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Facilities Management As A Strategic Tool For Improved Occupational Safety And Health In Corporate Organizations In Nigeria

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Abstract: All over the world today, health and safety is being clamored for especially in workplaces. The reason for this is not farfetched as workers need to be in good state of health and in a conducive/ comfortable environment in order to give their best in their places of work. Health and safety in workplaces (otherwise known as Occupational Safety and Health (OSH)) as defined by ILO, 2003; Alli, 2008, is the science of anticipation, recognition, evaluation and control of hazards arising in or from the workplace, that could impair the health and well-being of workers, taking into account the possible impact on the surrounding communities and the general environment. Odewunmi and Ajisegiri (2013) pointed out that in all areas of human endeavor, there is need to keep safety as a watchword if there should be hope for continuity of life on earth. Roelofsen (2002) adds thats one of the fundamental human requirements is a working environment that allows people to perform their work optimally under comfortable conditions. This indeed cannot be overemphasized since workplaces in recent times have become very sophisticated, consequently in seeking for a better life style, people spend almost all their day working in the office. The Health and Safety Executive (2000) estimated that in the United Kingdom alone, about 500 people are killed every year and several hundred thousands are either injured or suffer work related ill health. In industralised economies such as Nigeria where there are no accurate data and laws are not enforced, the figures may be higher (Idubor and Oisamoje, 2013). The absence of proper OSH law/regulations in Nigeria as observed by Adeaga (2015) compounds the problem. What operates are the old and obsolete factory laws which are limited in scope, and are not even implemented. A study of OSH policies indicates that it is the responsibility of the organization's management to prevent accidents and eliminate health and safety hazards in order to minimize the suffering of the employees, this invariably minimizes the organizations losses. Employers therefore have a duty of care to ensure that their employees are protected from the hazards of their work by making the workplace safe from all the pollutions and dangers of the sophisticated facilities and designs, plants and machinery, which are used in the office environment. This can be achieved by means of an efficient and effective OHS facilities management system. This paper identifies areas of health and safety consideration in the workplace to include; lighting, posture, pollution and ventilation. The views of fifty respodents from three corporate organisations were analysed. The paper recommends effective facilities management services as a tool to improve the health and safety of people in their working environment by eliminating hazards and controlling risks that may arise in the course of duty. It also recommends that OSH policies be effectively implemented and facilities management professionals be contracted by employers for proper OSH management in Nigeria.

KEYWORDS: Occupational Safety, Health, Corporate Organisations, Environment, Facilities Management, Nigeria.

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I. INTRODUCTION

Occupational Safety and Health (OSH) as defined by the Joint Committee of the ILO/WHO (2009), is the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupation. OSH is a preventive and proactive approach which involves risk assessment, hazard identification, hazard mitigation, hazard elimination and treatment of work-related injuries (Adeaga, 2015). There is a plethora of hazards (safety and health hazards) which people are exposed to in their jobs; from the formal industries (banking, education, oil and gas, textile, agricultural, construction, food and beverage etc.) to the informal (logging & sawmill, roadside mechanic, carpentry, local welders, pepper grinders, market traders etc.).

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Exposure to these hazards occurs for fairly long hours on a daily basis as the majority of the active hours of the day is spent at work (8am to 4pm or 9am to 5pm); at least 8 hours per day. These hazards include chemical, biological, physical, mechanical, psychological and ergonomic hazards. For any person affected, it could be either one or a couple of the various forms of hazard.

