

# Occupational Health and Safety Practices and Barriers in Implementation in Small and Medium Scale Industries in Sri Lanka

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**Abstract:** ***Introduction:** Occupational safety and health is an area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goal of implementing occupational safety and health measures is to foster a safe and healthy work environment. **Methods:** This study aimed to present an overview of the situation of occupational health and safety practices in small and medium size enterprises (SMEs) and the barriers in implementation of occupational health and safety practices. A qualitative study was conducted by conducting in structured in - depth interviews with owners, managers and employees. A sample of 20 small and medium scale industries located in three MOH areas in Gampaha district were selected using convenient sampling method considering the feasibility and the lack of complete sampling frame of SMEs. The SMEs chosen for this research consisted of Garment industry, Metal industry, Poultry industry, Manufacturing industry, Rubber industry, Metal quarry industry and Plastic industry. **Results:** All SMEs had risk factors in the workplaces. Although owners, managers and workers were aware of the presence of the risk factors, a majority perceived risks as inherent to the work. Some of the workers who were interviewed, saw it as their responsibility to take care of their own safety and health, rather the responsibility of management. None of the workplaces had any written risk assessments. In about a half of the work places accidents were investigated at an organizational level but were not reported. Almost 40 % of the MSE companies were reactive towards OSH, while the other 60% were neither reactive or proactive. **Conclusion:** The occupational health and safety practices in a majority of the SMEs were not given a priority. Poor awareness and considering risk as normal part of work by the employers and employees can be considered as one of the main barriers for implementation. The government should regularize the OSH activities in the SME through legislation, training, close monitoring and supervision by Authorized Officers.*

**Keywords:** Occupational Health and Safety, Small and Medium Scale Enterprises, Risk factors, Sri Lanka

## 1. Introduction

Occupational health and safety (OHS) aims at protecting workers' health and welfare by adapting the working places to them and by promoting physical, mental and social wellbeing.<sup>1, 2, 3, 4</sup> According to International Labor Organization data published in 2020, more than 2.78 million people die as a result of occupational accidents or work - related diseases. In addition, there are 374 million non - fatal work related injuries each year, resulting in a vast and economic burden estimated at 3.94 % of global Gross Domestic Product.<sup>5</sup>

According to the World Health Organization (WHO), a substantial part of the general morbidity of the population is related to work (WHO, 2006).<sup>6</sup> Based on WHO Health for All principles and ILO Conventions on Occupational Safety and Health (No.155)<sup>7</sup> and on Occupational Health Services (No.161)<sup>8</sup> every worker has the right of access to occupational health and safety services, irrespective of the sector of the economy, size of the company, or type of assignment and occupation.

Work - related injuries present a major public health problem resulting in serious social and economic consequences that could be prevented if appropriate measures are taken.<sup>9, 10</sup> The estimated economic loss caused by work - related injuries and disease was equivalent to 4 % of the world's gross national product.<sup>11</sup> The impact is 10 to 20 times higher in developing countries, where the greatest concentration of the world's workforce is located.<sup>12</sup> Moreover, the majority of the world's workforce does not have access to occupational health services. Only 5 to 10 percent of workforce in developing countries and 20 to 50

percent of workforce in developed countries have access to some kind of occupational health services.<sup>13</sup> Small and medium - scale industries employees are about 80% of the workforce and contribute over 90% of all industries in developing countries. Workers in these industries are at greater risk of work - related injuries, chronic illness, stress, and disability or death because of low educational and literacy rates, unfamiliarity with work process and exposures, and inadequate training.<sup>14, 15</sup> Work - related injuries result from a complex interplay of multiple risk factors. Exposure to physical, mechanical and chemical hazards and the performance of unsafe practices by workers are the leading causes of work related injuries. Similarly, psychosocial factors, work arrangements, socio - demographic characteristic of workers, environmental and social conditions are other potential risk factors.<sup>16, 17, 18, 19</sup>

Occupational health and safety (OHS) is a multidisciplinary concept touching on issues relating to such disciplines as medicine, law, technology, economics and psychology.<sup>20</sup> As a broad based concept, occupational health and safety encapsulates the mental, emotional and physical well - being of the worker in relation to the conduct of his work. This therefore makes it an important discipline contributing to the success of any organization, health of the workers and productivity of a county.

