

# Effect of Occupational Safety and Health on Organizational Performance: A Case of Nzoia Water in Trans-Nzoia County

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## Abstract

There was recurring accidents in Nzoia water in Trans-Nzoia County due to failure to observe OSH. The purpose of the study was to investigate how occupation safety and health could be properly observed to improve performance at Nzoia Water Company in Trans-Nzoia County. The specific objectives of the study were; to determine the effect of accident reduction on organizational performance in Nzoia water company Trans-Nzoia County. The study was guided by the following theories; traditional cost theory, accident causation theory, two factor theory and public relation theory. The company has a total of 138 employees. The targeted the entire population of 138 employees. The research tools used for data collection was questionnaires. There was a pilot study to test the validity of the instrument. Reliability of the instrument was determined by use of Cronbach Alpha test of 0.7. Data was analysed both quantitatively and qualitatively. Regression model was used for data processing and analysis. The following were the key findings; The study revealed that the organization against health and safety hazards. According to the study, the organization conducts regular reviews and audits based on the accident reduction scheme. It also revealed that accident reduction enhances organizational growth, survival as well as performance. Based on the findings, the the organization should provide a health and safety programme to the employees yearly to reduce cost. It should help employees acquire knowledge and skills on how to deal with health and safety issues to reduce accidents. Top management should support health and safety issue awareness. The organization should conduct regular reviews and audits. They should also have a provision of good people management and supervision.

**Keywords:** Organisational Health and Safety, Accident Reduction

## 1.0 Introduction

According to International Labour Organization (2013), Work – related illness and injuries have been a feature of employment since the beginning of industrialization. Changes in managerial thinking with regard to occupational safety and health have paralleled developmental stages in personnel relations as a whole. The trend has been from lack of concern to workers as individuals to a scientific- Work management approach (with alienation of public opinion, and increasing governmental regulation). Current businesses are moving to modern concepts of business leadership where employees are valued and allowed to participate in management and social responsibility.

Occupational safety and health (OSH), also commonly referred to as occupational health and safety (OHS), occupational health, or workplace health and safety (WHS), is a multidisciplinary field concerned with the safety, health, and welfare of people at work. These terms of course also refer to the goals of this field, so their use in the sense of this article was originally an abbreviation of occupational safety and health program/department etc. The goals of occupational safety and health programs include fostering a safe and healthy work environment. OSH may also protect co-workers, family members, employers, customers, and many others who might be affected by the workplace environment, Lim (2012).

Occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities; and, to summarize, the adaptation of work to man and of each man to his job. The main focus in occupational health is on three different objectives: the maintenance and promotion of workers' health and working capacity; the improvement of working environment and work to become conducive to safety and health and development of work organizations and working cultures in a direction which supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the undertaking, (Rajkuar 2014).

In the United Kingdom, the Factory Acts of the early nineteenth century (from 1802 onwards) arose out of concerns about the poor health of children working in cotton mills: the Act of 1833 created a dedicated professional Factory Inspectorate. The initial remit of the Inspectorate was to police restrictions on the working hours in the textile industry of children and young persons introduced to prevent chronic overwork, identified as leading

directly to ill-health and deformation, and indirectly to a high accident rate. However, on the urging of the Factory Inspectorate, a further Act in 1844 giving similar restrictions on working hours for women in the textile industry introduced a requirement for machinery guarding but only in the textile industry, and only in areas that might be accessed by women or children, Pollitt (2011).

In 1840 a Royal Commission published its findings on the state of conditions for the workers of the mining industry that documented the appallingly dangerous environment that they had to work in and the high frequency of accidents. The commission sparked public outrage which resulted in the Mines Act of 1842. The act set up an inspectorate for mines and collieries which resulted in many prosecutions and safety improvements, and by 1850, inspectors were able to enter and inspect premises at their discretion. In the United States, the first of these corrective laws came into effect in 1911 (Wisconsin). It held an employer financially liable for all disabling accidents arising out of, and in the course of, employment. Compensation laws (finally passed in every state) came to be interpreted as also covering occupationally induced chronic illness and injuries suffered in the place of work (even during off-hours). Organized labour incessantly lobbied for other improvements in workers' compensation, (Srinivas 2013).

At the start of the twentieth century, safety engineering efforts still reflected a paternalistic attitude. Mechanical and automatic protective devices were designed to make machinery "foolproof." Safety of employees was supposed to depend solely on strict enforcement of safety regulations. Relatively little effort was made to develop safety-mindedness in employees, (Prabakar 2014). Gradually, many employers began to realize that safety education is good business. A group of safety-minded professionals took the lead in developing programs for industrial and public safety. In 1913 the National Safety Council was founded. Executives, as well as technicians, recognized that "foolproof technology" is not enough. Sooner or later, some "fool" will; manage to have, or to create, an accident, (Rajkuar 2014). According to Lim (2012), by mid-century an enlightened approach began to make itself felt. An analysis of 75,000 cases had demonstrated conclusively that 88 percent of industrial accidents were caused primarily by unsafe acts of persons. This finding suggested that many accidents could be prevented by helping employees to develop safe practices for their own benefit, and to cooperate with supervisors and staff experts to make the immediate workplace safe for their fellow workers. Yet until the late 1960s most corporate executives continued to feel that responsibility for employee safety and health could properly be left entirely to staff experts. However, changing public opinion and stronger government regulations had an impact on executive thinking and acting.