Occupational Health and Safety (OHS) programmes are multifaceted and multidisciplinary, aimed at fostering a safe work environment, including the protection of employers, employees, suppliers, customers, family members, nearby communities, and other members of the public who could be affected by a company's operations. Such programmes draw on disciplines such as occupational medicine, occupational or industrial hygiene, public health, safety engineering, chemistry, health physics, ergonomics, toxicology, epidemiology, and environmental health. The scope of occupational health and safety has evolved gradually and continuously in response to social, political, technological and economic changes and Nigeria is not left out as Idubor and Oisamoje (2013) pointed out that today's office jobs have moved away from the agrarian society to the industrialized world where technology, tools and machineries are used to work, making it necessary to protect users of this technology from unforeseen dangers that could arise. While it may be true that organizations exist for the major purpose of making profit in the long run, it is also true that the safety and welfare of their employees cannot be separated from their continued effective existence. All organizations therefore have a duty of care to ensure that employees and other persons who may be affected by the company's undertakings remain safe at all times (Idubor and Oisamoje, 2013). Alli (2008) asserts that because occupational hazards arise at the workplace, it is the responsibility of employers to ensure that the working environment is safe and healthy. This means that they must prevent, and protect workers from, occupational risks especially in the use of major facilities and design of the building. The Health and Safety Executive (2000) estimated that in the United Kingdom alone, about 500 people are killed every year and several hundred thousands are either injured or suffer work related ill health. In an industrialized economy such as Nigeria where there are no accurate data and laws are not enforced, the figures may be higher. There are numerous newspaper reports of accidents occurring in workplaces especially in factories that are poorly equipped with abysmal safety standards that will not be tolerated anywhere else (Idubor and Oisamoje, 2013). These accidents in many instances have led to deaths, health impairments and permanent disabilities of workers. In a country where there are no workable OSH policies, employees become victims of these risks. Additionally, due to low levels of compliance to rules and lack of enforcement of those rules, the company barely loses anything. In many cases, compensations are not paid and because of gross unemployment, the workers cannot protest as there are countless others waiting to take their place. There is therefore the need to take necessary steps to eliminate these unwanted and unfair incidences of unsafety of workers.

II. RESPONSIBILITY FOR MANAGING OCCUPATIONAL HEALTH AND SAFETY

The responsibility for managing health and safety risks in the work place is sometimes not clarified in the terms and conditions of service in most organizations, especially in developing countries. According to Safe Work Australia (2011), persons conducting or undertaking a business will have to manage health and safety duties where they;

- 1. Engage workers to undertake work for them, or if they direct or influence work carried out by workers.
- 2. May put other people at risk from the conduct of their business or undertaking.
- 3. Manage or control the workplace of fixtures, fittings or plant at the workplace.
- 4. Design, manufacture, import or supply plant, substances or structure for use at a work place.
- 5. Install, construct or commission plant or structures for use at a work place.

It is important that company directors and senior chief executives diligently assess their business or undertakings to ensure that it complies with the Work, Health and Safety (WHS) Act and Regulations. It will be necessary to;

- a. Have an indept understanding of the hazards and risks associated with the operations of the business or undertaking.
- b. Take steps to ensure that the business or undertaking implores appropriate processes and resources to eliminate or reduce to the barest minimum, any health and safety risks.

III. BENEFITS OF OCCUPATIONAL SAFETY AND HEALTH

It is important to emphasize that both the employee and employer are equal stakeholders in the effort to maintain a high standard of health and safety in the workplace which are of enormous benefits as listed by Adeaga (2015) thus:

1. It is preventive and proactive in approach as it foresees, identifies and prevents hazards before they turn to bad occurrences with unexpected or unpredictable consequences. Prevention is effective, always better and less costly than treatment and rehabilitation.

- 2. It ensures workers' health are not adversely affected by their work and work is not affected in return by poor health, thus fostering mutual benefit.
- 3. It fosters healthy workforce leading to increased productivity for business owners and the economy at large (workers well-being vs. productivity). Healthy workers are essential to the success of any organization, and are the best assets in any industry.
- 4. It also reduces work-related illness. This is an invaluable cost-saving benefit to employers. Work-related illness is one of the main causes of economic loss to employers due to lost productivity/output/man-hour loss, time and resources spent on sickness absence management.
- 5. It helps businesses to attain compliance with the relevant laws. It also helps businesses to save cost by reducing potential claims and litigations.
- 6. A business organization that is successful with the health and welfare of its workers enjoys goodwill (better company image) which gives such business an edge over other competitors. Some notable companies will only award contracts to contractors with health and safety provisions.
- 7. It is another way of caring (health protection) for the public's health. Most of the health problems that people generally suffer from can be traced to work/job tasks (e.g. low back ache, respiratory problems, deafness, infertility, cancers etc.)

