OCUPATIONAL HEALTH AND SAFETY IN THE NIGERIAN CONSTRUCTION INDUSTRY

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Abstract
Construction industry has been adjudged to be an important sector of any nation's economy. This sector has contributed to the growth of the economy and the physical development of the nation. However, the sector usually witnesses high occurrence of accidents and many hazards, especially, in Nigeria. Several issues have arisen on the challenges of occupational health and safety of workers in this industry. This paper examines the types of construction industry, its importance in Nigeria, various issues and perspectives relating to occupational health and safety of workers in the construction industry and also recommends cogent and radical steps which must be taken to establish occupational health and safety of workers in the industry.

Key words: *occupational health and safety, construction workers, construction industry*

Introduction

Construction work and industry, although, highly important to the developmental processes of any nation, is characterised with high level of risks occurrence and hazards, especially, in Nigeria. The workers, who are mostly temporary members of staff with relatively average educational background, are particularly prone and exposed to various forms of hazards and injuries. The trend is exacerbated by the insecure manner in which the construction workers are recruited, placed and managed (Ojo, 2016). The seeming employers' ambition for high profit and effectiveness in productivity at all cost is fast increasing their nonchalant attitude to health and safety issues in the different construction sites in Nigeria. This has been fuelled by the poor economic situation prevalent in Nigeria as well as non-enforcement of existing safety laws in the various industries. It is necessary for the stakeholders to pay attention to the need of occupational health and safety of workers in the construction industry in order to reduce the level of exposure to various forms of hazards and injuries.

Nigerian Construction Industry

The Nigerian Construction industry dates back to the 1940s, with few foreign companies coming into operation (Isa, Jimoh and Achuenu, 2013). Nigeria's independence in 1960, bolstered by the "oil boom" of the 1970s, brought an upward trend in the construction activities. Up to the end of the Second Republic in 1983, the construction industry in Nigeria witnessed an overwhelming upsurge in construction contracts dominated by expatriate companies with few indigenous companies (Idoro, 2009). Unfortunately, the period also exposed the country's indigenous

companies' low level of human resources development required for planning, designing, constructing and maintaining the magnitude (in size and number) of projects conceived by the government.

However, with improved training institutions, engagement of expatriates, collaboration between indigenous and foreign entrepreneurs, political stability and improved government policies, the apparent gap between indigenous companies and their foreign counterparts is now closer compared to the pre-independence era (Mbamali and Okotie, 2012). Sanusi (2008) observed that several changes had occurred in Nigeria in the past ten years, which helped all sectors of the economy, especially, the building and construction sector. He added that with double digit growth rates in the last 3 years, the construction industry had outgrown all other sectors of the Nigerian economy. However, its contribution to the Nigerian GDP and employment of labour is still very low. Despite its impressive performance, the industry faces a significant number of challenges, including the lack of local skilled labour, power shortage, the unavailability of materials and the unethical practices that are very common in the industry.

Over the last decade, several changes have occurred in Nigeria which have helped all sectors of the economy, especially, the building and construction sector. However, the current recession in the Nigerian economy has effects on the construction industry in the past few years. Most of the projects embarked upon by these industries were not promptly and adequately funded, especially, when governments were the clients. Describing construction industry in Nigeria, Aniekwu (2002) emphasized that Nigeria's construction industry was not developing and was unable to implement the country's construction programme. This inability to contribute to the national output, given its relatively expected large contribution to the country's fixed capital formation, was ascribed to heavy dependence of the country on imported materials and technology for her construction.

Isa, Jimoh and Achuenu (2013) viewed the construction industry in both developed and developing countries as that sector of the economy which, through planning, design, construction, maintenance and repair, transforms various resources into constructed facilities. The types of public and private facilities produced in construction range from residential and non-residential buildings to heavy construction; these physical facilities play a critical and highly visible role in the process of development (Kheni, Gibb and Dainty, 2008). The major participants from the construction industry include the architects, engineers, management consultants, general contractors, special trade contractors or subcontractors, and construction workers.

