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# HEALTH RISK MANAGEMENT IN THE CONSTRUCTION INDUSTRY

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## Abstract

The building construction industry has a high incidence of occupational ill health. Statistics show that two people die every week on construction sites. Most of these deaths could have been avoided if health and safety risk is managed through legislation directly and indirectly related to construction. This paper examines risk management in the building construction industry with emphasis on occupational health issues. The study was conducted through the use of secondary data from journals, books and internet to achieve the objective of the study. The review of literature looked into details of different views from different scholars about Occupational Health issues and Occupational Health and Safety (OHS) Management System. It further highlighted on various sections or disciplines of occupational health risk management and its benefits in the construction industry. It also outlined the process in construction risk management. The findings from literature review showed that risk assessments for health and safety risks are a statutory requirement under the management of Health and Safety at Work Regulations. It was also mentioned that health and safety risk assessments are conducted in a controlled and thorough way following a set process.

**Keywords:** construction, health and safety, management.

## Introduction

Occupational health is often overlooked in the construction industry as it concentrates on accident prevention. Although there have been significant improvements in the industry's health and safety performance, efforts have

usually focused more on safety hazards rather than on workplace hazards resulting in ill health issues (System Concept, n.d.). Occupational hazard normally exposed employees to risk of injury or harm to health. This calls for the systematic manner of management of health and safety in the construction industry (Fiedler, 2004). There has also been global campaign on the right to safe and healthy working conditions in construction industry. Current health and safety laws and regulations have separate sections specifically for the construction industry (International Labour Office (ILO, 2007; ILO 2005). The responsibility for managing occupational health risks is placed on the employer under the Management of Health and Safety at Work Regulations 1999 (Construction Design and Management) Regulations 2007 (CDM, 2007). Occupational health issues are not always and immediately visible but can have the same devastating impact as accidents and injuries, sometimes causing prolonged and long term health problems (System Concept, n.d.). Managing occupational health goes beyond undertaking pre-start health checks, providing first aid and site welfare facilities. It involves organisations and employers having effective system of managing occupational health risks as well as compliance with health and safety legislation (System Concept, n.d.). To eliminate, prevent or reduce the likelihood of any occurrence of incidents, there is the need for control measures to be put in place (Huges and Ferret, 2010). It has been argued that risk identification is the most important stage of the risk assessment (Carter and Smith, 2006). This paper presents an investigation into occupational health issues within the building construction industry. It began with a discussion of Occupational Health and Safety (OHS) Management System, occupational health risk management and its benefits. This is followed by construction risk management process.

## **Literature**

Occupational health and safety is already a legal requirement in several countries. Risk management is an integral part of performing occupational health and safety. The associated risk derived from hazard is identified and assessed in risk management. Appropriate measures are given to reduce or even eliminate the risks (Fiedler, 2004). Risk in construction is generally associated with poor record of completion to cost and time, high levels of disputes and litigation, intense competition for work, low margins as well as profit, risk and poor safety and occupational health record. Others are pressure to produce a high return on funds invested, pressure to save time and money and pressure on health and safety provision (Cook & Williams in Morphy, 2013). Risk can be defined as uncertainty of outcome (whether positive opportunity or negative threat). The management of risk is critical to project success and it is the task of risk management to manage a project's exposure to risk (Princel in Morphy, because no measures have been put in place to cater for such hazards.

Therefore, there is the need for effective communication and risk management to prevent rampant accident in the building construction industry. Effective risk management in construction is the prevention of losses caused by exposure to risk such as accidents, loss of money or time, damage to property or loss of reputation (Morphy, 2013). Different tools of communication should be applicable on construction sites to disseminate information. These can be in the form of training, provision of handbooks, team briefings, toolbox talks, supervision meetings or other management meetings, specific or general instruction or training sessions and hands-on training (Health and Safety Executive (HSE, 2010).