## 2. Methods

Literature classifies small scale (SSE) enterprises to medium scale enterprises (MSE) as small and medium enterprises (SMEs). SMEs have been classified into the micro - enterprise (<10 staff), the small scale enterprise (10-50 staff), and the medium scale enterprise (<250 staff). In this

study micro - enterprise were also included in small scale enterprises category. Evidence shows that SMEs are the main contributors to the high incidence of serious injuries and fatalities.<sup>21, 22</sup>

A descriptive cross sectional qualitative study was conducted to describe occupational health and safety practices and barriers in implementation in selected small and medium scale industries in Sri Lanka.

A sample of 20 small and medium scale industries located in 3 MOH areas in Gampaha district were selected using convenient sampling method considering the feasibility and the lack of complete sampling frame of SMEs. A total number of 10 small industries and 10 medium scale industries were selected for the study.

The SMEs chosen for this research present the sectors of Garment industry, Metal industry, Poultry industry, Manufacturing industry, Rubber industry, Metal quarry industry and Plastic industry. The idea of this wide sectorial selection was to explore the situation of SMEs of most representative sectors

Employer, manager or assign safety officers were interviewed by a trained pre - intern medical officer. Semi structured in depth interviews were conducted. The interviews were conducted until no new responses were available from the interviewee. The interviews were recorded and later narratives were translated to English.

### 3. Results

As indicated in Table1, the sample was very diverse. The wide range of industries represented the diverse occupational risks workers faced. This resulted in capturing the different issues faced by wide variety of industries as well as different scale of industries.

**Table 1:** Data on the Small and Medium Scale Enterprises

Type	Small scale <sup>1</sup>	Medium scale <sup>2</sup>
Garment industry	03	04
Poultry industry	02	02
Metal industry	00	01
Manufacturing industry	01	01
Rubber industry	01	01
Metal quarry industry	01	01
Carpentry industry	02	00
<b>Total</b>	<b>10</b>	<b>10</b>

<sup>1</sup> Less than 50 employees

<sup>2</sup> 50 - 250 employees

#### Risk awareness and understanding

Almost all interviewees (92%) owner – managers and workers alike reported that there was a risk of slips, trips, bruises and cuts. In addition, some reported that working at height or on ladders was a risk for workers, as were falling objects. Many suggested that some risks were inherent to the work itself and thus to some extent unavoidable. These hazards were perceived as being ‘small risks’. Regarding physical and ergonomic strains, manual handling of heavy loads was most commonly reported by the interviewees. Backache and musculoskeletal problems were seen as occurring frequently among workforce. In addition,

repetitive work, strenuous postures, heat and noise were mentioned. Therefore, imminent and acute risks were recognized, however risks that affect health in the long term were less likely to be recognized.

Interviewees also reported a range of hazards in relation to exposure to chemical and biological agents. These mainly depended on the type of work involved, but included, for example, acids, dust cleaning agents, smoke. However, some interviewees (3) reported relatively limited exposure. Work involving high – risk materials or in high – risk areas was usually also covered by specific protective measures, and many interviewees suggested that workers’ awareness of the risks was generally satisfactory. Overall, the investigators considered that risk awareness was low to medium, with only a few exceptions. Even though several owner - managers and workers perceived some risks as inherent to the work, they were still aware of them.

An owner – manager explained that his own risk awareness was high due to his participation in the daily production processes: *I have good knowledge of the risks in the business because even now I am actively involved in the daily work processes.* (Owner - manager, SSE employees).

The impact of low – risk awareness on OSH management was of concern. For example, in a metal company where the investigator assessed overall risk awareness as moderate, the worker explained that he and his colleagues based their knowledge on experience not really depend on proper training. They were left on their own, and felt that their owner - manager was not interested in OSH – related topics. As a result, the responsibility for risk prevention, and indeed OSH ‘management’, was individualized.

