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IMPLEMENTATION OF GENERAL PROVISIONS ON OCCUPATIONAL HEALTH AND SAFETY IN THE FACTORY ORDINANCE (NO. 45 OF 1942) (A QUALITATIVE STUDY)

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Abstract

In the late 1970s, Free Trade Zones were established in Sri Lanka as an important part of the economic development of the island. These zones were specially designated manufacturing areas which were set up to attract foreign investments to the country. In these places, occupational health and safety are vital features of the Human Resource Management. In the Sri Lankan context, studies regarding occupational health and safety are scarce. The general objective of this study was to explore the implementation of general provisions on occupational health, and

safety in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake Export Processing Zone. A qualitative approach was adapted to this study. The study consisted of two phases: in the first phase focus group discussion with workers were done, and in the second phase, ten in-depth interviews were conducted. Purposive sampling method was used to select participants from workers based on the inclusion criteria. Twenty workers (n=20) were selected from different factories in the zone. Saturation method was used as the guiding method of data collection. Data was analyzed using framework analysis. Study found that, implementation of general provisions on occupational health is remaining in a satisfactory level; implementing general provisions of occupational safety in work place is remaining at better status; however implementation of few provisions should be improved. A longitudinal study on occupational health and safety among factory workers and factory managers need to be conducted. In addition to that, improving awareness on Factories' Ordinance (No. 45 of 1942) is recommended. Employers should also be empowered to intervene with managers for implementing general provisions and special provisions of occupational health and safety in the Factories' Ordinance.

Keywords

Economy, Factories' Ordinance, Occupational Health, Safety, Human Resource Management

1. Introduction

In the late 1970s, Free Trade Zones (FTZ) were promoted in Sri Lanka as an essential part of the economic development. These zones are also called Export Processing Zones (EPZ) (BOI) (Trade Chakra, 2008). The BOI functions as a central facilitation avenue for investors and this place is conducive towards continuously improving the country's economy. The vision of the BOI is "to make Sri Lanka the most preferred destination for sustainable investment in Asia" and the mission is "to attract and secure sustainable investments for optimum utilization of resources and talents, through vigorous promotion and excellent investor facilitation whilst preserving harmony within the natural environment as a significant contributor in the development of the national economy (BOI, 2015).

The oldest FTZs in Sri Lanka being the Katunayake and Biyagama Zones, they are located within a close proximity to the Bandaranaike International Airport. At present, there are about thirty-nine thousand workers employed in more than 70 factories the Katunayake FTZ. It

is about 31.1 percent of the total number of EPZ workers (Department of Labour, 2013). The FTZs at the time of their start drew rural youth, mainly women, to assembly-line work. One of the main problems of these workers is the denial of the right to organize themselves into a trade union. It appears that the management is interested only in obtaining their labour at a low cost. For that purpose, it reduces the work force and increases their work load. In fact, there are a large number of job vacancies available to be filled but the management does not seem to recruit.

A new feature in the post war era is the presence of a large number of Tamil speaking workers from the North and the plantation sector. The Tamil workers from the North are strangers to the industrial culture in Katunayake so they become easy victims of exploitation. Strangely, even the new recruits from the plantation sector where there is a rich labour tradition live quite timidly in these places. The manpower agencies as a strong hand behind recruiting workers use every opportunity to exploit the young workers who roam about seeking job opportunities in the area. These manpower agencies can earn large commissions by supplying recruits to private companies. Those who migrate from the rural areas for work are forced to lodge in dungeon like rooms without proper ventilation and minimum facilities. Even the basic sanitary facilities are not properly available in these boarding houses. It is yet another agony that they are destined to suffer. Psychologically most of these young girls and boys who are away from their parents suffer from loneliness. One of their burning issues is the high cost of living.

1.1 Occupational Health and Safety

Occupational Health is also given a considerable focus (Luo, et al, 2018). Occupational Health and Safety (OHS) is generally defined as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, considering the possible impact on the surrounding communities and the general environment (ILO, 2008). OHS incorporates the social, mental and physical well-being of workers. Unhealthy or unsafe working conditions can be found indoors or outdoors of the work place. An important point to consider is that the OHS are disciplines with a broad scope involving many specialized fields (WHO, 2001).