### **Health issues in the construction industry**

Occupational health issues are not always and immediately visible but can have the same devastating impact as accidents and injuries, sometimes causing prolonged and long term health problems. Some of the health problems associated with work in the construction and building industry include (CDM 2007):

- Musculoskeletal disorders including back pain usually from manual handling;
- Noise- induced hearing loss;
- Respiratory and breathing problems including asthma from exposure to asbestos, dust, silica and other hazardous substances;
- Skin diseases including dermatitis from exposure to chemicals, paint, cement, bitumen, asphalt and other hazardous chemicals used in the industry;
- Hand arm vibration syndrome resulting from frequent operation of hand held power tools; and
- Occupational stress due factors such as work pressures, work load, the risky nature of the job, job insecurity.

### **Occupational Health and Safety (OHS) Management System**

The process of hazard identification, its assessment, action to be taken and the review of the outcome are provided in figure 1. The elements of a management system for Occupational Health and Safety (OHS) are based on the plan, Do - Check - Act cycle: defining the OHS strategy, planning, implementing and operating, checking and corrective action, management review and continual improvement (Fiedler, 2004).

## **Risk Management**

Risk management is applied in Occupational health and safety (OHS) management system to assess the risk associated with hazards in the construction industry. The OHS process is achieved through hazard identifying, assessing the associated risks, taking appropriate action to mitigate risks and finally by monitoring its effectiveness ((Morphy, 2013; Fiedler, 2004). Anything that has a threat to health and safety in an organisation is termed as hazard (Fiedler, 2004). The prevention of exposure to risk in the construction industry is achieved by planning, monitoring and providing control measures (Morphy, 2013).

## **Risk Management Process in the Construction Industry**

Figure 1 shows a risk assessment procedure. It illustrates the concept of residual risk (risks that have not been identified or that remain/persist following risk control measures).

