

## Examining the state of OSH in Jordan

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### Abstract

This work addresses the issue of a significant number of work related accidents and injuries in Jordan. It does so by understanding the Occupational Safety and Health (OSH) situation in the country through the presentation and examination of the available records and numbers for these accidents and injuries. It was found in this work that only a part of Jordan's work accidents and injuries are being reported and recorded, while many of the country's workers are not covered by such records. The study's main findings showed that in the year 2010, the country suffered around 37 work injuries every day, and one worker died every 200 occurring work accidents. About half of the recorded work accidents took place in the industrial sector. The research helped in understanding how work safety conditions can be improved by presenting measures and advices.

**Keywords:** Occupational safety and health, Management system, Safety risks

### Introduction

#### Occupational Safety and Health (OSH)

Occupational safety and health (OSH) is a term commonly used to emphasize the importance of a human life that needs to be taken into consideration even in the work environment. Therefore, occupational safety and health could be defined as the protection of the safety and health of people in their workplaces by providing them with a clean and safe work environment, and by preventing work related accidents thus preventing illnesses, injuries and deaths from occurring (Marcheur, 2010). OSH is considered cross-disciplinary involving disciplines such as occupational medicine, industrial hygiene, safety engineering, and public health.

#### Work Accidents and Injuries

A work accident is an unexpected and unintentional incident. According to the Jordanian Labor Law (MOL, 1996) and the Social Security Law (SSC, 2011), a work injury or what is also known as occupational injury is defined as an injury that occurs

to the worker from an accident while performing the work, or because of the nature of the work, or from any accident on the way to and from the work place. In addition to that, the Social Security Law (SSC, 2011) includes specified occupational diseases in its definition of a work injury. The work injury could be considered as an injury, disease or even death (ILO, 1998).

According to the International Labor Organization (ILO), 160 workers worldwide encounter a work accident every 15 seconds and one worker in the world dies from a work accident every 15 seconds. In 2008, an estimate of about 2.34 million people worldwide died from work related accidents; an average of more than 6,300 work related deaths every day (ILO, 2011). While, for the same year, more than an estimated 317 million workers worldwide had work related injuries from non-fatal accidents, which resulted in absences from work of four days or more. This meant an average of 850,000 injuries every day (ILO, 2011). Poor OSH practices have resulted in an economical burden estimated to be at 4% of global Gross Domestic Product (GDP) per year, where GDP is defined as the



total value of all goods and services produced in a country in a certain year (Hall and Lieberman, 2008).

### **Impacts of Occupational Injuries on Society**

The injury can affect the injured worker in many ways which consequently make everyday a challenge. It does not only include pain and sometimes scarring other physical problems, but the effects also include mental and financial problems, social isolation, and different lifestyle changes (Burton, et al., 2002). Therefore, life expectancy is expected to be lowered for workers who are severely injured (ILO, 1998).

Impacts from work related injuries can be divided into the following:

#### ***Psychological impacts:***

Different psychological and emotional impacts affect the injured worker. The effects might include a lot of negativity and depression, especially in the first stages of treatment (Macmillan, 2007). Depression or other mental health issues could result from the worker's stress and anxiety towards the injury. In some cases, an injured worker might feel guilty for no longer being able to support his/her family, as well as for the occurrence of the accident even if it was not the worker's fault. The self esteem of the worker is also affected (Macmillan, 2007).

#### ***Effects on the family:***

A work injury does not only affect the injured person but also his/her family (Burton, et al., 2002), who could be easily affected by anxiety and stress (ILO, 1998).

An injury can affect the relationship between the injured worker and his/her family including the parents, children, spouses and siblings due to emotional and financial stress and isolation. Some families find it very difficult to cope with the situation especially in which their relative worker is disabled by a work injury. Whether the recovery from an injury takes a few weeks or months or in some cases a disability has occurred, certain family members become responsible for taking care of the injured and they sometimes need to leave their jobs or studies for that purpose (Burton, et al., 2002). Other family members might need to work in a way which will allow them to compensate for the loss of the previous regular income of the injured worker (ILO, 1998). The lifestyle changes (which occur in the injured worker's family) depend on the nature or degree of the work injury (Burton, et al., 2002). These changes also

include undesirable changes in the roles and responsibilities of the different family members (Kumar, 2011).

