talk, and no preventive and safety measures and these all things make the situation worst and lead to fatalities as law enforcement is missing. Keeping in view the perspectives of management, this study concludes that by establishing a national framework for policies and legislations as per the conventions of ILO for a better workplace environment along with proper law enforcement, improvement in the occupational health and safety domain can be achieved.

Keywords: *Necessity; Occupational Health and Safety; better workplace environment; Pakistan.*

JEL Classification: J81

1. INTRODUCTION

For organizations to carry out profitable businesses they need to ensure safety and well-being in their workplaces.

* Student of Institute of Business Management, IoBM, Karachi, Pakistan. Email: naziaatiq0@gmail.com (corresponding author)

** Associate professor Institute of Business Management IoBM Karachi, Pakistan. Email: ather.akhlaq@iobm.edu.pk

Many organizations worldwide, have come to realize the necessity of improving health and safety standards. And they are willingly doing so by utilizing occupational health and safety management systems (OHSMS)(Standards, 2008). According to the International Labour Office (ILO), employers must work on processes that help develop and implement occupational health and safety standards and guidelines at the national level(Nations, n.d.). The management of occupational health and safety risks has become a critical aspect of business risk assessments and proper management. However, there is a growing need for the involvement of intermediaries as organizations may lack the expertise themselves(In & Supply, 2013). Nonetheless, organizations must aim at mitigating and preventing any sort of harm or potential hazard to their workers and others involved in the operational processes. They must work toward adequate training and development, mentoring, and supervision. They should take measures for promoting the health and well-being of the workers(Floors, n.d.). To ensure proper safety and management, organizations must establish various principles such as documented safety protocols, safety objectives, safety committee, rules and procedures, training, and investigation of accidents; by adhering to these principles, organizations can effectively ensure the protection of employees from potential injury and harm(Sivaligam et al., 2016).

Occupational health and safety (OHS) is defined as the measures that strive toward maintaining processes that boost a positive workplace by ensuring, protecting, and promoting the well-being, safety, and health of workers in the organization. It is central to improving the workplace conditions for all employees(Global & Health, 2017). Ultimately, occupational health and safety (OHS) is a crucial strategy for not only sustaining the health and safety of workers but also for contributing to the productivity of workers, the image of an organization, and its social responsibility(Ansah, 2017). While specifically concentrating on the food industry and its potential hazards for workers, it is said to have one of the highest rates of injuries in the manufacturing field, and most of the mishaps occur because of machinery and plants(European Agency for Safety and Health at Work (EU-OSHA), 2010). Undoubtedly, training is considered a vital component of occupational health and safety programs worldwide. There is still a lack of concrete information on OHS training's effectiveness as it is still developing(Robson et al., 2012). The issue is even more grave in developing countries where a majority of the work environments and conditions are not advanced enough and are substandard (Noman et al., 2021). The workers are not provided adequate training, which means that safety conditions differ from country to country and also from industry to industry(Parlaktuna, 2017). In various industries in developing countries, workers are directly exposed to materials that can be potentially hazardous and detrimental to their health(Khan et al., 2015).

1.1 Pakistan Context and the Food Manufacturing Industry

Pakistan falls under the category of a lower middle-income country which harbors a population that is surpassing 195.4 million people and is the sixth most populous country in the world. The country faces climatic issues, scarcity of resources, labor gender inequalities, and worker safety issues that hinder its food manufacturing and exporting industry's growth(Fact et al., 2016). The food manufacturing and processing industry of Pakistan are said to be the second largest industry in the country followed by the textiles industry. It is an immensely labor-intensive industry that contributes significantly to the growth and development of large-scale manufacturing in the country(Nurul et al., 2013). Additionally, the food processing industry is shifting from solely producing traditional products such as biscuits and jams to more value-added products such as sauces, frozen foods, ready-to-cook, and various others, and it is also actively responding to changing customer preferences accordingly. Pakistan is also planning on venturing into the export of edible products both finished and unfinished with a precise focus on halal food products but to do

so it has to adhere to international standards which also necessitate worker safety (Nodari, 2011). These international standards exist to ensure that the products are produced in a safe environment under satisfying workplace conditions, thus enhancing the need for occupational health and safety standards (Amjad et al., 2012). Furthermore, the country faces immense nationwide challenges that prove to be detrimental not only for the food manufacturing industry but for various other industries as well. These issues consist of the energy crisis, political issues, lack of advanced technologies, and so forth (Gillani et al., 2017; The & Academy, 2011).