APPRAISAL OF OCCUPATIONAL SAFETY AND HEALTH LEGISLATION IN NIGERIA

Currently, OSH legislation in Nigeria is largely based on the Factories Act (1958, 1987 now CAP. 126 LFN. 1990, and CAP. F1 LFN. 2004), which appears to be quite inadequate in terms of coverage, empowerment, independence and currency (Abubakar, 2015). This is in contrast with what is obtainable in developed countries like the UK, USA, Australia, etc, where employers are held responsible for employee's health and safety protection. Work and safety institutional polices are enacted with strict enforcement on defaulters.

The need to hold employers of labour responsible for their lapses in respect of health and safety issues triggered a new Labour Bill which was passed in 2012. Pedro (2012), reports that the passage of the bill was a consequence of the report of the Joint Committee on Employment, Labour and Productivity, Health and Establishment and Public Service presented to the Nigerian Senate. This bill, the Labour, Safety, Health and Welfare Bill (2012) has stricter sanctions for offenders and enables the State to charge corporate organizations and the firm's directors for criminal offenses where the organizations actions or inactions results in loss of lives and properties. The bill, which still awaits presidential assent, seeks to repeal the Factories Act and serves as a comprehensive OSH legislation for the workplace (Umeokafor, Isaac, Jones and Umeadi, 2014). The Factories Act of 2004, the Workmen's Compensation Act of 1987 and the Labour Safety, Health and Welfare Bill of 2012, are important documents aimed at protecting the health and safety of Nigerian workers. In addition to these, the Federal Ministry of Labour and Productivity and the Nigerian Institute of Safety Professionals also have oversight functions to perform (Idubor and Oisamoje, 2013).

EMPLOYERS' HEALTH AND SAFETY MANAGEMENT RESPONSIBILITIES

Because occupational hazards arise at the workplace, it is the responsibility of employers to ensure that the working environment is safe and healthy. This means that they must prevent, and protect workers from, occupational risks. Alli (2008) is of the view that employers' responsibility goes further, entailing knowledge of occupational hazards and a commitment to ensure that management processes promote safety and health at work. Diligent efforts need to be made to find out workplace hazards. This could be done by carrying out work place inspections and ascertaining the general state of housekeeping. It will be practicable to assess the available space for unobstructed movement, adequate ventilation and lighting, suitability of tools and equipment and their maintenance pattern. The fact that some hazards are not obvious in the workplace can not be ruled out. Safe Jobs Now (2014) suggests that answering basic questions could provide a clue as to the health and safety risks inherent in a business environment. Such questions could be;

- a. Do you or your co-workers have injuries or health complaints? If so what types?
- b. Who has been hurt or is having symptoms?
- c. When do you or your co-workers feel these symptoms?
- d. Where in the workplace are health and safety problems occuring?
- e. What are the conditions causing the problems?

Honest answers to these questions will in no little way provide useful clues as to what hazards pose risks to workers.

Insight on the health and safety hazards in the workplace should guide decisions on the choice of technology, equipment, and other facilities and on how work is organized. Training is one of the most important

tasks to be carried out by employers. Workers need to know not only how to do their jobs, but also how to protect their lives and health and those of their co-workers while working.

Within organizations, managers and supervisors are responsible for ensuring that workers are adequately trained for the work that they are expected to undertake. Such training should include information on the safety and health aspects of the work, training on handling of facilities, plant and machineries installed at work premises and on ways to prevent or minimize exposure to hazards. It is therefore important that employers engage the services of trained safety professionals in various fields of endeavor as it concerns their scope of business activities. One of such vital fields is facilities management.