#### ***Financial impacts:***

Financial impacts include the cost of hospitalization and medical bills, which are covered by insurance or by the company which employs the worker (Macmillan, 2007), but if the worker is not insured, he/she will have to deal with some or all of these expenses.

Losing a stable income due to the injury affects the financial status of the injured worker and his/her household. Even if the injured worker is insured, he/she is not getting the amount of money paid before the occurrence of the injury, which puts a strain on the financial status of the family (Burton, et al., 2002).

On a larger scale, the cost of work injuries for the Social Security Corporation (SSC) insured persons in Jordan reached about 2 million Jordanian Dinars in 2010 (DOS, 2011). In the same year, work accidents and injuries cost Jordan around 80 million Jordanian Dinars (Jordan Labor Watch, 2011).

#### ***Effects on the workplace:***

The effects of a work accident or injury on the company or the workplace of the injured worker might not be as significant as the effects on the worker himself/herself, but should still be mentioned. The company is responsible for transporting the injured worker to the hospital, and in some cases for the treatment of the worker (Macmillan, 2007). This affects the economical status of the company, which can also be affected if equipments got damaged from the work accident, or if the production of the company is delayed or decreased (Burton, et al., 2002). The company might need to hire and train new workers to compensate for the missing injured worker. It might also need to retrain the injured worker for another more suitable work responsibility. If the injury or work accident was on a larger scale or was severe, it can affect the emotional status of the co-workers, who might need time before returning to normal efficiency at work as how it was before the occurrence of the work accident (Macmillan, 2007).

All of these effects can lead to financial problems affecting the company in such a way that the company might increase prices of its manufactured goods (ILO, 1998), this in return can affect the community which depends on such products.



### **Jordan and its Labor force**

Jordan is of a total area of about 89,318 km<sup>2</sup>, which mostly consists of land area distributed into semi-desert lands, plains, rift valley, and heights. The population of Jordan reached 6,113,000 in 2010, with 38.7 % of its population living in its capital city Amman (DOS, 2011). Like other countries, there are different economic sectors in Jordan such as agriculture, construction, transport, education, services and the industrial sector.

The Jordanian labor force, consisting of those 15 years old and above, reached a total of 1,412,134 in 2010. This number includes both the employed and unemployed Jordanians. But the total labor force in the country, which also includes the registered migrant workers, reached 1,710,475 in 2010 (DOS, 2011a). Note that there are illegal migrant workers (working without work permits) in the country and they are estimated to be roughly around 150,000 to 170,000 (Jordan Labor Watch, 2011). About 83.5% of employed Jordanians, age 15+, are considered paid employees, while most of the rest are self-employed or employers (DOS, 2011).

### **Jordan's Industrial Sector**

According to the Ministry of Industry & Trade (MIT), the industrial sector in Jordan includes:

- Manufacturing, such as clothing industry, furniture industry, and the food industry.
- Mining and quarrying, such as mining of chemical and fertilizer minerals, and quarrying of stone, sand and clay.
- The production and distribution of electricity and water.

The industrial sector accounted for 22.3 % of Jordan's GDP in the third quarter of the year 2010 (MIT, 2011). Poor practices alone can cause many of these work accidents (ILO, 2011). Workplace hazards include:

- Mechanical or physical hazards, such as: collisions, falls, vibration, and noise.
- Chemical hazard, such as: acids, heavy metals, and fumes.
- Other types of hazards such as: overwork and stress.

Achieving OSH by preventing hazards such as chemical spills or air contaminants is also a way of protecting the environment. This shows an important correlation between OSH and the environment.

### **The Problem, Importance & Objectives of the Study**

There is a significant number of work related accidents and injuries in Jordan in different sectors including the industrial sector. Many of these injuries or even most of them can be considered preventable if proper and appropriate safety measures are adopted. In this study, the example of Jordan will attempt to address the issue and reasons for problems facing work safety and health. In addition to that, it will propose some necessary measures to improve occupational safety and health. Therefore this study addresses two basic questions: Why is there such a significant number of work related accidents and injuries in Jordan (including in its industrial sector)? And how could we solve this problem by reducing it or preventing it?

The study will also discuss different aspects and issues regarding occupational safety and health in general and for Jordan in specific. This is obviously important for the Jordanian society since it will help in providing them with more knowledge, as well as increase their awareness for the importance of occupational safety and health. This in turn could help in providing a safer work environment for everyone and in preventing work accidents as much as possible. It will also help in understanding the different aspects of occupational safety and health, including the impacts of work injuries on the society. Moreover, the study also represents a statistical analysis of work accidents in Jordan and its industrial sector.

