



## OCCUPATIONAL HEALTH, ENVIRONMENT AND SAFETY RISK ASSESSMENT OF EREKABO SECURITY COMPANY LIMITED, YENAGOA, BAYELSA STATE

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### Abstract

*Occupational health, environment and safety risk assessment is a very significant process in industrial risk management. A comprehensive Occupational health, environment and safety risk assessment of Ereka Security Company limited has been undertaken. The aim of the study is to identify the health, environment and safety hazards in the company and suggest preventive measures to avoid loss of lives and property in the company. Several hazards were identified, such as lack of a written HSE policy statement to guide the employer and employee, fear of live, lack of fire distinguishers, bad sits and electric appliances, lack of first aid box and work overload. The suggested preventive measures include: a good written policy statement to guide the employers and the employee, regular trainings for staff, electrical appliances should be fixed to avoid any loss of life through electric shocks, and to avoid any ergonomic hazards, comfortable work chairs should be made available to staff in the offices, and finally shift duties should be introduced to avoid work over load and in efficiency. The researchers recommend that the company should adopts all the preventive measures, in order to avoid any financial loss, loss of lives and property including avoidable insurance payment. If these recommendations are implemented, the company will be a safe haven for the employer and employee.*

**Key words:** Occupational, health, environment, safety and hazards

### 1.0 INTRODUCTION

Human beings are exposed to risk everywhere. At the national, regional and global levels, humans are exposed to risk of natural disasters such as flood, cyclones, hurricanes, and volcanic eruptions etc. In the factory, people are exposed to the risk of chemical pollution and mechanical explosion. Also in other work places, workers are exposed to occupational health, environment and safety risks. In the case of natural disasters, there is nothing anyone can do about it to control or stop it, the only option is mitigation. However, in the case of occupational health and safety risk in the work place, measures can be taken to prevent or control the occurrence of such risk event. For instance, the result of an occupational health and safety risks study conducted in Spain revealed that the practice of risks prevention activities in manufacturing industries contributed to reduction of industrial injuries (Arocena *et al.* 2008 and Waqas *et al.*, 2014).

Occupational health hazards emanate from different tasks ranging from simple to more

complex tasks. The effects of occupation health risks are always on man and the environment in which work takes place. Work place hazards have resulted to the death of many employees while others are affected with diseases and injuries. For instance, the International Labour Organization (ILO) and World Health Organisation (WHO) reports indicated that in manufacturing industries, many employees suffer from workplace injuries and property damage that result to economic crisis (ILO, 2010; WHO, 2010; Kassu and Daniel, 2016). Every 15 seconds, 153 workers have work-related accident. Every day, 6,300 people die as a result of occupational accidents or work-related diseases and more than 2.3 million persons die from occupational accidents or work-related diseases each year (Kassu and Daniel, 2016).

Occupational health and environmental risks exist as result of exposure to occupational hazards in our day to day activities which human engage in to make a living, using science, technology and administration. However, Occupational health and environmental risks management is not given



the desired attention, especially in small organisations' and government establishments. Kassu and Daniel (2016) reported that in emerging economies, workplace safety and health has been overlooked in their industrial development policy and strategies, as focus is mainly on production volume or profit making while undermining the latent effect of dissatisfactory working environment.

All employers have a duty to ensure that as far as possible, the health, safety and welfare of their employees are protected and made a priority in their goal of establishing the work environment. Nowadays, World Health Organization (WHO) considers work place safety as a priority; (WHO, 2010). Therefore, employers are under obligation to guarantee the health and safety of workers in all aspects related to the job and nothing can relieve an employer of this responsibility. As part of these responsibilities, the employer must take the necessary precautions to protect the health and safety of workers, including action to prevent occupational hazards, informing and training staff. Risk assessment, as a compulsory process in implementation of OHS, stands out as evaluating the risks arising from the hazards, taking into account the required control measures, and deciding whether or not the risks can be reduced to an acceptable level. (Muhammet, 2018).

The aim this study is to assess the occupational health and environmental safety risks factors and exposure in Ereka Security Company Limited, in order to identify the occupational hazards and risks in the company and to suggest strategies that can be employed by the company to avoid and avert any financial liability, loss of lives and property

## **2.0 OVERVIEW OF OCCUPATION HEALTH AND ENVIRONMENTAL RISK MANAGEMENT**

Occupational risks exist in every employment. There are many risks in the workplace depending on the type of work (Leyla and Merve (2019). However, these risks can be controlled if employers and employees appreciate the need for good health and safe environment. Occupational health and environmental safety risk management

is concerned with ensuring the safety and wellbeing of workers and the environment in which the work is done. It emphasizes the effects of the working environment and how it affects the wellbeing of workers and the influence of the workers' state of health on their ability to perform the task assigned to them. Work place environment plays a major role in the performance and productivity of an employee (Edem, Akpan and Pepple, 2017) Workplace environment influences and motivates workers' performance more than financial incentives. Edemetal., 2017).