Gradually, an aroused public opinion brought some relief. First, a series of corrective liability laws aimed at counteracting an employer's common-law defences were enacted. Another development was the formulation of an entirely new principle: liability without fault (on the part of the employer). Risks of industrial accidents, for example, were viewed as inevitable hazards of industrial employment. Therefore, all expenses associated with accidents became a legitimate production cost for the employer (Hudson 2010). According to The Occupational Safety & Health Act, 2007(Nairobi, 26th October 2007) Kenya was under the colonial rule of Britain and thus much of the Occupational health and safety legislation were influenced the British legislation. In Kenya occupational health and safety legislation has been under the Factories Act (Chapter 514 of the laws of Kenya). In 2007 the Kenyan Parliament enacted the 'Occupational Safety and Health Act, 2007'. There was also the Workmen Compensation Act, Cap 236 which has been replaced with 'The Work Injury Benefits Act (WIBA).'

According to Safework (2006), Countries around the world have recognized the universality, inalienability, interdependency and indivisibility of the human right to safe and healthy working conditions. In this paper, the author discusses occupational safety and health as a fundamental human right, by first outlining the international legal framework on safe and healthy working conditions and thereafter, the extent to which Kenya has respected, protected and fulfilled its international legal obligations on safe and healthy working conditions. From an international human right perspective the author puts forth the argument that since human rights are interconnected, then the right to occupational safety and health should be given the same attention as the civil and political rights. On the same note the author seeks to assess whether the right to occupational safety and healthy has been realised as a fundamental human right in Kenya. New risks as some of the main obstacles to the effective implementation of the law on occupational safety and health in Kenya as a fundamental human right. By making a succinct overview on the implementation of the Occupational Safety and Health Act<sup>1</sup> the author illustrates the main challenges facing occupational safety and health programs in the work place and argues that it has not been realised as a fundamental human right in Kenya (O'toole 2002).

According to Matthewman ( 2006), Occupational health and safety is a cross- cutting disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. All occupational health and safety programs are therefore geared towards fostering a safe working environment. As such this area has dramatically developed a lot of interest in Kenya following the enactment of the new Constitution of Kenya. The Occupational Health and Safety Act No.15 which came into force on 26<sup>th</sup> October 2007, and saw many workplaces which had hitherto operated without institutional and individual capacity for health and safety management. They develop the requisite mechanisms in order to improve the safety of the working environment

and escape liabilities.

The corpus of law in Kenya dealing with occupational safety and health is contained in the international legal instruments which emphasise that everyone is entitled to the right to safe and healthy working conditions, the Constitution of Kenya, the Occupational Safety and Health Act No.15 of 2007, and the various labour laws now in force. Seeing occupational safety and health as a fundamental human right will ensure that the vulnerable workers mostly women, the poor and the children and forming the largest population of the working class get the basic knowledge of hazards, personal protection and that they do not work for long hours in unsafe conditions without health care or insurance covers. For occupational safety and health to attain the status of a basic human right for all (Pollitt 2011).

Occupation safety and health is concerned with protecting the safety, health and welfare of people engaged in work or employment. The enjoyment of these standards at the highest level is a basic human right that should be accessible by each and every worker. Regardless of their nature of work, workers should be able to carry out their responsibilities in a safe and secure working environment, free from hazards. These rights are set out in legislation to ensure that employers are clear about the obligations and the consequences for neglecting them, International Labour Organization, (2012). However there have been problems, failure to observe OSH is the major problem in Nzoia water services company Trans-Nzoia County. It has been expensive to handle employees who get injuries at work place, in term of compensation and treatment. There have been recurring accidents due to lack of preventive measures, personal protective equipment, and incompetence. Employees are not motivated to observe OSH and also their welfare is not taken care of. Therefore the study seeks to analyze how OSH can be properly observed to improve performance in Nzoia water services company Trans-Nzoia County with the specific objective of determining the effect of accident reduction on organizational performance in Nzoia water services company Trans-Nzoia county.