1.2 OHS in the Food Manufacturing Industry of Pakistan

Unlike developed countries, where occupational health and safety standards are observed stringently to reduce the number of workplace mishaps, the scenario in developing countries is quite different. In developing countries accidents occasionally cause severe harm to workers, and they are not even recorded nor reported to higher authorities such as the governing bodies (Hussain et al., 2019; Noman et al., 2021; Zahoor et al., 2016). The potential hazards, problems, and challenges of the food manufacturing industry have not been given much attention or seen as severe issues compared to other industries in Pakistan. Though statistics prove that issues that arise from the food manufacturing industry have the worst records (Kim, 2016). In the past, the country has witnessed distressing accidents that left many workers dead and others severely injured all because of a lack of adequate health and safety measures and arrangements in the workplace. Although large-scale manufacturers follow some worker-safety measures, small and medium-sized manufacturers are reluctant at following practices to ensure laborers' safety and well-being. The main reason behind this careless attitude is mainly because of the absence of proper education and acceptance of advanced systems and procedures (Afzal & Ayaz, n.d.). The workplace safety rules and legislation in Pakistan are not specific to any industry instead they lay down provisions for all industries collectively, hence failing to address the differing workplace issues of various industries (Raheem & Hinze, 2012). Likewise, organizations are not fully implementing occupational health and safety measures which leads to various accidents and injuries. Reports also depict that health and safety practices significantly affect workers' mental and physical well-being, influencing productivity and performance (Ahmed et al., 2018; Hussain et al., 2019).

1.3 Research Questions

In the background of these views, the following questions had been investigated with this research:

- Key persons' perspectives regarding OHS practice in developing countries collectively and Pakistan specifically?
- Main barrier related to OHS practices in the manufacturing sector particularly and all sectors of Pakistan collectively?
- Policies and commitment related to OHS in selected organizations?
- How OHS practices can be improved collectively and in selected organizations specifically?

2. METHODS

2.1 Design

Researchers carried out the research using a qualitative case study method. It consisted of interviewing quality assurance managers and health and safety executives of the food manufacturing and food services companies of Pakistan which are established in Karachi. During the process, researchers reviewed international research papers as well as local research papers and government laws regarding occupational health and safety. NA carried out the interviews both in-person and through Skype and Zoom mainly due to the spread of covid. The reason for choosing a case study approach was to examine and study occupational health and safety standards and measures taken by the food manufacturing companies in-depth in the Pakistan's-context and to draw potentially transferable lessons for other manufacturing industries of Pakistan as well (Keen et al., 1995).

2.2 Sampling and Recruitment

Researchers developed a purposive sample of quality assurance managers and health and safety executives of the private sector (see Table 1). This sample involves individuals who work directly with occupational health and safety mainly under the quality assurance and management department of the food manufacturing and food services companies in Karachi. The individuals participated willingly upon the requests for invitation for interviews by researchers. They were also sent an information leaflet, topic guide (see Box 1), and consent form. Those who didn't respond were reminded twice after the first approach.

Table 1: Sampling Framework

The sampling Framework consists of the following organization types:

Local Manufacturing Food Company (LMFC)
Local Manufacturing and Exporting Food Company (LMEFC)
Small-scale Food Manufacturing Company (SFMC)
Private Food Manufacturing Company (PFMC)
Food Services Company (FSC)

Box 1. Areas covered in Interviews.

- OHS Practices in developing countries
- The necessity of implementing OHS practices
- Problems with following OHS practices
- Suggestion for OHS implementation

2.3 Data Generation

The average interview length was 20 minutes, they ranged from 15 minutes to 35 minutes. The interviews were taken during the following dates; from March 9th, 2021 to April 27th, 2021. The interviews were a mix of both English and Urdu language, as the interviewee saw fit. Two interviews were in English, whereas the remaining five were in a mix of both Urdu and English. The interviewees' consent was taken before recording the interview but some denied so researchers had to take written notes. Researchers used the topic guide to steer the discussions, however, the interviewees were eager to provide additional information that helped immensely with the present research (see Appendix A)

2.4 Data Handling and Analysis

Some of the interviews were recorded using a smartphone whereas other interviews were recorded by writing notes as the interviewees weren't comfortable with sharing his/her audio recording. Field notes were also made of 2 interviews and the interviews were transcribed by NA. These transcriptions were then used to analyze the data using QSR NVivo (v10). The data were analyzed to extract codes from the data which provided the patterns, categories, and eventually, the themes underlying the data collected. Researchers were attentively aware of the influence that backgrounds could have on the data interpretation, so cautionary measures have been taken.