It is important for employers to take the necessary steps to protect employees from the health and safety concerns of today's corporate community. Workplace health and safety procedures are necessary for the well-being of both employers and employees. Health and safety programs make an important part of preventing injury and illness in the workplace. Health

programs help employers and employees understand the potential hazards they are exposed to on a daily basis. Globalization, demographic change, and technological advancement have witnessed a significant change in work environments both of industrial and developing countries. Improving OHS is a dynamic process and the objectives are long-term.

1.2 The global situation

According to the current context, it is estimated that 2 million work related fatalities and 330 million work-related accidents still occur each year (ILO, 2009). Average estimated fatal occupational accident rate in the whole world was 14.0 per 100,000 workers (Takala, 1999). According to the data, the rate of fatal occupational accidents increased slightly (Tampere University of Technology, 2014).

1.3 The situation in Sri Lanka

There is a separate unit of the Ministry of Health named 'Environment and Occupational Health Unit' that has been established to cover the matters related to OHS. The unit is responsible for the establishment of occupational health units at district level. It also conducts awareness and training programs. Apart from that, the Ministry of labor and labor relations, and National institute of occupational safety and health are responsible authorities for OHS and health in Sri Lanka. The Cabinet of Ministers in Sri Lanka has designated the second week of October as the "National OHS Week". At present, occupational safety and health issues are mainly legislated under the Factories' Ordinance No. 45 of 1942, which has separate provisions for health, safety and welfare of the employees. Workmen's Compensation Ordinance Act No. 19 of 1934, Shop and Office Employee's Act No. 15 of 1954, Municipal Councils by-laws and regulations also cover OHS related matters. However, safety and health aspects of the construction industry remain at an unsatisfactory level in Sri Lanka (Halwatura & Jayatunga, 2011). According to the National Institute of Occupational Safety and Health Act, No. 38 of 2009 of Sri Lanka, the institute instructs the government on the measures required to prevent accidents and injuries relating to employments at work places. In addition to that, this institute instructs the government to undertake and assist in investigations, study programs, surveys and research in the field of OHS (Gazette of the Democratic Socialist Republic of Sri Lanka, 2009). However, it is clear that there is no proper way of gaining information about accidents by the relevant authorities in Sri Lanka.

1.4 Factories' Ordinance No. 45 of 1942 (General Provisions)

According to the Factories' Ordinance, it is compulsory for the employer to ensure health and safety of employees at work place. Basically, under the Health and safety, it covers employee care, free protection, training and labor inspection systems. The organization should regularly check the quality of the whole premises, cleanness, overcrowding, maintain reasonable temperature, ventilation, lightening, drainage of floor, and sanitary convenience. Under the safety condition, organizations should ensure employees' safety from machineries, transmissions, moving of heavy objectives, protection from dangerous machines and other relevant parts. In addition to the general provisions, ordinance contains some special provisions regarding the health and safety of the workers (Gazette of the Democratic Socialist Republic of Sri Lanka, 2002).

1.5 The Problem of the study

OHS characterizes a dynamic equilibrium between the worker and his or her working environment. In other words it can be described as the highest degree of physical, mental and social well-being of workers in all occupations. Sri Lanka is still not industrialized enough. According to the current context, as the industrialization is rapidly in progress, a higher volume of factory works is coming into operation. Therefore, the incidence of occupational accidents and occupational diseases are on the upsurge. The major law applied to ensure the OHS of working population is the Factories' Ordinance with subsequent amendments and regulations made under it. However informal observations reveal that most of factories violate the rules and regulations mentioned in the Factories' Ordinance. There are several agencies dedicated to improving OHS in Sri Lanka. However, unfortunately, there is no proper way of collecting OHS related data in Sri Lanka. OHS is an important aspect of the Human Resource Management. In Sri Lankan context, studies regarding the OHS are scarce.

2. Objectives

1. To explore implementation of general provisions on occupational health, in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake export processing zone, Sri Lanka

2. To explore implementation of general provisions on occupational safety, in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake export processing zone, Sri Lanka

3. Methodology

3.1 Research Design

A qualitative approach was adopted to explore implementation of general provisions on OHS in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake export processing zone in Sri Lanka. The study consisted of two phases. In the first phase, Focus Group Discussions (FGD) with workers was conducted. As the second phase one ten in-depth Interviews with workers were conducted.