## **2.0. Effect of accident reduction on organisational performance**

According to Pollitt (2011), supervisors are the link between management and the operative employees, they are in the best position to promote safety. Accidents can be reduced through; accident identification. Even though hazards look different in every workplace and in every type of industry, there are five defined classes. Here's a list and introductory definitions for each. Physical hazards are things or agents that may come into contact with the body with potential for harm. Many physical hazards are things that can be seen, like a slippery work surface, a loose railing on a scaffold, or a missing guard on a meat slicer. Other physical hazards are referred to as 'physical agents'. These are sources of energy that can't always be seen, but still have potential to harm the body. Physical agents include things like level and nature of noise, vibration, radiation, temperature and pressure.

Chemical are in everything around us. They can be natural or manufactured, and come in the form of liquids, gases, vapours, solids or particulates (very small pieces). Naturally occurring and manufactured chemicals both carry potential for harm for people working around them. This potential is based on the level and type of exposure that someone may have to a chemical or chemical product. In Canada, laws like WHMIS (Workplace Hazardous Materials Information System) and Transportation of Dangerous Goods are in place to support the safe handling and transportation of certain chemical products. Biological hazards are typically in the form of bacteria and viruses transmitted by contact with insects, birds, animals, plants and fungi, and other humans. Unprotected exposure to biological hazards can result in a range of infections and illnesses. Some may appear fairly commonplace, like catching a cold or a skin rash from the customer served at lunch, but have serious side effects such as a poor recovery. Other types of biological hazards, like body fluid borne diseases or bacteria carried by some fungi, can be extremely dangerous (pollit 2011).

According to Hudson (2010), ergonomic hazards are caused by the way work tasks are designed and carried out. The injuries that result from ergonomic hazards always affect the muscles and the skeleton, and are the most common type of workplace injury in Nova Scotia. These injuries may happen suddenly, but are more likely to form over very long periods of time. Ergonomic hazards can be seen in work that involves awkward body postures (working in the same body posture for long periods), high body force (lifting or carrying heavy or awkward loads), and high task repetition (same movements over long periods). Improper or poorly designed work stations, tools and equipment are also a part of ergonomic hazards.

Psycho-social hazards can arise out of the many different ways that people interact with each other. This type of hazard may show up as negative workplace conditions like bullying, violence or sexual harassment. It can be due to stress outside or inside the workplace, the type of work being done or because of the attitudes and behaviors that different people bring to their jobs. Psycho-social hazards have the potential to harm our physical and mental health and safety, and the health and safety of the workplace. Nova Scotia's Workplace Violence Regulation is one example of safety law that guides employers and workers to recognize and deal with psycho-social hazards as seriously they would any other class of hazard (Matthwman 2006).

## 2.1 Accidents Identification

According to Hudson (2010), Safety inspections are designed to examine a specific area of the organization in order to locate and define any faults in the system, equipment, plant or machines. If there is any error that may cause accidents, it will be identified. It is carried out by manager and supervisors with the advice of health and safety advisors. Safety inspections should be carried out on a regular and systematic basis. The steps to be taken in carrying out safety inspections are as follows: allocate the responsibility for conducting the inspection, define the points to be covered in the form of a checklist, divide the department or plant into areas and list the points of attention, define the frequency with which inspections should be carried out daily in critical areas, use the check lists as the basis for the inspection and carry out sample or spot checks on a random basis. Health and safety audits are very important. This is where all aspects of health and safety policies, procedures, practices and programmes are reviewed. An audit therefore examines the whole organization. Through audits accidents prone area will be identified. Workers are encouraged to propose or suggest potential hazards that are contained in a job, task or activity. This will be based on employees past experience in the organization (Lim 2012).

Pre- use analysis method is used when an organization is acquiring new equipments, machines, instruments, tools and personal protective equipments. The new equipments will be tested before they are used to ensure they are in order. The most serious accidents usually occur by metal and woodworking machines and saws, or around transmission machinery like gears, pulleys, and flywheels. The method is used before exposure to hazards. Multi-Step planning process is very important. Before an employee starts doing a task he / she should get answers to the following questions such as; how could I get hurt doing this job, task or activity?, and what will I do to prevent accidents, injuries or illnesses( Safework 2006).

According to Waring (1996), certain jobs are inherently more dangerous. For example, the job of crane operator results in about three times more accident-related hospital visits than does the job of supervisor. Such workers who are exposed to such danger need to ask themselves such questions to identify the accidents. This method is applied before exposure to a hazard and it helps to identify the hazards. Work permitting is another method to identify accidents, for example when working with toxic gases such as carbon monoxide and flammable gases a person must be permitted to do the job , task or activity . Question from a checklist are asked to assure that hazards are not overlooked. Hand tools (like chisels and screwdrivers) and electrical equipment (extension cords, electric drop lights, and so on) are other major causes of accidents and should only be permitted to those who know how to use them. To be able to identify accidents it is important to know what causes accidents at the workplace,

## 2.2 Causes of Accidents,

According to Matthewman (2006), accidents don't just happen. They are generally the result of a combination of circumstances and events. The circumstances and events causing accidents are usually unsafe personal acts, or an unsafe physical environment, or both. Most experts believe that unsafe personal acts cause the bulk of workplace accidents. Such acts have been estimated to cause 80 percent of all such accidents. Acts of this kind include taking unnecessary chances, engaging in horseplay, failing to wear protective equipment, using improper tools and equipment, and taking unsafe shortcuts. It is difficult to determine why employees commit unsafe personal acts. There probably is no single reason.