IV. DEFINITION, SCOPE AND PRACTICE OF FACILITIES MANAGEMENT

There are many definitions of the term, Facilities Management (FM), as organizations vary in what is included in the facilities management role. This, according to Udechukwu (2012), underscores firstly, the problems associated with constructing a definition, and, secondly the dynamic nature of the development of the discipline. Facilities management is multidisciplinary; hence, definition of the term is always evolving. However, some of the most widely accepted definitions are those of the British Institute of Facilities Management (BIFM), where it is defined as "the integration of multidisciplinary activities within the built environment and the management of their impact upon people and the workplace", and that of the International Facility Management Association (IFMA) as "the practice of coordinating people and the work of an organization into the physical workplace". Enoma (2005) described Facilities management as a new discipline; an exciting profession that embraces many essential areas of the organizational built environment. The above definitions bring to the fore some common issues in the profession which are: management, workplace, people, and management process. This indicates that Facilities Management is an umbrella term which brings together a wide range of issues for the benefit of the organization in achieving efficiency and effectiveness at an optimal combination of cost, quality and time. The hard issues are building, equipment, furniture while the soft issues refer to people, process, safety and the environment. These, according to Enoma (2005) are all the responsibilities of Facilities Management.

According to the Registered Institute of Chartered Surveyors (RICS) guidance notes (2013), a facilities management consultant's aim in any organization should be to manage facilities to enable organizations better achieve their operational objectives, this way, the facilities manager holds the key to organizational performance. There is the potential to add value by facilitating increased productivity from a satisfied and comfortable workforce, enhancing customer experience and, by controlling costs through the efficient management of facilities and improving overall operational performance.

Facilities management has a broad scope which is varied and multidisciplinary, covering a wide range of services from real estate management, contract management, financial management, change management, human resource management, project management, space management, procurement, risk management, quality management, to health and safety of workers in their use of the office building, plant and machinery as well as other facilities. Facilities management has been applied in the educational sector (Okorie 2011), healthcare sector (Oladejo 2015) etc with improved performance of the organizations.

FACILITIES MANAGEMENT AND OCCUPATIONAL HEALTH AND SAFETY

The health and safety of workers/ contractors in any organization necessitates the adoption of facilities management services especially in the area of risk management. Accidents involving workers are sometimes fatal and not uncommon in the workplace (Greenfield and Morgan, 2014; Idubor and Oisamoje, 2013; Hurst and Kerby, 2004) and investigation shows that the legal duties and responsibilities of the organizations employing them are not fully understood by both parties, resulting in failures in the system of health and safety management. Risk management therefore, according to Safe Work Australia (2011), involves taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimizing the risks so far as is reasonably practicable. This action involves three stages according to Work Safe Victoria (2006). They are:

- 1. Find the hazards
- 2. Assess the risks
- 3. Fix the problem

Identifying the hazards is the first step towards the elimination of safety and health risks in the workplace. It involves finding things and situations that could potentially cause harm to people. According to Safe Work Australia (2011), hazards generally arise from the following aspects of work and their interaction:

- 1. physical work environment these could be in form of noise and obstructions.
- 2. equipment, materials and substances used these could come in form of pollution from toxic substances emitted, chemical spills.

- 3. work tasks and how they are performed hazards arising from a production line involving the use of dangerous moving parts.
- 4. work design and management hazards associated with manual tasks and psychological hazards due to the pace of work.

Table 1: Examples of common hazards and potential harm

Hazard	Potential harm
Manual tasks	Overexertion or repetitive movement can cause muscular strain
Gravity	Falling objects, falls, slips and trips of people can cause fractures, bruises,
	lacerations, dislocations, concussion, permanent injuries or death
Electricity	Potential ignition source. Exposure to live electrical wires can cause shock,
	burns or death from electrocution
Machinery and equipment	Being hit by moving vehicles, or being caught by moving parts of machinery
	can cause fractures, bruises, lacerations, dislocations, permanent injuries or
	death
Hazardous chemicals	Chemicals (such as acids, hydrocarbons, heavy metals) and dusts (such as
	asbestos and silica) can cause respiratory illnesses, cancers or dermatitis
Extreme temperatures	Heat can cause burns, heat stroke or fatigue Cold can cause hypothermia or
	frost bite
Noise	Exposure to loud noise can cause permanent hearing damage
Radiation	Ultra violet, welding arc flashes, micro waves and lasers can cause burns,
	cancer or blindness
Biological	Micro-organisms can cause hepatitis, legionnaires' disease, Q fever,
	HIV/AIDS or allergies
Psychosocial hazards	Effects of work-related stress, bullying, violence and work-related fatigue

Source: Safe Work, Australia (2011).