3. RESULTS

Researchers approached a total of 13 individuals who were potential participants, out of which 7 were interviewed. After 7th interview researchers realized that they reached saturation point moreover receiving the same answers for questions being asked. Though 7 respondents might seem less it is stated that there is no consensus concerning the exact size of a proper sample (RUSU MOCĂNAȘU, 2020). Sample size can vary depending on the context and content under study as per The SAGE Encyclopedia Qualitative Research Methods.

Table 2 represents the characteristics of the participants, their influence (high, medium, and low) in the occupational health and safety domain in their organization, and the method of conducting interviews.

The themes that we extracted from the interviews are as follows: 1) the Necessity of implementing OHS; 2) Problems with following OHS; 3) Suggestions for OHS implementation.

Table 2: Characteristics of the Interviewees

Interviews	Domains	Respondents' influence on the occupational health and safety of workers	Gender	Location	Interview Method
NG_01_S	LMEFC	High	Male	Karachi, Sindh	In-person
MS_02_G	FSC	High	Male	Karachi, Sindh	Skype
NN_03_P	SFMC	Medium	Female	Karachi, Sindh	Zoom
FK_04_D	LMFC	High	Male	Karachi, Sindh	In-person
MA_05_I	PFMC	High	Male	Karachi, Sindh	Skype
SK_06_K	LMFC	Medium	Female	Karachi, Sindh	Skype
GM_07_S	LMEFC	High	Male	Karachi, Sindh	Zoom

Table 3: Summary of Results

Themes	
The necessity of Implementing OHS	<ul style="list-style-type: none"> Limit hazardous work conditions Maintain company reputation Reduce costs Increase in worker efficiency
Problems with following OHS	<ul style="list-style-type: none"> Following OHS is costly Training takes up time Worker involvement and productivity declines Adjustment takes time
Suggestion for OHS implementation	<ul style="list-style-type: none"> Effective legislation Law enforcement Proper data management Standardized programs in universities A commitment of top management Workers' training

3.1 The necessity of Implementing OHS

The quality assurance managers describe various reasons why it is necessary to implement occupational health and safety (OHS) standards in organizations and factories. These safety measures are not only essential to limit or reduce hazardous work conditions leading to enhanced productivity but also serve to maintain the company's reputation.

“Practicing OHS standards lets us provide a safe environment for our workers... and they can work without worrying that they will get harmed.” FK_04

“OHS affects a company’s reputation a lot... in today’s time people are very aware of everything... especially consumers and of course the governing bodies, so it helps increase goodwill in the industry... company is seen as trustworthy.” MS_02

“Of course, following safety rules helps us make sure that staff is safe from potential dangers of working with heavy machinery and even harmful chemicals... we don’t use very harmful chemicals, but still in the food manufacturing business you have to be careful with many materials and machinery and following safety rules allow us to do that... ensure worker safety.” SK_06

Secondly, some company managers also said that adhering to OHS standards allows a company to reduce costs that can arise from accidents both to the worker and company assets.

“One advantage that I see... or what I should say is... truly exists, is that companies realize costs savings... my experience with other companies also made me understand that safety practices reduce costs... and these costs are not only related to worker injury but damage to company assets... like materials, machines, and other things.” MA_05

“There are costs related to paying for workers' medical bills... God forbid if there is some permanent injury then the company has to bear that costs as well... then some workers take the matter to court.. and that becomes even more disastrous... so imposing OHS eliminates these things from happening entirely.” SK_06

Thirdly, a significant reason for implementing safety practices and rules in companies is that employee/worker productivity and efficiency increase.

“They (workers) know that they are working in safe conditions... their health is looked after... they have the proper gear and follow strict guidelines for the sake of their well-being... so they work more actively... and complain less and are satisfied with their work... so you can say that efficiency increases when OHS is being followed.” FK_04

“Without a doubt, following occupational safety and health standards boost productivity... previously when we didn’t follow such strict measures... that is like you can say some six years ago... we weren’t getting much work done in lesser time than we are today... workers would be scared and hesitant to work with advanced gas ovens in the factory... but now since we are adopting many safety protocols work has increased... workers are making more batches in a day compared to previous days.” NN_03

3.2 Problems with following OHS

When organizations implement occupational health and safety measures, it at times gives birth to various issues that impede business processes. These issues vary from organization to organization. Some managers stated that following OHS practices are quite costly while others believe that training takes up a lot of time that delays business processes.

“Whenever we hire staff, we have to give them training... this is very different from basic pieces of training like in companies... factory workers undergo rigorous training and it takes months... so it takes up a lot of our time... and efforts as well.” SK_06

“By no means is implementing OHS easy and it comes with a lot of costs, we have to change the infrastructure... for this, we need a permit from local government... which is another cost... then we have to purchase machinery and equipment that is according to the requirement of safety regulations... so it’s a whole costly process.” MA_05

Secondly, it has been observed by the managers that safety standards can potentially deteriorate worker involvement in the process, impeding productivity as most prefer following old practices.

