

# Assessment of Health and Safety Management on Construction Sites in Kenya

Stephen Diang'a, Wanyona Githae, Ng'ang'a Kibe

**Abstract:** *The construction industry is an important part of the economy in many countries and is often seen as a driver of economic growth especially in developing countries. Owing to its relatively labour intensive nature, construction works provide opportunities for employment for a wide range of people skilled, semi-skilled and unskilled. Despite its importance, construction industries are considered risky with frequent accidents rates and ill health problems to workers, practitioners and end users. However, knowledge on how health and safety risks are managed on public construction sites in Kenya is limited. This study therefore, aims to find out the current practice of health and safety management on public construction sites in Nairobi County, Kenya. A cross sectional descriptive study was carried out in randomly selected public construction sites. Questionnaires were used for collection of qualitative and quantitative data from contractors and workers on public construction sites. Descriptive statistics was used for data analysis. The study concludes that the most common cause of injuries is tools and equipments, slips and over extortion respectively, with fire explosion and electricity and transport trailing the list, the management teams were commitment toward implementing the safety measures. Training influences the implementation health and safety measures*

**Keywords:** *industry, Owing, countries, implementation, Descriptive statistics, respectively, Kenya*

## I. INTRODUCTION

### A. Background of the study

The function of any government is to ensure workers' safety in a modern construction industry is safe workplace and is central to the ability to enjoy health, security, and the opportunity to achieve success in life. Health and safety at construction sites can be achieved by provision of enough clean water, proper and enough sanitation facilities, health friendly environment, knowledge of handling of machines, plants and equipment and hygienic practices. Health and safety standards on construction sites are set by the International Labour Organization (ILO) and are based on international conventions and recommendations on occupational health and safety (ILO, 2002). In Kenya, they are enforced through National Workmen's Legislation (Cap 236), the occupation Safety and Health Act, 2007, the Factories and Other Places of Work Act 1962. Safety concerns at workplace started in earnest in 1906

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In the U.S with the formation of the Massachusetts Board of Health which appointed health officials to inspect factories, work places and such like institutions (Stranks, 2005).

In the United Kingdom employees set up their own work place committees elected by the employees with the power to determine health and safety matters with the management. The general duties of the committee are in line with the European wide harmonized requirement of the health and safety directive. Following the Mexico earthquake of 1985, which had profound effects health care and safety, the United Nations General Assembly launched in 1990 the International Decade of Natural Disaster Reduction (IDNDR), with an objective to implement Disaster Mitigation programs which could in the long run improve safety and health at work places and home (Ridley, 2004).

### B. Objectives of the study

The specific objectives are:

1. To establish the kinds and causes of accidents and injuries on construction sites in Nairobi county
2. To assess the impact of accidents and injuries on the construction process in Nairobi county
3. To determine factors influencing implementation of health and safety measures on construction sites in Nairobi County
4. To develop a framework as a guide for health and safety management for construction sites.

## II. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### A. Introduction

This chapter presents summary of the study findings as guided by the research objectives, discussion of the findings, conclusion, recommendations and suggested further research.

### B. Summary of the Study Findings

Establishing and maintenance of health and safety management system in a working environment is critical in cultivating a health and safety culture among the employees in an establishment, more so in building construction where the levels of accidents are documented to be higher than most other work places, ILO report (2010) as we observed in the literature review. The researcher established that the most common cause of injuries is tools and equipments, slips and over extortion respectively, with fire explosion and electricity and transport related accidents receiving a vote of least likely accidents to happen. Slips were found to likely occur once a week at a rate of 65%, 33% once a month and 5% once every two months. Tool and equipment accounted for majority of injuries and hand an accordance rate of 76% per week. 71. % of the respondents have recorded

accidents in their construction sites. Though the accidents were mainly minor injuries in nature with only 7% being fatal and severe respectively, this shows the level of danger construction site workers encounter in the course of carrying out their tasks.

Wounds and bruises cuts and fractures were found to be the most common causes of injuries associated with construction sites in Nairobi. Wounds and bruises were they were the most likely injuries to happen with rating of 86% likelihood of occurrence per week. The researcher found out that fractures and broken bones were the second most likely injuries to occur in Nairobi county construction sites. This was supported by over 50% likelihood of occurrence weekly. The researcher sought to know what is the impact of various injuries sustained during construction works. In this respect the researcher examined the impact on two perspectives, that is impact to the workers and impact to the construction project. From the study it was evident that injuries have a high impact on family income. This was supported by 61% of the respondent. It was interesting however to note that despite the fact that majority of the respondent thought that injuries have a high impact in decreasing family income, majority of them thought that it had a little to do with standards of living. This is supported by 40%. 58% of the respondents who said that injuries sustained during construction works did not cause disability. Also injuries sustained in construction sites are less likely to cause depression. From the study only 31% said were in favor of injuries causing depression. The study found out that injuries sustained had a high impact on worker absenteeism. This was supported by over 66% of the respondents which no respondent in favour of a no impact verdict. Loss of public confidence was least likely to be affected as a result of workers sustaining injuries. This is supported by 60% of the respondents. However, opinion was divided on whether injuries sustained are likely to cause loss of employee. 46% of the respondent said that injuries sustained did not affect loss of workers with the same number saying they had a high impact. Notwithstanding chances are high that morale of the employees is likely to be affected by injuries sustained during construction works. This is supported by 52% of the respondent.

The researchers sought to know the factors that influence implementation of health and safety measures in construction sites in Nairobi County. In this area the researcher paid much attention on health and safety management policy, training of employee on health and safety, leadership commitment and employee participation. 64% of the respondents, were opinion that employee participation influences the implementation of health and safety measures in construction sites in Nairobi. 71% of the respondents stated that the management showed a good attitude towards workers safety. This is in line with Armstrong (2009), stated that leadership is the process of inspiring people to do their best to achieve a desired result therefore the leader therefore must be positive in all tasks they wish their staff to undertake. The study also sought to find out whether training influenced the implementation health and safety measures in construction sites in Kenya. 56% of the respondents supported this to a large extent that training influenced the implementation health and safety measures. The study sought to find out whether health and

safety policy had an influence on health and safety implementation in construction sites in Nairobi county. 53% of the respondents were of the opinion that health and safety policy had a positive impact on implementation of health and safety measures.

### III. CONCLUSIONS

The study concludes that the most common cause of injuries is tools and equipments, slips and over exertion respectively, with fire explosion and electricity and transport trailing the least. Slips were found to occur more likely more than any other injuries majority of the accidents at construction sites were minor injuries and likelihood of fatal injuries was minimal. Wounds fractures and broken bones are the common types of injuries associated with construction sites.

The study sought to establish whether leadership influences the implementation of health and safety measures in construction sites in Kenya. The study found out that leadership influences the implementation of health and safety measures. The management teams were committed toward implementing the safety measures. On whether employee training influences the implementation of health and safety measures in supermarkets on Kenya, the study concluded that training influences the implementation health and safety measures. Lack of training on health and safety measures affects performance and productivity of the employees to a large extent. The study concluded that Employee participation was shown by the study to influence the implementation of health and safety measures in construction sites to a large extent. Participative approach can result in improvements on health and safety, it is important for managers to share information with employees, creating individualized relationships with employees on health and safety and the respondents believed in the value of providing greater autonomy to employees.

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