How Health Hazards Enter Your Body:

There are other workplace hazards associated with ergonomics, lighting, building pathology etc. The goal of ergonomics is to support people in the way they work so that they are safe, comfortable, and productive. Ergonomics requires consideration of the things people use and ways and places they use them to accomplish their duties. Effective ergonomics focuses on both the individual and the organization. At the individual level, ergonomics pays attention to details of equipment and workplace design such as work surface height and seat dimensions(microergonomic considerations) while at the organizational level it focuses on global issues such as training, job organization, locus of control and stress(macroergonomic considerations).

(i) Ergonomics of Workplaces

Office workers use a variety of tools in different places. Chief among their tools is the computer. This implies that the workplace should support computer interaction. Ergonomics tends to deal with technology in terms of the nature of and need for control and display, In the case of computer technology, these two elements translate into control requirements with the keyboard and cursor control devices and display monitor interaction. The keyboard, mouse and touchpad are the control devices provided or used with most computers to manage interaction with the computer. These are components of the computer that needs physical interaction. Consequently, the location and support of these devices is the primary ergonomic consideration in workstation design (Chaffin, 1991). The computer and its accessories should be positioned in the right precession to ensure that no strain or stress is experienced by the worker.

(ii) Ergonomics of Seating

The use of computer requires people to sit to use the technology most effectively. The chair has become the foundation for most jobs and nearly all office jobs, as a result of this the chair becomes the most critical ergonomic element in the workplace. A good chair should do three basic things:

- (i) Provide a stable base
- (ii) Provide anatomical support
- (iii) Support task postures

Every office chair should provide stability and motility. It also provides a base that is resistant to tipping when the operator shifts their weight around.

Anatomical support is individually specific. Since there is variety in size and shape, chairs should also vary. Unfortunately, most chairs are shaped to support the greater "middle- size" population. However, most

chairs do not adjust sufficiently to support the full range of users. For instance, short people are forced to seat with their legs not touching the floor, large people do not fit comfortably on many chairs because the chair is too narrow or shallow to support them, very tall people often find chairs require them to sit with their hips below their knees thus, resulting in blood pooling and tingling sensation. Considering these variations, it is almost impossible for one chair to adequately fit the entire adult working population. Organizations should be prepared to purchase several different sizes, designs and models of chairs to meet the needs of their workers.

To support people at work, it is not sufficient to provide a chair in which people merely sit down. Chairs must support people in the particular postures in which they work. These postures and positions do vary considerably depending on the range of tasks people perform throughout a day or week. The seat pan, backrest and arm rests must support the task postures of the worker.

(iii) Ergonomics of Lighting

Every facility has its lighting requirements which varies with the activities being performed. Good lighting contributes to productivity, quality of product, staff morale and conservation of energy (Sievert, 2001). Increasing trends in the use of personal computers and video display terminals, combined with the struggle to minimize energy cost, is changing the way offices are lighted. People are working under lower light levels, which reduce glare and visual stress in a modern office setting. Light levels should vary according to room function and the task locations within each room. Just as poor lighting can lower a workers output, heavy lighting can also increase the workers stress level and other vision related problems(Carayon, 1992).

Poor ergonomic conditions cause job related stress, carpal tunnel syndrome, tendonitis, and eye strain. Temporary physical ailments such as muscle strains and backaches, as well as permanent disabilities and fatal accidents, may result from improper layout of facilities or materials handling procedures.