### **The Legislative Framework for OSH in Jordan**

To improve the management of Occupational Safety and Health (OSH), there has to be a proper legislative framework supporting the process. There are two main parties concerned with OSH in Jordan; they are the Ministry of Labor (MOL) and the Social Security Corporation (SSC).

### **The Ministry of Labor (MOL)**

The Directorate in the Ministry of Labor involved with OSH is the Directorate of Labor Affairs and Inspection. This directorate carries out inspections in different establishments to ensure the enforcement of the labor law and regulations, and makes sure that the rights of the workers are met. These inspection visits reached about 53,825 visits in 2010, which is an increase of 10.6 % over the number of visits in 2009 (MOL, 2011).



### **The Social Security Corporation (SSC)**

The OSH Office aims to increase awareness about OSH, and to convince people that work related injuries and diseases can be preventable. Its objectives also include getting involved with the national week for safety and vocational health, in addition to developing and supporting a safe work environment in the establishments which follows the provisions of the Social Security Law.

### **The Occupational Safety and Health Institute (OSHI)**

The Occupational Safety and Health Institute is an accredited governmental institute that belongs to the Vocational Training Center. This institute carries out OSH related seminars and sessions and prepares technical personnel specialized in OSH for both the public and the private sectors.

OSHI also organizes different training programs for engineers, trainers and supervisors of the Vocational Training Center. These training programs include sessions for general safety, specialized safety, and the preparation of occupational safety supervisors (OSHI, 2004).

### **Better Work Jordan (BWJ)**

Better Work Jordan is part of the Better Work global program, which is a unique partnership between the International Labor Organization (ILO) and the International Finance Corporation (IFC). It aims to improve compliance with the Jordanian labor law and the ILO labor standards. (Better Work Jordan, 2011). BWJ is considering expansion to other labor intensive Jordanian industries.

### **Jordan and the International Labor Organization (ILO)**

Jordan is one of the 183 members in the International Labor Organization (ILO, 2011). It is a member since 1956. The ILO is a tripartite United Nations (UN) organization with representatives of governments, employers and workers in its executive bodies. The ILO is devoted to promoting social justice and internationally recognized human and labor rights.

### **Examining the State of OSH in Jordan Social Security**

Calculations made in this study using the numbers provided by the SSC, showed that there are 288,765 more people insured by the SSC in 2010 than in the case of 2005. This increase might be because over the

years, more and more workers are aware of the importance of being insured by the SSC; which provides the insured persons with social security and protection during times of work accidents, maternity, unemployment, old age, disability and death. The calculations also showed that the average increase of SSC insured persons was 57,753 persons per year for the period from 2005 to 2010. In 2010, the total number of employed people in the country was 1,534,289 (DOS, 2011a), and the number of actively insured persons (which means those who are employed) by the SSC was 880,995 for the same year (SSC, 2011a). This means that about 43% of workers in Jordan are not insured by the SSC.

Based on the same kind of calculations but for the year 2009 the results show that there is a decrease of 916 cases of work injuries between 2009 and 2010. However, to accurately compare between the two years incidence rates of the work, injuries in 2009 and in 2010 have been calculated. Incidence rate (%) is calculated by dividing the number of work accidents or injuries by the number of SSC insured workers, and multiplying the result by 100. So, the calculated incidence rate of work injuries is 1.74% for 2009 and 1.55% for 2010, which indicates a slight decrease in the incidence rate of work injuries in 2010 than in the previous year. This might be due to the increase in the number of workers covered by the SSC insurance. This decrease might also be due to increased efforts made by the Ministry of Labor.

The Social Security Corporation specified a number of causes for the work related accidents in Jordan. The majority of the accidents are caused by objects falling on workers, which is totally preventable if proper care and supervision were maintained. The rest of the causes include, in descending order, chemical materials, machines and equipments, transporting tools and lifting equipments, stepping on objects or colliding with them, falling of persons, and manual work tools. Objects could also fall on workers in the case of having unstable structures in the work area which may be due to the lack of regular maintenance and inspection for the worksite's surrounding structures.