A desire to impress others or project a certain image, fatigue, haste, boredom, stress, poor eyesight, daydreaming, and physical limitations are all potential reasons. However, these reasons do not explain why employees intentionally neglect to wear prescribed safety equipment or don't follow procedures. Most employees think of accidents as always happening to someone else. This attitude can easily lead to carelessness or a lack of respect for what can happen. It is also true that some people injured out of taking chances and showing off. Research studies have shown that employees with low morale tend to have more accidents than employees with high morale. This is not surprising when one consider that low morale is likely to be related to employee carelessness (O'toole 2002).

Accidents can and do happen in all types of environments. They can happen in offices and retail stores, and they can as well happen in factories. However, they occur most frequently in certain kinds of situations. Listed in order of decreasing frequency, these locations are: Wherever heavy, awkward material is handled, using hand trucks, forklifts, cranes, material. Improper lifting is also a frequent cause of accidents. Around any type of machinery that is used in production and need to be operated. Among the more hazardous are metalworking and woodworking machines, power saws, and machines with exposed gears, belts, chains, and the like. Even a paper cutter or an electric pencil sharpener has a high accident potential (International labour Organization 2012).

Wherever people walk or climb, including ladders, scaffolds, and narrow walkways. Falls are a major source of accident. Wherever people use hand tools, including chisels, screwdrivers, pliers, hammers, and axes. Hand tools also account for many household and workplace accidents. Wherever electricity is used other than for the usual lighting purposes. Among the places where electrical accidents occur are: near extension cords, loose wiring, and portable hand, tools. Outdoor power lines have a high accident potential( Pollitt 2011).

Just as there are certain situations in which accidents occur more frequently, certain physical conditions also

seem to result in more accidents. Some of these unsafe physical conditions are: Serious understaffing or not having enough people to do the job safely, Unguarded or improperly guarded machines (such as all unguarded belt), poor housekeeping (such as congested aisles, dirty or wet floors, and improper stacking of materials), defective equipment and tools, Poor lighting, poor or improper ventilation- insufficient air change, impure air source improper dress (such as clothing with loose and floppy sleeves worn when working on a lathe). Hazardous procedures in , on , or around machine or equipment and unsafe storage – congestion overloading (International labour Organization 2012).

When thinking about workplace hazards and how to prevent or control them, it's important to consider that there are always other factors contributing to how hazards impact a workplace and the people in it. There are the four types of contributing factors; they can be remembered by the acronym. People as contributing factors to workplace hazards means considering how the action or non-action of people, influences workplace hazards and situations. Sometimes this seems easy to see. For example, during the supper hour rush at a fast food restaurant two workers crash into each other in the kitchen, one falls and breaks her elbow. It seems clear that people's actions of rushing, combined with the hazard of a slippery floor, clearly led to the serious injury. However, we need to remember that it is people who design work process. In this example it will be important to question why people were rushing, and whether the risk for injury could be decreased by improving the process for safely dealing with rush hour work (Safework 2006).

According to Hudson (2010), equipment as contributing factors to workplace hazards means determining whether equipment, tools and even protective equipment or clothing, are proper for the job. Using a fast food setting again, many employers do use raised non-slip mats to reduce the risk of slips and falls. However, if the mats are not properly cleaned with an appropriate floor brush, food residue can build up and pretty soon the mats themselves become a hazard. Equipment can also refer to personal protective equipment or clothing. If workers are wearing protective gear that doesn't fit them, isn't in good condition or appropriate to the task, then the equipment itself can be a contributing

factor to the risk for injury. Materials as contributing factors to workplace hazards means thinking about whether a material is proper for the job and/or if it's being properly used and handled. One example is how cleaning products are used. Not all cleaners are appropriate for all settings. Using a strong de-greasing product designed for industrial kitchens, on the counters of a clothing store, creates the potential for injury to both workers and customers. The existing hazard of germs and spread of illness in a public place is worsened by the improper handling and use of a material. Safe work requires proper materials and the proper use of those materials.

Environment as a contributing factor refers to how conditions around workers and supervisors further impact hazards and workplace safety. Some aspects are more obvious than others. Are work areas too cold or too hot? Is lighting correct, or is it not suitable for the work being done? Are work areas cluttered, crowded or dirty? Other factors may not be as easy to see. Are key pads on computers or cash registers clean? Is the air in workplace healthy? It is important to recognize that many jobs are carried out in difficult, and sometimes quite hazardous, settings. To make sure that the workplace environment isn't creating even more harm, workers and employers should come together to identify when further hazard controls are needed. All workplaces and types of work have different hazards. This is normal. Working safely means recognizing hazards and contributing factors, talking to your supervisor about how to work safely around those hazards, and then doing everything possible to work safely and prevent injury and illness ( Pollit 2011).