3.2 Study setting, sampling and recruitment

This study was conducted in Katunayake EPZ which is situated in the Gampaha district, Sri Lanka. Purposive sampling method was used to select participants among workers based on the inclusion criteria. Workers were selected from different factories in the zone. As per the inclusion criteria at least six months working experience in the selected area. Workers who had illness, impairment, or disabilities were excluded from the study. Initially twenty workers ($n=20$) from different factories were selected to the study. Within the selected hostels, participants were selected purposively. The selected participants were instructed orally and with a participation information leaflet and a verbal informed consent was obtained.

An interviewer guide was prepared for each participant to obtain the data. Ten interviews were conducted at the hostels and each interview took about 15 minutes. Interviews were conducted until data saturation. In addition to the interviews, one FGD was conducted with workers. FGD and interviews were conducted according to the Family Health International (FHI) guidelines (Mack et al., 2005). Focus group moderator wrote brief notes on the focus guide as he led the discussion and detailed notes on focus group discussions was noted by the note-taker. The note taker was trained for note taking and FHI guideline was applied during note taking process. All participants were pre-informed and reminded of the venue and the time. FGD notes were expanded immediately after the discussions with the use of the notes of the note taker. These notes were typed and attached to the focus group transcript in the Computer file while they were consistently evaluated for quality and accuracy.

Table 1: Main questions in the interviews and FGD guide

1	Implementation of general provisions on occupational health
2	Implementation of general provisions on occupational Safety

3.3 Data analyzing method

The principal investigator entered the data into one excel sheet after interviews and FGD. Data was stored in raw data format in a computer and stored safely with an appropriate backup that was protected under a password to avoid event of loss, damage or unauthorized access to the data. Saturation method was used as the guiding method of data collection. The “framework” analyzing method was used to analyze data.

3.4 Quality assurance

Few techniques were taken to ensure the quality and credibility of the study. Triangulation method was applied to enhance the validity of data. Respondent validation method was used to maintain validity of focus groups. Data collection tools were designed according to the accepted guidelines.

3.5 Ethical issues

A number of key phrases were followed to prevent ethical issues. Informed consent was obtained from all participants before the study. The principal investigator assured that all actions were taken to minimize any harm for respondents. Privacy and confidentiality were protected throughout the study. Participation for the study was entirely voluntary and there was no obligation for taking part. It was also possible for participants to withdraw from the study at any point without giving any reasons and without any penalty.

4. Results

Study found that, implementation of general provisions on occupational health is remaining in a satisfactory level among workers in Katunayake.

“I don’t know about provisions of occupational Health, and Safety. The management has done several programs for us, but I think occupational health might be a missing component.....most factories mean more than 95%.... are nice inside as well as outside in terms of the looks....” (Focus Group Discussion - FGD -1)

“I think our factory is the most beautiful one in the area... because cleanliness is one of the priorities of the managers...”(Interview Participant (IP) -2)

“Yes... Factories are clean.... However there are few sides that are not cleaned.”(IP -4)

“5S concept is in operation... so, every day we have to clean our working areas... Sweep two times per day....”(IP -2)

“Sometimes we sweep or wash our working area.... When the labor from assisting workers are absent...otherwise they sweep one time per day.... ”(IP-4)

“We assumed that management of each factories have special rules to keep the factory in a cleanly manner.... So, at least once a day we sweep our working areas..” (FGD-1)

“Most of the time... limited workers work inside the factories.. factories are not overcrowded... But canteen facilities are not enough....we cannot have our lunch at one time.. so they have scheduled few intervals based on the sections.... ”(FGD -1)

“Not enough space to work....we are in a line and we have narrow space....”(IP-4)

“In our factorywe don't have enough working space..” (IP-6)

“Some places are air conditioned and some are not ..however, proper ventilation mechanism has been introduced...most factories have a proper ventilation method...” (FGD -1)

“Sometimes we feel uncomfortable... while working....” (IP-1)

We have enough sanitary facilities in our factories.. sanitary facilities are separated by gender.... ”(FGD -1)