“Adaptability... our worker, if he is cutting some fruit or vegetables, with bare hands and you provide them with the gloves, so their productivity will decline because they are not used to it... their body memory is not used to it, so there are challenges... although they will wear it when you are in front of them when you go away they will remove and start working... it’s an adaptability issue, you can say that.” NG_01

“It is easier for them (workers) to just follow the old practices... since humans are by nature not fond of change... they resist too... like they will rush in and out of the premise without wearing the gear at times... we have told them this is harmful to their health... they make excuses.” SK_06

“I have found many workers... even given warnings to some... that are caught skipping safety protocols... but they say that it is easier for them to work without the protocols.” MS_02

Thirdly, many workers resist the change that comes with following OHS standards, whereas some take a lot of time to adjust to the safety guidelines.

“During the training phase we tell them that these are for your safety... still, most of them are reluctant and avoid following the OHS guidelines... those that do follow take a lot of time to adjust to the standards... and we have to monitor them regularly... otherwise they skip even minor steps... which can disturb the whole process.” NN_03

3.3 Issues attributed to the absence of OHS

Almost all respondents admitted that we are lagging in the implementation of OHS practices in our organizations, a key reason is poor legislation. Though some organizations are export-oriented they are comparatively much better as compared to local organizations since they are ISO certified, but the overall situation is not that much encouraging.

The poor legislation policies in terms of OHS practice are visible from space. In Pakistan, we have a 1934 factory law that has only 1 chapter related to OHS, which has been amended in 1997.

“..... Developing countries like Pakistan don’t even know how to effectively formulate the OHS policies, whatever we do have they are completely vague and most of them cannot be implemented in our scenarios.....” GM_07

“..... OHS is a multi-dimensional field and that’s why proper implementation needs many other factors like proper premises, and Pakistan building authority is still stuck with its old version of policies where there were no elevators.....at that time OHS practices were not that common but now we need revised policies that could address modern issues.....” NG_01

“..... OHS practices concept is a bit new to our workers, in the last 5-10 years companies started to adopt this concept. They didn’t reach to utmost level as the law enforcement situation is so pathetic. When everyone knows they can easily breach the law and save themselves by paying peanuts as a bribe.... then what is the point to spend a huge amount for OHS....” MA_05

“.....no one takes OHS practices seriously, common people mindset is a big issue, they don’t want to change themselves....” NN_03

“.....Organizations don’t want to invest in OHS practices.....” GM_07

“..... weird mindset, like what has to happen it will.....so what the hell to take care of this issue.....” SK_06

“.....It is very difficult to make workers understand that OHS practices are just for their benefit only.....” NG_01

3.4 Barriers and Facilitators to OHS

Many barriers and facilitators to OHS practice have been identified as reported below.

3.5 Legislation

The major barrier that has been identified throughout the process of data generation by almost all respondents whether they are in the top position or supervising the staff, is pathetic law enforcement. If someone knows he is not accountable for his wrong actions then whatever he does is less at least for him. The ineffective policies are completely impractical for our society. It is not possible to climb the mountain overnight, it needs patience and proper realistic strategies that unfortunately we as a nation lack. There is no strictness from the Government side, in other countries where the incident and accident ratio is less than half, there is proper law enforcement which is the key element (James, 2011). As we see developed countries are stringiest with OHS practices because they value human life which is missing in our situation.

“.....Applicability and implementation factor are missing.....”GM_07

“.....poor legislation is the biggest barrier.....”NG_01

“..... they did some changes in 2018 and this is a ray of hope for us...but till now proper enforcement is missing, some organizations are very committed and they are doing their best part.....but you know x and y theory...and here many people need x leadership.....”MA_05

The factory act 1934 doesn't cover the agriculture sector, even not the seasonal and informal employees and of course, it just creates more complications (Parlaktuna, 2017)

3.6 Infrastructure

Building designing plays a very significant role in terms of practices of OHS. If the movement of materials and pedestrian movement is the same, the premises are so congested and crammed then it creates a lot of hazardous situations for workers. In most workplaces, there are no proper windows for ventilation, no latrines, urinals, and no Spittoons, though, these all are mandatory according to the factory act 1934 chapter 3. Organizations have the goal of zero-defect quality culture but zero safety accident is not their primary goal and that's why they are not willing in spending finance on it.