### 2.3 Accident prevention

In practice, accidents prevention can be carried out by reducing unsafe conditions and reducing unsafe acts. In large facilities, the chief safety officer (often called the "environmental health and safety officer") is responsible for this. In smaller firms, various other managers including those from human resource, plant management and first line managers share these responsibilities. The methods used to prevent accidents include; reducing unsafe conditions and acts. Reducing unsafe conditions is always an employer's first line of defence in accident prevention. Safety engineers should design jobs so as to remove or reduce physical hazards. In addition, supervisors and managers play a role in reducing unsafe condition (Safework 2006).

Employers increasingly use computerized tools to design safer equipment. Sometimes the solution of eliminating an unsafe condition is obvious, and sometimes it's more subtle. For example, slips and falls are often the result of debris or a slippery floor. Relatively obvious remedies for problems like these include slip-reducing floor coatings. Floor mats, better lighting and a system to quickly block off spills. But perhaps less obviously, personal safety gear can also reduce the problems associated with otherwise unsafe conditions. For example, slip resistant foot wear with grooved soles can reduce slips and falls. Cut-resistant gloves reduce the hazards of working with sharp objects ( Pollitt, 2011).

Getting employees to wear personal protective equipment can be a famously difficult task. In addition to providing reliable protection and durability, protective gear should: fit properly, be easy to care for, maintain and repair, be flexible and lightweight, provide comfort, reduce heat stress, be relatively easy to put on and take off,

and be easy to clean or dispose of and recycle. Employees should be included in planning the safety program, reinforcing appropriate behaviours, and addressing comfort issues contribute to employees' willingness to use the protective gear. Again, however, reducing unsafe conditions (such as by enclosing noisy equipment) and having managers watch for hazards is always the employer's first line of defence. There are also administrative controls, such as job rotation to reduce long-term exposure to the hazards (Safework 2006).

It is the supervisor's responsibilities to set the tone for the subordinate to work safely. This involves more than talking up safety, ensuring that workers wipe up spills, or enforcing safety rules, although such things are important, it's also necessary to show by both word and deed that safety is crucial. For example, supervisors should: Praise employees when they choose safe behaviours, listen when employees offer safety suggestions, concerns, or complain, be a good example, for instance, by following every safety rule and procedure, visit plant area regularly, maintain open safety communication for instance, by telling employees as much as possible about safety activities such as testing alarms and link manager's bonuses to safety improvement ( Safework 2006).

Proper employee screening and placement can reduce unsafe acts. Here, the employer's aim is to identify the trait (such as visual skill) that might predict accidents on the job in Question, and the screen candidate for this trait. For example, a test like the Employee Reliability Inventory (ERI) can help employers reduce unsafe act at work. Purportedly measures reliability dimensions such as emotional maturity, conscientiousness, safe job performance, and courteous job performance similarly, using job simulation test (which attempt to measure the applicant by simulating physically demanding work activities) and physical capabilities tests (which measure muscle strength and motion) also seem to predict who will have more accidents. Also, ask several safety-related questions during the selection interview-for instance, "What would you do if you saw another employee working in an unsafe way (Hudson 2010).

Safety training is another way to reduce unsafe acts, especially for new employees, you should instruct them in safe practices and procedures, warn them of potential hazards, and work on developing a safety –conscious attitude. Employers also use various tools to motivate workers to work safely. Safety posters are examples of such tools. Safety posters can apparently increase safe behaviour, but they are no substitute for a comprehensive safety program. Employers should combine them with other techniques (like, screening and training) to reduce unsafe conditions and acts, and also change the posters often. Incentive programs are also successful at reducing workplace injuries (Cole 1997).

Many employers successfully use positive reinforcement programs to improve safety; such programs provide workers with continuing positive feedback, usually in the form of graphical performance reports and supervisory support, to shape the workers safety related behaviour. Behaviour-based safety means identifying the work behaviour that contribute to accidents and then training workers to avoid these behaviours. For example, does the employee watch his or her hands while performing a task? The consultant will make observation, collect data regarding the behaviours and then successfully institute on-site training programs to get employees to perform the expected task properly (Health and Safety Executive 2004).

According to Cowling (1994), there are two good reasons to get employees involved in designing the safety program. First, employees are often management's best source of ideas about what the potential problems are and how to solve them. Second, employee involvement tends to encourage employees to accept the safety program. Managers should routinely inspect for possible problems using checklists as aids. Investigating all accidents enable employees to notify managers about hazards. Use employee safety committees to inspect. Committees should evaluate safety adequacy, monitor safety audit findings, and suggest strategies for improving health and safety performance.