“In most the factories, 5S concept is in operation... therefore, factories can be seen in good shape. Specially in the wash rooms... ” (FGD -1)

“We don't have enough sanitary facilities, and the washrooms are not constructed in close proximity” (IP-10)

“Most factories provide a basic job training at the beginning.... During this period we received instruction on health and safety measures... it is compulsory...” (FGD -1)

“When we changed from one section to another, we received basic technology methods of new section...” (IP -6)

“Periodically, the managers takes actions to discuss about safety measures..” (IP -7)

“In our factories, we have to follow precautions when we engage with hazards related to work.....” (IP -5)

“We feel that administrators share policies regarding the occupational health and safety” (IP -7)

“However we don't have an action team for health and safety...but most factories have trained workers for health and safety matters” (IP -3)

“Occupational health and safety are highly prioritized aspects in our factories...” (FGD -1)

“Machines are very safe....we keep machine clean, technicians examine all machines regularly... however there are certain places where there is no sufficient measures taken to keep the machine safe... Specific safety requirements have been provided for the operation and maintenance of boilers in a successful manner in our factories” (FGD -1)

“Every fly-wheel or a moving part of any prime mover are securely fenced in most Factories...and firefighting appliances are successfully installed in every factory” (FGD -1)

“In my work place, the floors, passages ways are not properly constructed and what has been constructed are not properly maintained...” (IP -9)

“Floors, steps and gang ways are not constructed and not properly maintained in few factories...” (FGD -1)

“Every factory has fire protection strategies except at few places...” (FGD -1)

Following themes emerged from the study.

Theme - 1: Most factories maintained clean state in the Katunayake EPZ.

Theme – 2: In every factory, the floor of every room is cleaned by washing or sweeping daily.

Theme – 3: Most factories are not overcrowded in such a way that leads to risk or injury to health of the workers

Theme – 4: In most factories, premises are maintained at a reasonable temperature with suitable and adequate ventilation and lightening.

Theme – 5: Most factories are fully established with sufficient and suitable sanitary facilities but they can be improved further.

Theme – 6: Every fly wheel or moving part of any prime mover or transmission machinery are securely fenced in most factories.

Theme –7: Any vessel containing dangerous substances are covered or securely contained on a satisfactory level.

Theme –8: Hoists or lifts are good mechanical constructions and they are examined by a competent person. They remain in a satisfactory level.

Theme –9: Exits are made for evacuating in case of fire, and firefighting appliances are successfully installed. However, further improvements are needed.

Theme –10: Floors, steps, stairs, passages ways and gang ways are not constructed and not properly maintained in few factories and specific safety requirements have been provided for the operation and maintenance of boilers in a successful manner.

5. Discussion

This qualitative study examined (1) implementation of general provisions on occupational health, in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake export processing zone, Sri Lanka, (2) implementation of general provisions on occupational safety, in the Factory Ordinance (No. 45 of 1942) among workers in Katunayake export processing zone, Sri Lanka. According to the FGD -1, despite not knowing about provisions of occupational health, the workers assured that 95% of the factory premises of most of the factories are nicely built and maintained. About 40 % participants claimed that the factory premises can be improved in terms of infrastructure and cleanliness. They maintained that the work routine has been equipped with daily cleaning of work areas. They also mentioned that some areas are not cleaned on such regular basis (two times per day). Introduction of 5S concept has been meaningful to these places, and because of its active role, the workers are accustomed to cleaning the premises two times a day. This practice may as well be extended to washing the