“.....no proper washrooms are available for workers.....sometimes they have to go out of the premises to answer the nature call....” and you are asking for rest rooms..... sigh....”NN_03

....” it all needed to lift from bottom pyramid..... just a few changes in the law will not bring any betterment in our system.... especially when our infrastructure is pathetic....”GM_07

8.3.1 The installation and maintenance of fire door assemblies and fire window assemblies used to protect openings in walls, floors, and ceilings against the spread of fire and smoke within, into, or out of buildings shall comply with Section 8.4 and NFPA 80 or any other approved code/standard (Building code of Pakistan-fire safety, 2016)

14.15 Industrial Occupancies

14.15.4.3 Extinguisher Training. Employees shall be periodically instructed in the use of portable fire extinguishers (Building code of Pakistan-fire safety, 2016)

Again, laws are here, but most of the local industries don't comply with them.

“.....barely you will find workers who know how to use fire extinguishers.....if you try to train them.....they will, though it will take time.....but I think.....everyone loves his life and his safety is his priority.....problem is with infrastructure.....you won't find a fire extinguisher.....oxygen cylinder....fire blanket...even smoke detectors... on their premises....if you asked them they would laugh at you.....like you are talking.....leave it.....”MA_05

“..... sometimes I wonder how they are breathing in this cramped place but yeah they don't have any option.... they accept it as their fate.....they are unaware of their rights.....they just want to get bread and butter for their families.....”NN-03

The number of incidents and accidents has been reduced in industrialized countries by adopting structural changes like work and creating a safe and healthy workplace (James, 2011)

3.7 Organizational

As far as the organizational side is concerned, then export-oriented organizations are doing much better in terms of OHS practices, but local companies don't comply with a single clause of chapter 3rd of the factory act, there are no proper washrooms for workers, cleanliness so they don't know the proper definition of it, no exhaust fan, no ventilation concept, no fencing around the machinery even workers don't get clean drinking water. Organizations' commitment related to OHS is missing rather they take it as an unnecessary expense.

“..... we can't afford it.....”FK-04

“.....who cares for these issues.....”SK_06

“..... policies are there, but no implementation.....” NN_03

“.....I am here for just the last 1 year before they didn't hire any HSE officer....”FK_04

“.... most of the local brands don't have an HSE officer...”SK_06

“.....there are local pieces of machinery which don't have proper machinery guard.... these are cheaper and that's why many local companies use them which increases the no of fatalities and injuries.....”GM_07

“..... many companies are opting to outsource.....and therefore we can see many loopholes in terms of OHS.....”NG_01

“..... many contractual companies exploiting human resources and again there is no control over them, neither from organizational side nor from government side....” NN_03

HSE is a money-oriented field and organizations are reluctant in spending on this, though it offers long-term benefits. It is a long-term investment that not saves from so many hassles but it helps to build a very good image for that company. Finding a shortcut to profit is a big organizational barrier.

3.8 Data keeping

Regarding data keeping, it is found that many organizations do not have a proper reporting system for accidents and incidents which is why it is very difficult to measure the extent of the effects

of OHS-related hazards. Most of the data is not quantified and qualified and that is why finding the root cause is too difficult rather than resolving the issues and bringing improvement. By seeing and resolving the surface-level issues a sustainable change cannot be expected. ISO certified Organizations do have static data but due to their privacy policies, it couldn't be shared with outsiders. One more thing came to the researchers' knowledge that mostly no one from the government side asks organizations about the reporting system so whatever is being done is completely from the organizations' policies.

3.9 Suggestion for OHS implementation

We have a very clear example from history that how **the Horrific Tragedy of the Triangle Shirtwaist Fire Led to Workplace Safety Laws** (history stories, 2021), what we need is to learn from our mistakes, should adopt a realistic approach, set SMART goals, achieve them and keep them as sustainable benchmarking. This fire claimed 146 lives but ultimately led to changes in safety regulations. "On a larger scale, the Triangle fire convinced the nation that the government had a responsibility to ensure workers had a safe place to do their jobs" (history stories, 2021).

This is the fundamental missing component in our system, if it gets fixed the other components will fall into their exact position. Though globally applicable frameworks and instruments are available to address these challenges the need of the hour is effectively formulated as a national framework that has to be established while considering local resources, issues, and challenges. Keeping the proper track of incidents and accidents, digging for the root cause, and then setting sustainable goals with proper evaluation are much needed. Living nations learn from their mistakes, they don't repeat their mistake and expect a different result as it is completely insane. Top management should take a personal interest in this matter, hire skilled personnel, allocate a proper budget for it, and then continuously check and balance. It will reduce companies' indirect costs and increase profitability by eliminating litigation issues, production delays, equipment damages, absenteeism due to injuries, hefty fines, and the like.