### **3.0 Method**

The Study employed a descriptive research design with a target of 138 employees in Nzoia water services company Trans-Nzoia County. The study targeted the entire population. The research instruments that were used for data collection were questionnaires. A questionnaire contained a set of written questions used to elicit responses from respondents. The same questionnaire was administered to all employees which were issued out a questionnaire with both closed and open questions to respondents for collection of primary data. Piloting was done to test the validity and reliability of the data collection instrument. Multiple regression was used and analysis of variances.

### **4.0 Discussion**

Regardless of their nature of work, workers should be able to carry out their responsibilities in a safe and secure working environment, free from hazards. These rights are set out in legislation to ensure that employers are clear about the obligations and the consequences for neglecting them, International Labour Organization, (2012).

The study sought to establish the effect of accident reduction on organizational performance in Nzoia water services company Trans-Nzoia County. The findings are presented in a five point Likert scale where SA=strongly agree, A=agree, N=neutral, D=disagree, SD=strongly disagree and T=total.

From table 4.2 below, the respondents were asked whether the organisation has a good accident reduction

and risk minimisation scheme. The distribution of findings showed that 30 percent of the respondents strongly agreed, 41.8 percent of them agreed, 22.7 percent of the respondents were neutral, 5.5 percent disagreed while 0 percent of them strongly disagreed. These findings implied that the organisation has a good accident reduction and risk minimisation scheme.

The respondents were also asked whether there are measures to identify accidents in the organization. The distribution of the responses indicated that 9.1 percent strongly agreed to the statement that there are measures to identify accidents in the organization, 16.4 percent of them agreed, 30.0 percent of them were neutral, 27.3 percent of them disagreed while 17.3 percent of them strongly disagreed to the statement. These findings implied that there are measures to identify accidents in the organization.

The respondents were also asked whether the organisation conducts regular reviews and audits based on the accident reduction scheme. The distribution of the responses indicated that 18.2 percent strongly agreed to the statement, 29.1 percent of them agreed, 19.1 percent of them were neutral, 28.2 percent of them disagreed while 5.5 percent of them strongly disagreed to the statement. These findings implied the organisation conducts regular reviews and audits based on the accident reduction scheme. Health and safety audits are very important. This is where all aspects of health and safety policies, procedures, practices and programmes are reviewed. An audit therefore examines the whole organization. Through audits accidents prone area will be identified. Workers are encouraged to propose or suggest potential hazards that are contained in a job, task or activity. This will be based on employees past experience in the organization (Lim 2012).

The respondents were further asked whether causes of accidents are well known and actions are taken for implementation. The distribution of the responses indicated that 13.6 percent strongly agreed to the statement, 28.2 percent of them agreed, 23.6 percent of them were neutral while 34.5 percent and 0 percent of them disagreed strongly and disagreed to the statement respectively. These findings implied that causes of accidents are well known and actions are taken for implementation. Reducing unsafe conditions is always an employer's first line of defence in accident prevention. Safety engineers should design jobs so as to remove or reduce physical hazards. In addition, supervisors and managers play a role in reducing unsafe condition (Safework 2006).

Finally, the respondents were asked whether accident reduction enhances organisational growth, survival as well as performance. The distribution of the responses indicated that 36.4 percent strongly agreed to the statement, 40 percent of them agreed, 22.7 percent of them were neutral, 0.9 percent of them disagreed while 0 percent of them strongly disagreed to the statement respectively. These findings implied that accident reduction enhances organisational growth, survival as well as performance.

**Table 4.1: Accident Reduction**

Statements		SA	A	N	D	SD	T
The organisation has a good accident reduction and risk minimisation scheme	%	30.0	41.8	22.7	5.5	0	100
There are measures to identify accidents in the organization	%	9.1	16.4	30.0	27.3	17.3	100
The organisation conducts regular reviews and audits based on the accident reduction scheme	%	18.2	29.1	19.1	28.2	5.5	100
Causes of accidents are well known and actions are taken for implementation	%	13.6	28.2	23.6	34.5	0	100
Accident reduction enhances organisational growth, survival as well as performance	%	36.4	40.0	22.7	0.9	0	100

#### 4.1 Inferential Statistics

#### 4.2 Pearson Correlation

The study sought to establish the strength of the relationship between independent and dependent variables of the study. Pearson correlation coefficient was computed at 95 percent confidence interval (error margin of 0.05). Table 4.2 illustrates the findings of the study.

**Table 4.2: Correlation Matrix**

		Nzoia water company performance
Accident Reduction	Pearson Correlation	.717**
	Sig. (2-tailed)	.000
	N	138

As shown on Table 4.2 above, the p-value for Accident reduction was found to be 0.000 which is less than the significant level of 0.05, ( $p < 0.05$ ). The result indicated that Pearson Correlation coefficient (r-value) of 0.717, which represented a strong, positive relationship between accident reduction and Nzoia water company performance.