working area depending on the work settings. There are assistants for each sector who are trained for the task of cleaning. When those trained workers are absent, the frequency of cleaning gets reduced. FGD -1 identified that rules are applied by the management for smooth operation of work and cleaning environment. On one hand, FGD -1 maintained that the factories are not overcrowded but limited space to allocate for activities such as meal taking has been allotted to several blocks to accommodate the number of workers working in each factory. 50% of the participants of FGD -1 identified the need to expand the canteen facilities. Proper ventilation is a must in places such as large factories where hundreds and thousands of people work on daily basis. According to the FGD -1, the participants expressed the need for air conditioning on certain compartments of the work setting. Some workers' attention was put on the psychological aspect of their work environment. They have felt uncomfortable while working. This sheds light on mental health of the workers. More studies need to be conducted on the psychological aspects of the workers to assure their wellbeing. Of those who were concerned on the mental aspect, their focus was not on the sanitary facilities. 20 % workers also mentioned that sanitary facilities such as washrooms are not sufficient or not built in close proximity for their use. They did not have any issue on separating the washrooms based on the gender. In terms of occupational safety, most factories provide basic job training at the beginning. As such, almost 100% workers claimed that they received instructions on health and safety measures as a compulsory step of implementing work. They also acknowledged receiving further instructions if they had to shift or move to a new working section. Accordingly, periodically, the managers have taken actions to discuss about safety measures. Hazard control has been maintained and education on hazard control has been provided to the workers. Workers claimed that they have to follow precautions as they engaged with hazards related to work. There was no blame on administrators in terms of sharing policies regarding the occupational health and safety. A red flag that was seen is that non-availability of a functioning action team for health and safety. For this, almost all the factories rely on the workers themselves on health and safety matters. 90% workers claimed that the machines that they operate are safe and are cleaned regularly. 10% of the workers emphasized that, according to them, the machines are located in insecure places. This observation sheds light on two aspects: safety of the workers as well as the safety of the machines. Since the allocated space for the machines are not sufficient, measures should be taken to provide specific safety requirements on operation and maintenance of machines and

equipment such as boilers, fly-wheels (FGD -1). Fencing the machines within safe boundaries are in good standard, also the firefighting appliances are successfully installed. It is satisfying to note that every factory has fire protection strategies but few places within these factories should also be included in extending fire safety.

6. Conclusion and Recommendations

According to the study results, implementation of general provisions on occupational health is remaining in a satisfactory level among the workers in Katunayake.

- Most factories are maintained in a cleanly condition in Katunayake EPZ.
- In every factory, the floor of every room is cleaned by washing or sweeping every day.
- Most factories are not overcrowded in a manner that may lead to risk or injury to health.
- In most factories, the premises are maintained at a reasonable temperature with suitable and adequate ventilation and lighting.
- Factories are fully established with enough and suitable sanitary facilities. However, they should be improved.

Study found that, implementing general provisions of occupational safety in work place is remaining in better status among workers in Katunayake. However, implementation of certain provisions should be improved. Following areas can be highlighted:

- Every fly-wheel or moving part of any prime mover or transmission machinery are securely fenced in most factories.
- Any vessel containing dangerous substances are covered or securely contained in a satisfactory manner.
- Hoist or lifts are good mechanical constructions and are examined by a competent person, so it is remaining in a satisfactory level.
- Exits are made for evacuation and escape in case of fire or an emergency, firefighting appliances are successfully installed. However, further improvements are needed.
- Floors, steps, stairs, passages ways and gang ways are not constructed and not properly maintained in few factories. Specific safety requirements have been provided for the operation and maintenance of boilers in a satisfactory level.

Under the scope of future research, a longitudinal study on OHS among factory workers and factory managers need to be conducted. In addition to that, improving awareness on OHS in

Factories' Ordinance (No. 45 of 1942) among workers can be recommended. On the other hand, employees should be empowered to intervene with managers for implementing general provisions and special provisions of OHS in the Factories' Ordinance to obtain the maximum benefits for employees.

According to the current status, there is a gap of studies carried on OHS in Sri Lanka. This study found the present status of OHS. Results of the study will help the relevant government and non-governmental bodies to identify current implementation of regulation relating to OHS in Factories' Ordinance. With the identification of current situation they can schedule promoting programs on OHS. On the other hand, this study will make a platform for other researchers who are interested in this field. Based on the results of the study responsible bodies can be involved with OHS through new initiatives. This will improve the living standards of the workers as well as contribute to the economy of the country in ways that improves the quality of life of its citizens, and thereby increasing their interest in developing the country.

6.1 Limitations

This was a qualitative study and, in the future, a longitudinal study on OHS among factory workers will determine the level of OHS. The study was conducted in Katunayake area and it is essential to carry out further studies in other FTZs. This study considered only general provisions of the Factories' Ordinance and it can be extended to special provisions gradually.

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