There was almost no medium scale industry in which the investigator considered that none of the acute risks were recognized. Among the 10 companies in which the researcher assessed that only a few of the acute risks were recognized and was mainly the risk of physical hazards. Some owner - managers, and also workers, thought that risks were ‘under control’ and regarded such work as safe. However, in some instances workers stated that they did not follow safety precautions.

A worker from a manufacturing enterprise narrated that: *It’s my own carelessness that I didn’t wear the gloves when I accidentally poured liquid on my hands. Additionally, I have to admit that gloves are uncomfortable. It’s easier and to hold the container in my hands when I have no gloves.* (employee - MSE)

Similar statements were made by workers in some of the other case study companies. This notion was often accompanied by the view that accidents were workers’ own fault, the result of individual mistakes. For example, there had been a fatal accident in a metal company and the owner – manager attributed it to the major mistakes made by the (very experienced) worker himself. As a result, no additional preventive measures were deemed necessary.

Some of the workers who were interviewed, therefore, saw it as their responsibility to take care of their own safety and

health, rather the responsibility of management: *You receive all the necessary information to prevent OSH problems, the rest depends on you employee - MSE). I cleaned my machine and I fell off the stepladder. The footstool! I had a sprained ankle. It was my fault, Otherwise, there are no risks at our premises (employee - SSE).*

It was evident, therefore, that responsibility for OSH was individualized in most of the case studies. However, there were owner – managers who reported that accidents were investigated at an organizational level. In these instances, accidents served as a trigger for talking about OSH - related topics and increasing safety measures. As one owner - manager put it: *We gather all workers together and go through safety rules again (Owner - manager - MSE)*

In some cases, risks were not spontaneously referred to by interviewees, although they were clearly aware of them when asked directly about particular risks. For example, an owner – manager of a garment factory did not mention ergonomic risks, but was well aware of them. Similarly, neither the owner - manager nor the worker from a manufacturer of metal pieces came up with any risks at all, but again they were aware when asked directly about individual risks. This suggests that employers and workers get used to risks overtime, and start to regard them as simply part of the job.

Some risks were acknowledged by the interviewees, but were not regarded as relevant in terms of OSH. For example, the owner - manager from the apparel industry referred to that standing activities were ‘no major problem’ because her mother stood as much as her employees. Therefore, even though the owner – manager was aware that her employees stood a lot, she did not recognize the need for any preventive measures, seeming to assume workers would use their commonsense in this regard.

Most strikingly, psychosocial strains were non - existent in the opinion of some owner - managers and workers. This was especially evident in the small - scale companies. When asked *Does it get busy? Yes, before festive seasons ... but we'll manage. Not at other times really. Problems between workers? No. We are like a family here. (Owner - manager - SSE)*

In contrast, some medium scale managers recognized and tried to address such problems: *A few weeks ago, a truck worker placed the particles in a wrong place. Another worker, who had to work near the area, got into a dangerous situation. A conflict arose which needed my intervention. Now, everything is solved, but it took some time and patience. I needed to use skills to solve it calmly. (manager - MSE)*

Normalization of stress was common. As one worker put it: *It is giving and receiving: the manager is flexible in planning and respecting our needs, and we take the necessary over time to finish the work when needed... It is never really in balance, but if you like your work, it will be in balance. (employee - SSE)*

### OSH management and practice

**Risk assessment** - Five of the 10 medium scale companies and all small - scale companies reported that they did not have any written risk assessments. In 5 of these medium scale companies, the researcher also considered risk awareness. Few small - scale industries: despite the lack of written assessments, researchers considered that the owner - manager was ‘motivated to engage in OSH informally’. However, from another perspective, the presence of a written risk assessment did not necessarily correspond with a high level of awareness of risks: *We have nothing dangerous here. Slippery floors? Well, who doesn't after cleaning? I find it ridiculous. (Owner - manager, 5 – 9 employees).*

**Risk communication** - Putting OSH on meeting agendas was not common in the case SSE. In particular, some owner - managers of MSE described discussing the day's work and, in some cases, the relevant protective measures, during daily pre - work briefings. As might be expected, the focus was almost always on acute risks and rarely extended to psychosocial strains. Such meetings also often reviewed experiences from the previous day:

**Control and overall approach** – The overall level of risk control was assessed. Almost 40% of the MSE companies were reactive towards OSH, while the other 60% were either reactive and proactive or mainly proactive. Almost all SSE were assessed were reactive in nature towards OHS practices.