#### 4.3 Multiple Linear Regression

Multiple linear regressions were computed at 95 percent confidence interval (0.05 margin error) to show the multiple linear relationship between the independent and dependent variables of the study.

#### 4.4 Coefficient of Determination ( $R^2$ )

Table 4.3 shows that the coefficient of correlation (R) is positive 0.529. This means that there is a positive correlation between occupation safety and health on the performance of Nzoia Water Company in Trans- Nzoia County. The coefficient of determination (R Square) indicates that 27.9% of performance of Nzoia Water Company in Trans- Nzoia County is influenced by occupation safety and health. The adjusted  $R^2$  however, indicates that 25.2% of performance of Nzoia Water Company in Trans- Nzoia County is influenced by occupation safety and health leaving 74.8% to be influenced by other factors that were not captured in this study.

**Table 4.3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.529 <sup>a</sup>	.279	.252	4.10718

a. Predictors: (Constant), accident reduction

#### 4.5 Analysis of Variance

Table 4.4 shows the Analysis of Variance (ANOVA). The p-value is 0.000 which is  $< 0.05$  indicates that the model is statistically significant in predicting how occupation safety and health on the performance of Nzoia Water Company in Trans- Nzoia County. The results also indicate that the independent variables are predictors of the dependent variable.

**Table 4.4: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	686.766	4	171.691	10.178	.000 <sup>b</sup>
1 Residual	1771.234	105	16.869		
Total	2458.000	109			

#### 4.6 Regression Coefficients

From the Coefficients table (Table 4.4 the regression model can be derived as follows:

$$Y = 29.741 + 0.352X_1$$

The results in table 4.5 indicate that all the independent variables have a significant positive effect on performance of Nzoia Water Company in Trans- Nzoia County. The most influential variable is accident reduction with a coefficient of 0.352 ( $p$ -value = 0.019). According to this model when all the independent variables values are zero, the performance of Nzoia Water Company will have a score of 28.741.

**Table 4.5: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	28.741	2.635	11.271	.000
	Accident reduction	.352	.148	.283	2.389

#### 4.7 Hypothesis Testing

**H<sub>02</sub>:** Accident reduction does not have a significant effect on organizational Performance in Nzoia water services company Trans-Nzoia County.

From Table 4.4 above, accident reduction ( $\beta = 0.352$ ) was found to be positively related performance in Nzoia water services company Trans-Nzoia county. From t-test analysis, the t -value was found to be 2.389 and the  $\rho$  -value 0.019. Statistically, this null hypothesis was rejected because  $p < 0.05$  Thus, the study accepted the alternative hypothesis and it concluded that accident reduction affects performance in Nzoia water services company Trans-



Nzoia county.

## 5.0 Conclusion and Recommendations

Accident reduction ( $\beta = 0.352$ ) was found to be positively related performance in Nzoia water services company Trans-Nzoia county. From t-test analysis, the t-value was found to be 2.389 and the  $\rho$ -value 0.019. Statistically, this null hypothesis was rejected because  $\rho < 0.05$ . Thus, the study accepted the alternative hypothesis and it concluded that accident reduction affects performance in Nzoia water services company Trans-Nzoia county.

Based on the findings, Nzoia water Services Company should provide a health and safety programme to the employees yearly to ensure a health and safe working environment to their employees to reduce cost. They should also enable employees to acquire knowledge and skills on how to deal with health and safety issues while at work.

Top management of Nzoia water services company should provide its staff with the support on health and safety issue awareness. The organisation conducts regular reviews and audits based on the accident reduction scheme. They should also have a provision of good people management and supervision; through proper designing of jobs and organizing work groups to make them as satisfying as possible with means of feedback provision to staff about their performance and training and development together with making effective arrangements for communications and consultation enables high performance. Employees should be involved in the decisions made in the company and participation on health and safety issues in the organisation.