Environmental health risk refers to the harmful exposures and conditions in the home, workplace and the natural environment. Environment and human health risk assessment is the foundation of Environmental management system which is aimed at improving the quality of life of employees in the work place (Waqas et al, 2014). Common risks include air pollution, water contamination, radiation, heat, noise, vibration and toxic fumes/dust exposure and unsafe conditions. Risk assessment constitutes a key aspect of occupational health and environmental safety management process (Sousa et al. 2015)

Occupational health and safety (OSH) is a cross-disciplinary area and it is concerned with guarding the safety, health and welfare of people who are engaged in work or employment (Waqas et al, 2014). Many work places contain risks for employees, these ranges from offices where people can develop repetitive strain injuries to high level construction projects where people are exposed to the risk of serious falls. Occupational health is so important that in some advanced countries like the United States of America (USA), a special government agency "the Occupational health and safety Administration" (OHSa) has been established to ensure the safety of workers. The pillar of occupational health is the prevention of injury and disease due to occupational exposure. The key objectives of occupational health are (i) The maintenance and promotion of workers' health and working capacity;(ii) the improvement of working environment and work to become conducive for safety and health (iii) development of work



organisations and working cultures in direction that supports health and safety at work place (Hamzar, 2016).

### **Workplace hazards and Risks**

Hazards simply means anything or situation that has the potential to cause damage or harm including ill health, injury, damage to property or the environment (Pedro, 2014). While risk is the likelihood that injury, ill health or even death might result because of exposure to hazard(s). There are many occupational hazards as well as risks in work places. According to Katie, (2019), workplaces hazards can be classified into six main categories such as biological hazards, chemical hazards, physical hazards, safety hazards, ergonomic hazards and psychological hazards.

**Biological hazards:** Biological hazards is the presence of virus, bacteria, fungi mold, parasites, blood borne pathogens, body fluid, plants, birds and animals that can cause variety of health effects ranging from skin irritation, allergies and infection to workers in the work place (Canadian Centre for Occupational health and Safety, 2021).

**Chemical hazards:** Chemical hazards refers to the presence of chemical substances such as acids, heavy metals, lead, solvents, petroleum, particulates, asbestos, fine dust/fibrous materials, silica fumes and other reactive chemicals in the work place or environment.

**Physical hazards:** Physical hazards are environmental factors that can harm an employee without necessarily touching them. These factors include the presence of noise, vibration, pressure, radiation, height, cold and eat stress etc. (Katie, 2019)

**Safety (Mechanical) hazards:** Safety or mechanical hazards are hazards that create unsafe working conditions. E.g. exposed wire, damaged carpet, broken floor, spill liquid on smooth floors or tiles exposed turning wheel, the presence of objects, situations or equipment, compress air/high pressures fluids and sharp objects. The presences of all these factors in the working environment have the potential to cause injury, harm, ill health or even death to employees or visitors.

**Psychological hazards:** These are aspects of the work environment and the ways that work is

organised that are associated with mental disorders and or physical injury or illness (worksafe, 2021). These hazards can impact on workers psychology and physical health and wellbeing. They can also adversely affect workers job satisfaction, organisational commitment and also cause conflict in workers family life. They include; work related stress, work related bullying, work related violence, work related fatigue and fear of the work environment or situation as a result of repeated threats, abuse, ridicule, or discriminate against employee(s) and sexual assault. All these can have adverse effects on work performance.

**Ergonomic hazards:** Ergonomic hazards are physical conditions that may pose risk of injury to the musculoskeletal system, such as the muscles or ligaments of the lower back, tendons or nerves of the hands/wrists, or bones surrounding the knees, resulting in a musculoskeletal disorder (MSD). Ergonomic risk assessments are an objective measure of ergonomic risk in workplaces. The goal of Ergonomic risk assessment is to identify ergonomic risk factors, quantify them, and then make measurable improvements to the work environment (Proactivemd, 2019). Ergonomic risks are difficult to identify because they affect the arm, which the cause to your health is not immediately recognized. Short term exposure to ergonomic hazards may result muscle strain and muscles imbalance (Team, 2018).