There should be standardized programs in universities for providing higher education in OHS so we can have an educated literate workforce. So far we do have only one institute **CIWCE** "Centre for the Improvement of Working Conditions and Environment" located in Punjab, built with the collaboration of Punjab's Province Directorate of Labor Welfare, Finnish Institute of Occupational Health, and ILO (Parlaktuna, 2017). According to static data around 85% of the workforce who suffered injuries or diseases are without higher education which shows a strong correlation between education and prevention of these diseases and incidents. (Legal Framework & Statistical Trend, n.d.)

4. DISCUSSION

4.1 Statement of principal findings

Most of the officers admitted that the situation related to OHS is much better than earlier 2000, now all exported-oriented companies have a better version of OHS, but still. we are way behind developed countries, the reason is simple OHS is a multi-department field, it involves architects, civil engineers, administration, Human sources, building authority, government inspection teams, and key person policymakers. Unfortunately. we don't have any effectively formulated policies in terms of

OHS. whatever fragmented parts are present they are vague and impractical. But still, those companies that are exporting their products are far better than non-export-oriented companies, probably exported-oriented companies have to seek ISO protocols that compel them to follow basic OHS practices. We are still far from developed countries, to reach their level, proper law enforcement is most needed. Companies either don't have any designated budget for OHS measures or a peanut which is not sufficient at all. In some companies, there is no OHS officer or they just appointed recently.

Workers are also unaware of safety measurements, health guidelines, and their basic workplace rights. Lack of safety culture, corrupted organizations, vague policies, poor infrastructure, and under-the-table practices, all are hampering the smooth OHS practice in Karachi food companies particularly and generally all food companies of the country moreover same situation are found everywhere. All these issues can be overcome if the government plays an effective role not only in the making of clear and realistic policies that should be equally followed by all organizations and along with strict inspection with penalties and hefty fines. Organizations don't keep the exact record of incidents and accidents and so many cases don't get public exposure rather they closed the mouth of the affected person or his family with threats or sometimes by giving them a small chunk of money. Bribing culture, and under-the-table practices should be eliminated. In a nutshell, the development of policies and legal frameworks is all in vain until or unless there is effective enforcement by relevant institutions.

4.2 Strengths and Limitations

The main strength of this study is the continuous assessment and analysis of collected data, based on this, they did change the interview guide and did some changes in the sampling frame. Once researchers learned that OHS practices are entirely different in local companies and those which are export-oriented and ISO certified, they approached some local-oriented companies to get the idea of their practice. It helped to see all aspects of this concept. Respondents' validation was also done. Furthermore, in all interviews, researchers asked respondents to add any additional information which was not being asked but they think it was supposed to be.

There are some limitations as well, the first one was a time constraint. Due to the shortage of time and prevailed pandemic situation, 5 of the interviews were telephonic or through zoom so field notes were missed. Body language could not be observed while conducting on phones. Researchers tried to approach some other companies like Unilever, EBM, and IFFCO but couldn't receive any welcoming gestures as some companies were busy in their auditing process. Researchers strived their best in covering all aspects of OHS yet do admit that many are still uncovered. Especially, data from the government side would be beneficial to see how they perceive the significance of OHS. The lack of transferability is one of the limitations of Qualitative research yet researchers do believe that these findings can be used in any developed country where legislation is weak, safety culture is not that prevailing and top management is not concerned about their employees' well-being.

4.3 Considering findings in light of the existing literature

The research study's findings are broadly moreover in line with the existing literature findings on this topic that improving OHS practices are not only sustaining the health and safety of workers but, they are equally contributing to the profitability of any organization in long run (Ansah, 2017). The current OHS practices in the food sectors of Karachi are not up to the mark. Though there are

various reasons for this gap mainly poor legislation is the key factor (Noman et al., 2021). Other factors are a lack of safety culture, lack of labor training, short-cut-seeking mindset, poor infrastructure, lack of commitment from top management, outdated rules and laws of Pakistan building authority, lack of finance and. Ineffective and vague laws and policies need to be revised (Afzal & Ayaz, n.d.). To resolve these key issues well-versed policymakers are required who can identify the problems of our OHS system and then set strategic policies. A proper and regular check and balance system must be there, to ensure that no one can devalue human life, no matter how influential a politician is on the back, laws should be equal for everyone. The whole system needs to be revamped whether it is legislation, infrastructure, or organizational side (Parlaktuna, 2017).