## REFERENCES

- Armstrong, M. (2011). *Human Resource Management Practice*. Kogan 251-269.
- Basson G, Garruthers M, Kruger D, Du Plessis Y, Visser K, Steyn H, Prozesky-Kuschke B, Van Eck S (2003). *Project Management – A Multi-Disciplinary Approach*, FPM Publishing, South Africa.
- Bloisi, W., Cook, C. W., & Hunsaker, P.L. (2003). *Management and Organisational Behaviour*, McGraw-Hill, 169-208.
- B.Rajkuar , January-July 2014, A study on labor welfare measure and social security in IT Industry in Reference to Chennai, *International magazine of Enterprise Computing and Business System*, Volume:4, Issue:1
- Cartwright, J. (1999). *Cultural Transformation*. Financial Times, Prentice Hall.
- DR R.K.Lalitha and T.Priyanka, December 2014, A study on employee welfare measure with reference to IT Industry, *International Journal Technology of Engineering, administration and Applied Science*, Volume:2, Issue:7
- Dr.Usha Tiwari, November 2014, *A study on employee welfare facilities and its impact on employee efficiency at Vindha Telelinks Ltd. Rewa(M.P) India* by Abhinav Publication, Volume:3, Issue:11, [2].
- Erez, M. (1977). Feedback: *A necessary condition for the goal performance relationship*. *J. Appl. Psychol.* 62:624-627.
- Erez, M. & Zidon, I. (1984). *Effects of goal acceptance on the relationship of goal setting and task performance*. *J. Appl. Psychol.* 69:69-78.
- Heizer, J. & Render, B. (1999). *Operations Management* (Fifth Edition). Prentice Hall. pp 16-23, 392-403.
- Herzberg, F., Mausner, B. & Snyderman, B. (1959). *The Motivation to Work*. New York, John Wiley and Sons, Inc.
- Health and Safety Executive (2004). The development of case studies that demonstrate the business benefits of effective management of occupational health and safety. *ISE Research Report*. 249. Green Street Beman. HSE Books.
- Hudson, C. (2010). *Respect, equity and diversity framework: Creating workplaces with positive cultures*. Accessed on , 20<sup>TH</sup> May 2017, from [www.cmd.act.gov.au](http://www.cmd.act.gov.au).
- International Labour Organization (2012). *Safety and health at work*. Online:[http://www.ilo.org/global/topics/afety\\_and\\_health\\_at\\_work/ang...en/index.htm](http://www.ilo.org/global/topics/afety_and_health_at_work/ang...en/index.htm).
- Kreitner, R., Kinichi, A. & Buelens, M. (1999). *Organizational Behaviour*," McGraw-Hill, Higher Education, (First European edition), p.118.
- K.Logasakthi and Rajagopal.K , June 2013, A research on employee safety, welfare and health measures of Chemical Industry in the observation of Salem Region ,*International magazine of study in Business Management*, Volume:1, Issue:1
- Latham, M. (1994). *Constructing the team: final report of the Government/industry review of procurement and contractual arrangements in the UK construction industry*. London: HMSO.
- Lim, A. (2012). OHS management system: Three benefits for construction enterprise. Retrieved on 12th April 2017 from [www.artipot.com/ article-tags/ohs-management system](http://www.artipot.com/article-tags/ohs-management-system).
- Maslow, A.H. (1943). *A theory of human motivation*. *Psychol. Rev.* 50(4): 370-396.
- McClelland, D. C (1988). *Human Motivation*. Cambridge University Press.ISBN 978-0521369510.
- Mullins, L.J. (2005). *Management and Organisational Behaviour*. Prentice hall. UK. (7th Ed). 88(431):1052-1058.
- Oduami, K.T., Iyagba,R.R.O & Onirin, M.M. (2003). The Relationship Between Leadership, Team Composition

- and Construction Project Performance In Nigeria, *Int. J. Project Managers* 21(7):519-527.
- O'Toole, M. (2002). The relationship between employee's perceptions of safety and organizational culture. *Journal of Safety Research* 33: 231-243.
- Pollitt, D. (2011). Corus forges new approach to safety and health. *Human resource management international digest*. Vol.19 No.1 pp.7-9.
- Pronovost, P., Weast, B., Rosenstein, B., Sexton, J. B., Holzmueller, C. G., Paine, L., Davis, R., Rubin, H. R. (2009). Implementing and validating a comprehensive unit - based safety program.(Online) Available:
- Rosekind, M. K. (2005). Understanding the societal costs of impaired Safety, health and productivity risks alertness.
- Safework, V. (2006). *Good health and safety means good business*: Public reporting of occupational health and safety by organizations. Accessed on 16th April, 2017, from [www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au).
- Srinivas K.T. December 2013, A study on employee welfare facilities adopted at Bosch Limited, Bangalore , *Research Journal of Management Science* ,Volume:2(12), Issue:7-11,
- S.Prabakar , October 2013, A case study with special reference to Don Bosco College of Arts and Science, Sogathur, Dharmapuri ,*Asia Pacific Journal of Research: Welfare measure and workers satisfaction*, Volume:3, Issue:10
- Vroom, V.H. (1964). *Work and motivation*. New York
- Waring, A. (1996). Corporate health and safety strategy. *Facilities*, Vol.14 No.3/4 pp.52 - 55. ISSN 0263 - 2772.
- Ward et al (2008). The impact of health and safety management on organizations and their staff, IOSH: United Kingdom.
- World Health Organization (2009). [www.who.int](http://www.who.int).
- Womoh, G., Owusu, E. E. & Addo, M. (2013). Impact of occupational health and safety policies on employees' performance in the Ghana's Timber industry: Evidence from Lowser and logs Limited. *International Journal of Education and R.*