## **3.0 METHODOLOGY**

### **3.1 Area of the study**

The area of the study is Ereko Security Company Limited which is located in Yenagoa the Capital of Bayelsa State. Bayelsa State is one of the Niger Delta state located in the South-south geopolitical zone of Nigeria. Yenagoa lies within coordinates  $4^{\circ}55'29''N$   $6^{\circ}15'51''E$ .

Ereko Security Company Limited was set up in 1988. It is a private security company that is committed to providing modern and professional services in personal, corporate, residential and movable security guards. Ereko Security Company team, comprises of the Chairman and CEO, Mr. Anthony Sawyerr, Assistant Inspector General of Police, Retired; other directors: Barrister Daubragha Kingsley Sawyerr, Mr. Ebi



Morris Sawyerr, ACA, and Supol Charles Sawyerr, a serving Police officer. The company presently operates in seven states of the country, namely Port-Harcourt, Rivers State as the head office, with branch offices in Akwa-Ibom, Bayelsa, Edo, Delta, Imo and Lagos. The state offices are controlled by security managers, who supervise the operations in the various states. They also control the operations of the secretaries, accountants, drivers, security guards and messengers.

The Company provides alarm services; security officers and guards; and security consultancy. It provides operational protective services, consultation and training to a diverse client base domestically. They have a verifiable background of military, law and accountancy.

### **3.2 Method.**

The international standard established by the occupational health and safety Administration (OSHA) assessment series (OHSAS 18001), 2007 edition was adopted for this assessment. This standard was adopted for the study because it provides organizations with a globally accepted system to minimize/reduce or eliminate

occupational health and safety risks to employees in the workplace. The study is basically a qualitative risk assessment, a key aspect of occupational health and safety risk management. The following steps in line with the standard were taken for the risk assessment. These steps are also listed by (Health and Safety Executive 2014; Verma and Chaudhri2016): as necessary process in occupational Health and Safety management system. The following steps provide the risk assessment

- I. Identification of hazards and those who are at risk and why they are at risk in various units/departments of the company. Observation, inspection, consultative communication with staff and task analysis were conducted to identify the hazards
- II. Evaluation and prioritization of the risks and what the risks are. This was done by estimating the consequences of each hazard and scaling according to the significance and likelihood.
- III. Deciding and recommendation of preventive actions about how to eliminate or reduce the Identified risks.
- IV. Documenting the assessment and reporting.



4.0 RESULTS AND DISCUSSIONS.

4.1 Results

The results of the occupational health and environmental safety risk assessment in Ereka Security Company Limited are

presented in Table 4.1. The results indicate that four workplaces occupational health and safety risks were identified qualitatively evaluated.

Table 4.1: Results of the occupational health and environmental safety risk assessment

S/N	type hazards	Description	Risks	Likelihood/severity
1	health /physical	It was observed that (i) there was no HSE policy. (ii) There was no fire extinguisher, (iii) there was no first aid in the office. Security guards in the company work for stretch of 24 hours without shift. They work at night and during the week; they are engage in long working days and heavily weekly work. They also move around facilities sometimes on foot.	The absence of HSE policy, first aid and fire extinguisher show Workers and assets of the company are at safety risk of fire injury escalation. Security guards have risk of developing eating and sleeping disorders and fatigue due to long working hours and work overload.	Fire and health risk escalation most probable. High Possibility of fatigue, eating and sleeping disorders among security guards and making mistakes that could lead to loss time injury..
2	Safety (Mechanical)	It was discovered that staircase of the company's office was poorly constructed, walkway to the office was also too narrow, walkways and floors were in a state of disrepairs. Floors were wet	Office workers and security guards are exposed to the risk of slipping, tripping and falling which could lead to serious injuries.	serious fall that can lead to loss time injuries is probable
3	Ergonomics	Ergonomic hazards usually occur when your body position and or your working conditions cause wear, tear or strain on the body musculoskeletal system, tendon or joints or other delicate part of the body. The main hazards include manual lifting, of objects, poor lightning which can effectively damage eyesight, wrong sitting, standing or lying position. It was discovered that chairs that were being used in the offices were not comfortable for sitting.	Those exposed to and affected by Ergonomic risk are the secretaries, messengers and the security guards. They are at the risk of musculoskeletal injuries, back pain or body strain. Seated posture is the most common ergonomic risk factor in activities involving observing screens or monitors as is the case in security control	The likelihood is probable and the severity could lead to disable injury



Also chairs used by the security guards in their different bits were old and not comfortable.