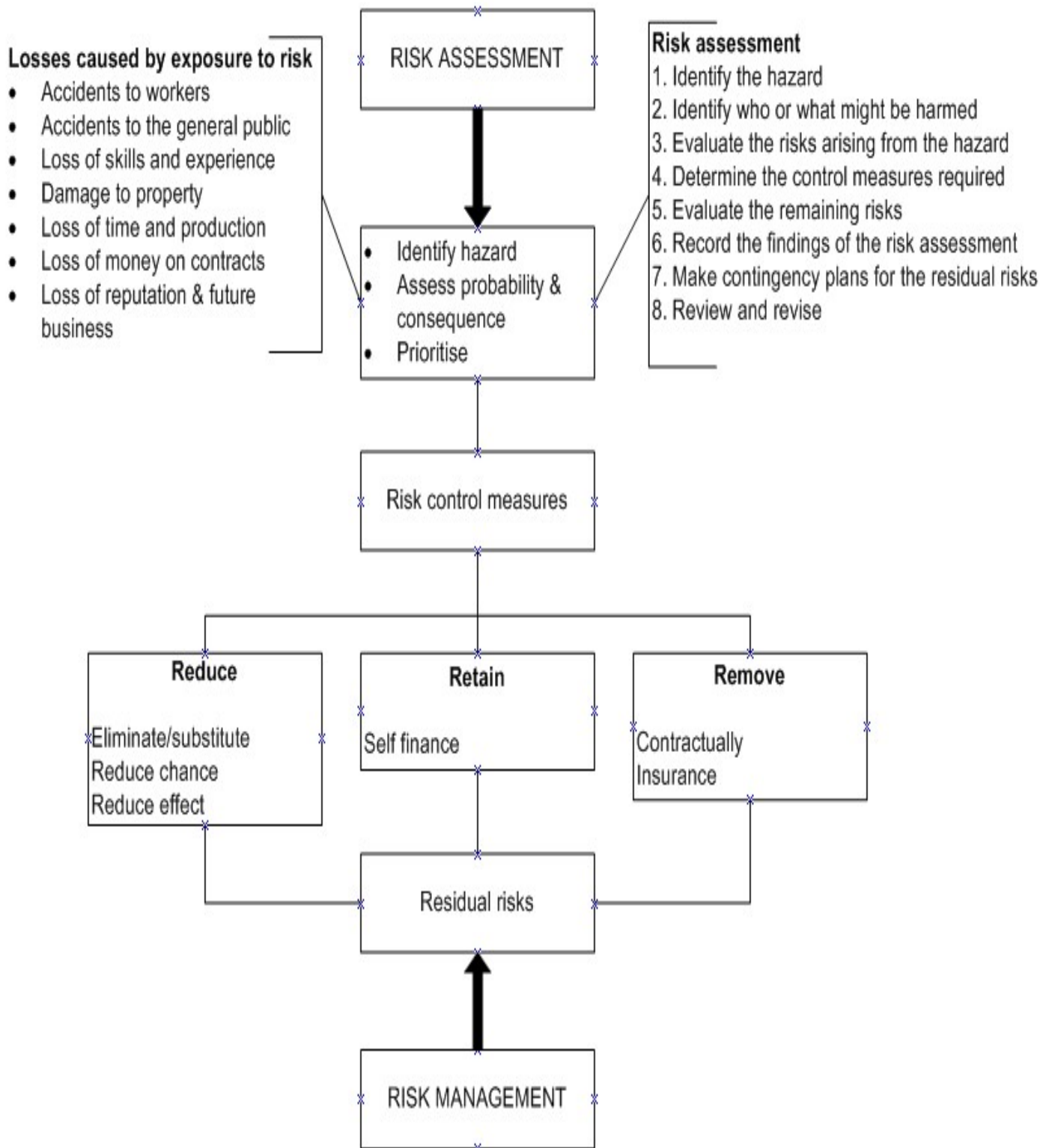


Figure 1: Adapted from (Cook & Williams, 2004; Morphy, 2013).

## **Risk Assessment**

Risk assessments play significant role in risk management and their function to meet legislative requirements relevant to site activities. *Weaver (2008) defined risk as an uncertain event or condition that if it occurs, has a positive or negative effect on a project's objective.* It is therefore, obligatory for management to take steps in the implementation of sound Occupational Safety and Health (OSH) management system. This should include proper risk assessments, reporting systems, safety plan and clear delegation of responsibilities, provide adequate resources and ensure that full information is disseminated to workers and other persons exposed to risks. The involvement of a health and safety officer in any of the risk assessment is highly empowered to change or improve the company's safety performance. The health and safety officer will also ensure the constant and effective use of *Personal Protective Equipment (PPE) provided by the employer.* "According to the Canadian Centre for Occupational Health and Safety (CCOHS, 2009) a risk assessment is a thorough look at workplace to identify situations, processes, etc. that may cause harm to people." Evaluation of the risk is carried out and a decision taken on measures to be taken to effectively prevent or control the harm from happening. The steps, as shown in figure 1 are as follows: identification of hazards, analyzing or evaluating the risk associated with that hazard and determining appropriate ways to eliminate or control the hazard (*Cook & Williams, 2004; CCOHS, 2009; Morphy, 2013*). Under the management of health and safety (H&S) at Work Regulations 1999, the occupational health risks management is placed on the employer. To meet the legal requirements as well as improving the organisation's H&S performance and ultimately reduce risks and costs (CDM, 2007).

## **Conclusion and Recommendations**

The purpose of this study was to highlight health risk management in the construction industry and to further find out different types of occupational health issues. The review showed how occupational health risk can be managed and its benefits to the construction industry. It was also mentioned risk management process with emphasis on risk assessment.

Robust system of management should be put in place to handle health problems associated with work in the construction industry due to the difficulty in controlling and managing occupational health risks. Risk assessments should play a significant role in risk management. Management of the construction industry should implement sound Occupational Safety and Health (OSH) management system.

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