There were 45 cases recorded of disabilities of 30 % or more in 2010 (SSC, 2011b). While 11 % of the work accidents resulted in disabilities of less than 30 %. On the other hand, 95 deaths were reported in the same year (SSC, 2011b). To understand the significance of this number and by a simple

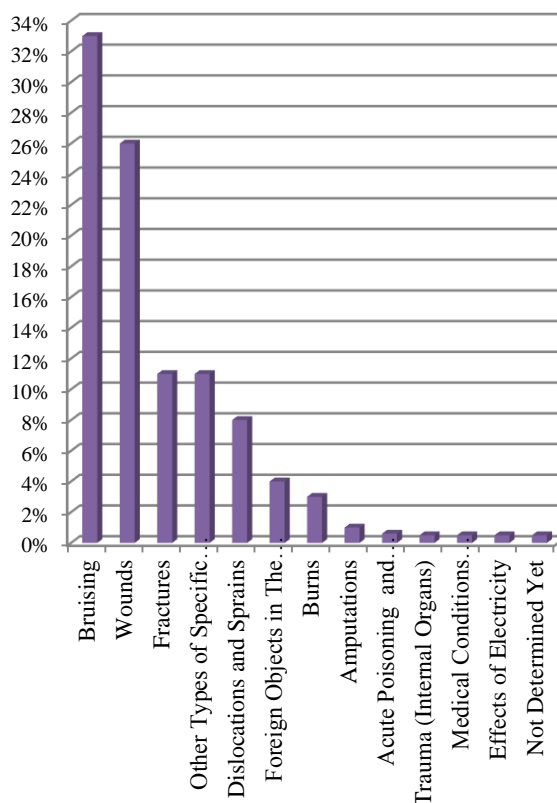


calculation, 0.5% of work accidents resulted in deaths in 2010. This can also be expressed as one worker dying every 200 occurring work accidents. Using numbers mentioned in the literature, the incidence rate of fatal injuries (deaths) calculated for Britain was 0.775 per 100,000 workers in 2010. The calculated incidence rate of fatal injuries for Jordan is 10.8 per 100,000 workers for the same year, which is obviously much higher than in Britain. This indicates that there is a serious problem in the occurrence of fatal injuries in the country. It might be due to the increased severity of the injuries resulting from work accidents which can be prevented by the use of safety equipment as and when required, and these equipment are most probably not used by many workers in Jordan. The problem might also be from a lack in safety awareness and training. Figure 1 shows different type of injuries which resulted from the work accidents recorded by the SSC in 2010, and which are mentioned in a descending order. About 33 % of the injuries were of bruises, and around 26 % were of wounds (SSC, 2011b). This also means that more than half of the recorded work accidents resulted in bruises and wounds alone. The trauma or impact from such events or situation will most probably result in bruising of the skin or in cuts and wounds.

This study also found that there are no other sources available for the numbers of occupational diseases in the country, except for those recorded by the SSC. In addition to that, the available numbers of work accidents and injuries in Jordan are basically from the SSC, except for some from the Ministry of Labor. Therefore, these available records cannot be considered as accurate or proper representation of the whole country's work accidents and injuries; since many workers are without social security and are excluded from such records.

## Conclusions

The study is a good step in identifying problems in OSH and the ways by which they can be solved. Some of this study's findings and conclusions are; both employers and employees must cooperate and work together in order to achieve occupational safety and health in their work environment; work injuries negatively affect the psychology of the injured worker, his/her family, and in some cases his/her co-workers, and it also affect the worker's financial status.



**Figure 1. (Note: These percentages are rounded to the nearest whole number)**

The Directorate of Labor Affairs and Inspection in the MOL and the OSH Office in the SSC should cooperate with each other in the country, which include carrying out inspection visits and providing OSH education and advice. This cooperation can help in increasing the accountability, strictness, and regularity of what is required from such cooperation.

In Jordan, work accidents and injuries are recorded by the Social Security Corporation only for workers who are insured by the SSC. Some injuries which do not comply with the Social Security Law are recorded by the Ministry of Labor. These available records are not a proper representation for the whole country's work related accidents. In 2010, around 37 work injuries occurred every day in the country. The total number of work accidents recorded was 17,276 which included 13,618 work injuries. The majority of work accidents were caused by objects falling on workers. Around 0.5% of the work accidents resulted in deaths, which also meant that one worker died every 200 occurring work accidents.

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