4.4 Implications for policy, practice, and research

Apart from legislation, training workers can play a significant role in the reduction of fatalities and other minor injuries. They should understand the importance of suitable clothing along with uniforms, gloves, boots, etc. There could be incentives for workers who follow proper guidelines. Those who fail to adhere should face consequences in their appraisal process. Government should have proper control over contracting companies as most of them have tight deadlines and then neglect the protection of workers for meeting them. Appropriate legal provisions, systematic law enforcement, and regular inspection by competent authorities will bring betterment in this regard. Research should be done to understand the mindset of the general public, how to motivate them to adopt a safety culture, finding better policies that address the current challenges of our society concerning OHS practice.

4.5 Likely transferable lessons to other manufacturing industries

It is already discussed that country to country, culture to culture situation is different, yet in broader perspective general finding can be implemented in developing countries where the situation is moreover same. We believed that legislation, organizational, infrastructural, data keeping barriers have transferability to other manufacturing industries of Pakistan in particular and of developing countries in general. The adaptability of workers so can be increased by using different methods according to their intellectual and emotional capabilities. For finding these methods further research could be done in Pakistan's context.

5. CONCLUSION

The food manufacturing sector is one of the main sectors of Karachi as it provides us with our basic needs and at the same time, it is a source of bread and butter for many workers. With proper OHS practices, these workers can do their work without encountering numerous issues related to injuries and fatalities. It will increase the overall productivity of the organization, uplift workers' morale, improve the quality of products, reduce turnover, retraining costs, and absenteeism, avoid delays in dispatching orders, and much more. There is no doubt that OHS is a money-oriented field, large companies can withstand these costs, but for small companies, it's difficult to bear it, here government can intervene by providing them some subsidies to address these issues. It will result in higher GDP, reduce unemployment and attract new investors to this sector. Clear and realistic OHS policies with proper law enforcement will bring improvement in this field.

REFERENCES

- Afzal, M., & Ayaz, M. (n.d.). *The efficiency of Food Sector of Pakistan – a Dea Analysis*. 085.
- Ahmed, I., Shaukat, M. Z., Usman, A., Nawaz, M. M., & Nazir, M. S. (2018). Occupational health and safety issues in the informal economic segment of Pakistan: a survey of construction sites. *International Journal of Occupational Safety and Ergonomics*, 24(2), 240–250. <https://doi.org/10.1080/10803548.2017.1366145>
- Amjad, R., Ghani, E., & Din, M. (2012). *Export Barriers in Pakistan : Results of a Firm-Level Survey*. September, 103–134.
- Ansah, E. W. (2017). *Analysis of Occupational Health and Safety, Accident and Safety*, PPh.D.in Health Promotion : Environmental and Occupational Health Department of Health, Physical Education and. April 2015. <https://doi.org/10.13140/RG.2.2.36203.13602>
- European Agency for Safety and Health at Work (EU-OSHA). (2010). *Safe Maintenance – Food and Drink Manufacturing*. 12.
- Fact, C., On, S., & Trends, A. P. (2016). *Pakistan*. 440(August).
- Floors, P. (n.d.). *Fact sheet : occupational safety & health and demographics Demographics, politics, andbusiness What is the impact of the demographic challenge on business ?*
- Gillani, S. H. B., Khan, M. M. S., & Ijaz, F. (2017). Factors Reinforcing Pakistan Halal Food Industry To Be the World. *Journal of Education and Social Sciences*, 6(April), 31–43.
- Global, T., & Health, O. (find). *Global occupational health network 13_26 Nov 07.pdf*. 13.
- Hussain, N., Kadir, M. M., Nafees, A. A., Karmaliani, R., & Jamali, T. (2019). Needs assessment regarding occupational health and safety interventions among textile workers: A qualitative case study in Karachi, Pakistan. *Journal of the Pakistan Medical Association*, 69(1), 87–93.
- In, M., & Supply, T. H. E. (2013). *FACT SHEET FOR BUSINESS : Enterprises and supply chain risks Enterprises and OSH risks in the supply chain Identifying, assessing, and managing OSH risks Action by enterprises if OSH challenges are identified in supply chains Influencing and enforcing org*.
- James, C. (2011). Developing a safety culture. *Geodrilling International*, 176, 21–22.
- Keen, J., Packwood, T., Keen, J., & Packwood, T. (1995). Case Study Evaluation Linked references are available on JSTOR for this article : Qualitative Research _ Case study evaluation. *British Medical Journal*, 311(7002), 444–446.
- Khan, A. W., Moshammer, H. M., & Kundi, M. (2015). Industrial hygiene, occupational safety, and respiratory symptoms in the Pakistani cotton industry. *BMJ Open*, 5(4), 1–8. <https://doi.org/10.1136/bmjopen-2014-007266>
- Kim, I.-J. (2016). Safety and Health Practices in the Food Industry and Ergonomic Interventions. *Journal of Ergonomics*, 06(01), 9–11. <https://doi.org/10.4172/2165-7556.1000e146>