V. DATA ANALYSIS

50 respondents making up administrative staff from three Educational institutions were surveyed. Areas of health and safety considerations in the work place are

- i. Lightning
- ii. Posture
- iii. Pollution
- iv. Ventilation

Table 1 shows the perception of respondents on the effect of Lightning on their health and job performance **Table 1:** Effect of light9ing in the work place on workers

Impacting	Large extent	Very large	Neutral	Low extent	Very low	Total
factor		extent			extent	
Lighting	28	17	0	4	1	50

Table 1 shows that respondents are effected by poor lighting in their work place. Oral interviews also asserts to this claim. The respondents disclosed that due to epileptic electricity supply, most times they depend on natural light from the windows to see and do their work. Even when electricity generating sets are used not all lighting points are used. This affects both vision and performance. In the long-run, this strain on the eyes degenerates to more serious eye problems that require medical attention.

Table 2: Effect of work place ergonomics on work posture

Impacting	Large extent	Very large	Neutral	Low extent	Very low	Total
factor		extent			extent	
Posture	10	23	2	3	2	50

The respondents view in table 2 shows that their posture is affected to a very large extent by their ergonomics of the work place. The positioning of working equipment like the computer, printers, seats, photocopier e.t.c put strain on the back, waist, eyes, wrist, neck and shoulder. The respondents pointed out that sometimes the chairs are too low for the platform/work surface on table. Sometimes too, the chairs are not rotational to allow for adjustments. The platform/work surface or table could also be too low with the chair high, making it inevitable to bend the back while working.

Table 3: Effect of pollution on workers

Impacting Large extent Verv large Neutral Low extent Verv low Total		Impacting	Large extent	Very large	Neutral	Low extent		Total
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factor		extent			extent	
Pollution	14	32	1	2	1	50

The respondents identified the sources of pollution in their work place to include but not limited to high dust levels, acidic air and noise from heavy machines. The dust levels are usually high during the dry seasons when the weather is usually hot and dry. This affects staff with respiratory tract disorder, improper disposal of chemicals used in laboratories and some renovation works give rise to acidic air which affects the health and performance of workers. If unchecked, in the long run it could cause very serious respiratory tract problems and aggravate that of workers already suffering from it. Noise from moving heavy machines, electricity generating sets, mowers etc are sources of pollution that can greatly affect workers health and safety and indeed job performance.

Table 4: Effect of poor ventilation on workers

Impacting factor	Large extent	Very large extent	Neutral	Low extent	Very low extent	Total
Ventilation	29	20	0	1	0	50

The respondents responses in table 4 attests to the fact that poor ventilation affects the health and safety in the work place. Poor ventilation they said result is in constant tiredness and fatigue. The air quality in the work place also affects the quality of ventilation. The respondents acknowledged that the design of the buildings in the work place will to a large extent affect the quality of ventilation.

VI. FINDINGS

This paper identified areas of health and safety consideration in the workplace to include:

- i. Lighting
- ii. Posture
- iii. Pollution
- iv. Ventilation

The fifty respondents laid emphasis on the impact of the factors and job performance and productivity. This will no doubt have effect on organisational output.

VII. CONCLUSION

Health and safety consideration in the work place is pre-requisite condition that should actually spur the interest and confidence of workers in the organisation. It is a duty of care which the employer must provide. When workers are guaranteed of their health and safety they tend to be more dedicated to duty having the assurance that their interests are protected. Health and safety standards should not be compromised to ensure a mutual employee/employer relationship which corporate organisations need to strive.

VIII. RECOMMENDATIONS

This paper recommends the following for improved health and safety in corporate organisations

- 1. Adopting effective facilities management services to ensure adequate health and safety in organisational performance.
- 2. Effectively implementing Occupational Safety and Health (OSH) policies. These policies stipulate the responsibilities of the employer to the employee. Proper implementation will minimize organisational losses and forestall or bring to the barest minimum the occurrence of risk in the work place.
- 3. Contracting professional facilities management for proper OSH management.

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