### Facilitating factors and barriers

A number of internal and external drivers of OSH were evident. The need to comply with legislation and buyers demands was clearly important to some of the MSE, especially those leading companies. About half of the MSE had experienced at least one inspection by the factory inspector/ Public Health Inspector in the 3 years prior to the study. Some of these owner – managers reported that these inspections were supportive.

In contrast, other managers reported that inspections simply increased their workload because they resulted in lots of requirements, many of which were not viable. In some instances, it was suggested that the impact of the labour inspectorate was dependent on the individual inspector.

During the interviews, owners/ managers were directly asked about their motivation for dealing with OSH. Among workers, this area was addressed indirectly, for example by asking about OSH – related changes. The attitude of the owner - manager seemed to be crucial in determining companies' OSH provision and approach. This is not surprising, but it is important to be clear that high levels of owner/manager motivation did not necessarily correspond to better OSH. OSH knowledge, in conjunction with formal routines (for example regarding OSH communication), were also necessary for a positive influence on OSH management.

In addition, several owner - manager and worker interviewees mentioned a good social climate (often reported as family - type) as another relevant driver for OSH. This was seen as encouraging owner - managers to provide a safe work environment.



### Worker participation

Formalized arrangements for worker involvement were not common among the participating SSE. However, in MSE, for example, there were some meetings with OSH on the agenda, among employees.

In MSE, over half of the case study companies had a worker representative for OSH. This was generally regarded as positive by the owner - managers. However, in the garment industry, the worker who was interviewed made it clear that workers were not aware of their right to go to the representative with OSH – related problems:

Two owner/managers from MSE reported that they had tried to encourage worker representation but had not succeeded, as motivation among workers was low. However, where companies were part of a wider group, the influence of the parent organization could be particularly important for OSH, including in relation to worker participation.

### 4. Discussion

The outcome of interviews conveys the advantage of owner - managers being involved in the production process. They experience the same risks as their employees and so are more aware of them. This was most common among the smallest companies in the sample. It was evident, that responsibility for OSH was individualized in most of the case studies. However, there were owner – managers who reported that accidents were investigated at an organizational level.

Some owner/managers reported having a structured approach towards OSH, and this was often accompanied by external support and good communication. The attitude of the owner - manager regarding responsibility for OSH was particularly significant in this regard. These findings were consistent across the business types and countries in the sample.

There was also a great variety of OSH competence and knowledge levels among the interviewees. Generally, owner - managers assessed their own OSH competence and knowledge levels as high. However, it was evident that owner - managers' estimation of their own OSH knowledge was dependent on a range of factors and, in many cases, may not have been an accurate reflection of actual knowledge.

Owner - managers reported that their OSH competence was mainly derived from professional education, OSH – related training and work experience. However, in majority, OSH education was seen as part of professional competence and so no formal OSH training was given in addition.

The awareness of long - term risks was substantially lower than that of acute risks. This may, of course, reflect the greater difficulty in their detection, as well as the tendency to 'discount' risks seen as inherent to daily work, but it is likely that restricted resources for OSH also played a part here.

### 5. Conclusion

Although formal worker involvement was evident in some establishments, there were also cases where such involvement was minimal. The occupational health and safety practices in a majority of the SMEs were not given a due priority. Poor awareness and considering risk as normal part of work by the employers and employees can be considered as one of the main barriers for implementation. The government should regularize the OSH activities in the SME through legislation, training, close monitoring and supervision by Authorized Officers.

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