- Nations, U. (n.d.). *FACT SHEET FOR BUSINESS : ILO WORK ON OCCUPATIONAL SAFETY AND HEALTH (OSH) The ILO and OSH standards The IOE position on ILO OSH standards How does IOE work on ILS advance the agenda for business ?*
- Nodari, R. O. (2011). Agriculture: Risk assessment for Brazil's GM bean. *Nature*, 479(7373), 299. <https://doi.org/10.1038/479299e>
- Noman, M., Mujahid, N., & Fatima, A. (2021). The Assessment of Occupational Injuries of Workers in Pakistan. *Safety and Health at Work*, 12(4), 452–461. <https://doi.org/10.1016/j.shaw.2021.06.001>
- Parlaktuna, M. (finding). Health and Safety Conditions in Four Major Industrial Sectors of Pakistan from 2010 To 2015. *International Journal of Petroleum and Petrochemical Engineering*, 3(4). <https://doi.org/10.20431/2454-7980.0304011>
- Raheem, A. A., & Hinze, J. W. (2012). Reasons for the poor implementation of worker safety in the construction industry of Pakistan: A contractor's perspective. *CIB W099 International Conference "Modeling and Building Health and Safety", 10-11 September, July*, 54–63.
- Robson, L. S., Stephenson, C. M., Schulte, P. A., Amick, B. C., Irvin, E. L., Eggerth, D. E., Chan, S., Bielecky, A. R., Wang, A. M., Heidotting, T. L., Peters, R. H., Clarke, J. A., Cullen, K., Rotunda, C. J., & Grubb, P. L. (2012). A systematic review of the effectiveness of occupational health and safety training. *Scandinavian Journal of Work, Environment and Health*, 38(3), 193–208. <https://doi.org/10.5271/sjweh.3259>
- RUSU MOCĂNAȘU, D. (2020). Determining the Sample Size in Qualitative Research. *International Multidisciplinary Scientific Conference on the Dialogue between Sciences & Arts, Religion & Education*, 4(1), 181–187. <https://doi.org/10.26520/mcidsare.2020.4.181-187>
- Sivaligam, A., Prabhakaran, D., & Thirumarimurugan, M. (2016). *a Study on the Importance of Health and Safety Environment in a Food Industry*. 2016–2026.
- Standards, M. (2008). *Management standards fact sheet for business : OSH Management Standards Why OSH management standards are relevant to business The IOE position on OSH management standards How does IOE work on OSH management systems advance the agenda for business ? For mo.*
- The, W., & Academy, W. (2011). *Impact of Occupational Health & Safety Management on Risk Existing At Construction Sites of Karachi Risk Existing At Construction Sites of Karachi.*
- Zahoor, H., Chan, A. P. C., Arain, F., Ran, G., & Utama, W. P. (2016). An analytical review of occupational safety research in Pakistan construction industry. *International Journal of Construction Project Management*, 8(2), 125–140. <https://doi.org/http://hdl.handle.net/10397/68602>

Appendix A

Topic guide

Topic guide

Q1-What is your perspective regarding OHS practice in developing countries collectively and Pakistan specifically?

Q2- what is the main barrier related to OHS practices in the manufacturing sector particularly and all sectors of Pakistan collectively?

Q3- What are your policies and commitment related to OHS in your organization?

Q4- How do employees behave when it comes to adhering to the policies of OHS?

Q5- kindly briefly explain your accident & Incident Investigation Protocols, Corrective & Preventive Action, etc concerning Pakistan OHS 2018.

Is there anything that you want to add or did I miss something which could be beneficial for policymakers or future research?

Annex 1: Company types.

Local Manufacturing Food Company (LMFC): Companies that are based in Pakistan and distribute their products only in Pakistan.

Local Manufacturing and Exporting Food Company (LMEFC): Companies that are based in Pakistan and distribute products both in Pakistan and to some foreign countries as well.

Small-scale Food Manufacturing Company (SFMC): Small-scale food manufacturing companies that are based in Karachi only distribute products to a few cities in Pakistan.

Private Food Manufacturing Company (PFMC): Private entities owned by a small group of investors that distribute their products to supermarkets only.

Food Services Company (FSC): Small food selling companies that prepare food products on an orderly basis instead of distributing finished goods in the market.