Centre's, alarm control Centre's and certain access control posts. These activities involve not only ergonomic risk, but also risks for the sight and mental workload problems. Security guards sitting long at control centre are at the risk developing back pain and brain damage.

4 Psychological

For obvious reasons, there is the risk of physical aggression in the security sector. For instance, security guards that are involved in contact with the public; surveillance of shopping Centres or other areas with high flow of people can be verbally or physically assaulted. It was observed that some of the security guard in the company have the feeling of fear of physical or violent attack

Security guards are among the occupational groups most likely to be exposed to acts of physical aggression and verbal attack. Security guards and security supervisors are those affected by this risk the likelihood of assault or physical attack is possible and the severity could lead to loss time injury

**4.2 Discussion**

An occupational health and safety risk assessment is important for the safety and morale of employees for legal and financial reasons. By law, employers need to protect their employees by establishing preventative, punitive and compensatory effects. An occupational health and safety assessment is done to evaluate the risk involved in the workplace with objectives to remove, reduce and replace the source of risk with a safer equipment or process, or to lessen the risk to the health and safety of the workers (Safeopedia,). In this study, the occupational health, environment and safety risk assessment in a security company (Erekabo Security Company

limited) located in Yenagoa was undertaken. The results presented in Table 4.1 show that four workplaces occupational health and environmental safety risk were identified and evaluated; these include health/physical, safety/mechanical, ergonomic and psychological risks. The study revealed that the company lacks Health, Safety and Environment (HSE) policy. This is an indication of the management lack of commitment to safety issues in the company. A study conducted by Ibrahim *et al*, (2012) in Malaysia revealed that there is a strong co-relation between organizational policies regarding safety at the workplace and environment of the office, attitudes of staff-members, and commitments by



the management. Ogbonna *et al.*, (2016) conducted a review of occupational health and safety standards and musculoskeletal risk factors regulation in Nigeria. Report of the review indicated that occupational health and safety Policies and their implementation in Nigeria are below international standards and global best practices to protect the health and promote the safety of workers. The lack of (HSE) policy in Erehabo Security Company could be said to be a reflection of general lack of regard for (HSE) policy in non-oil and gas companies in Nigeria. The findings also showed that the Company do not have fire extinguisher and first aid box. This could be attributed to lack of emergency preparedness and safety consciousness on the part of management of the company. Edem *et al.*, (2017) reported that poor fire safety measures and lack of personal protective equipment can adversely affect workers' productivity in the work place. It can therefore be adduced that lack of HSE policy, fire extinguisher and first aid box in the Erehabo Security company could have reduced the workers commitment in a manner that the management have not noticed. Findings also revealed that workers were also exposed to ergonomic risk factors such as bad chairs, long sitting hours. These factors can also contribute to low worker's commitment, according to (Edem *et al.*, 2017)

The results of the risk assessment indicate that staffers of the company mostly at risk are the security guards. This is due to the fact that security guards are exposed to all the risks factors identified. The probabilities of the risks were possible and the severity could be loss time injury or disability. Ergonomic assessment study conducted in Zimbabwe by (Mtetwa, 2003) revealed that work postures, manual handling, and speed of work were among musculoskeletal risk factors in work place, which are also applicable to Erehabo Security Company.

Faulty electrical appliances, broken floors, psychological risk relating to long working hours, lone working and work overload, lack of shift duties and lack of comfortable sitting chairs in the security bits were some other serious hazardous conditions or risk factors that were identified in the company.

## 5.0 CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

Risk assessment is a very important factor in a security business. Health and safety of workers must be protected because workers and safe working environment determine workers' productivity. The occupational health, environment and safety risk assessment conducted in Erehabo Security Company has revealed serious risk factors in the company that need to be addressed with urgency

### 5.2 Recommendations

Based the findings, the following recommendations are made to reduced occupational health, environment and safety risk in the company.

- i. There should be good written HSE policy statements to guide the employers and the employee. The employee views should be incorporated in the drafting of the policy statement.
- ii. There should be regular trainings for staff, especially lone security guards to avoid loss of lives out of fear.
- iii. The electrical appliances should be fixed to avoid any loss of life through electric shocks.
- iv. For safety purposes, there should be 2 fire extinguishers, and staff should be trained on how to use them, and they should be checked regularly for expiry dates.
- v. To avoid any ergonomic hazards, comfortable work chairs should be provided for staff in the offices, and for security guards in their different bits to improve their posture at work.
- vi. Shift duties should be introduced to avoid work over load and inefficiency.



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