The building and construction industry workplace health and safety guide by Workplace Health and Safety Queensland (2011) described a particular work as construction work if it is: work to erect, construct, extend, alter, convert, fit-out, commission, renovate, repair, refurbish, disassemble or decommission a structure, or part of a structure; or work connected with site preparation, excavation and landscaping for work mentioned above. It could also refer to the assembly or installation of prefabricated components to form a structure, or part of a structure for work mentioned above or the disassembly of prefabricated components for work mentioned in paragraph that, immediately before the disassembly, formed a structure or

part of a structure; or an activity that is a prescribed activity.

Importance of the construction industry in Nigeria

The products of the construction industry provide necessary public infrastructure and private physical structures for many productive services, commerce, utilities and other industries. Apart from contributing to the development of a nation, the construction industry is also a major source of employment to all categories of labour - skilled, semi-skilled and mostly the unskilled labour. Construction industry is often said to be the largest employer in any country (Bust, Gibb & Pink, 2008).

Recently in Nigeria, a number of development projects by government and private sector have created opportunities for construction companies to thrive. For instance, in recent times in most states of Nigeria, infrastructural projects, like road reconstruction, housing, bridge building, construction of drainage, dams, rural electrification, city expansion and beautification, have been on the increase, especially in Lagos, Rivers, Akwa Ibom, Ogun and Oyo States. This involved huge sum of money, running into hundreds of billions of naira, voted for capital projects. In Oyo State, there are different types of construction activities, like bridges, roads, flyovers and building of edifice, going on. The various construction activities in Oyo State, no doubt, have brought about development of the state as well as increase in job opportunities for all categories of workers.

In essence, the construction industry is closely linked to the economy of every state in the country and contributes to economic growth. Isa, Jimoh and Achuenu (2013) stated that the last four years saw an upward progression in the contribution of the construction industry to Nigeria's Gross Domestic Product (GDP). They also noted that the all-inclusive effect of this sector, especially, its employment-generating potential, makes it a veritable platform for sustainable development, if proper mechanisms are put in place for the growth of the sector.

Other researchers have opined that the construction industry is important to the economy of a nation and the general development and urbanization of the nation. Isa, Jimoh and Achuenu (2013), asserted that the building and construction sector is one of the top five sectors used in measuring the National Gross Capital Formation (NGCF) and the GDP of any country and that its effect on every other sector, makes it a significant front for sustainable development. Ibironke (2004); Shittu and Shehu (2010) also claimed that the construction industry plays a key role in satisfying a wide range of physical, economic and social needs, and contributes significantly to the fulfilment of various national goals. The construction industry is very germane to the development of any nation as it is the hub of social and economic development in all countries of the world. The construction industry contributed only about 1.98% of the GDP of the Nigerian economy, its importance and roles can never be disputed (National Bureau of Statistics, 2010; Okolie and Okoye, 2012). Isa, Jimoh and Achenu (2013) noted that the overview of construction sector to sustainable development in Nigeria is imperative. The size of the industry, the nature of its operation, the job-creation potentials and its presence in developmental activity made it an attractive area for experimentation in enhancing the effectiveness of governance towards sustainable economic development.

Occupational hazards and accidents in the Nigerian construction industry

Construction workers are exposed to a variety of hazards every day which may make them to be ill, injured, sick or disabled for life, especially in Nigeria (Construction Safety Council, 2012). The construction industry has the highest number of hazards when compared to other industries (Samaneh, Javier and Mehdi, 2011). The workers in a construction site may be exposed to various hazardous substances and physical agents like asbestos, lead, silica dust, organic solvents, sewer gases, welding fumes, radiation, noise and vibration (Guidance Notes on Health Hazards in Construction Work, 2004). Excessive exposures to these substances/agents may result in acute injury, chronic illness, permanent disability or even death. Loss of concentration at work and fatigue arising from poor health conditions may increase the risk of accidents.

The Nigerian construction work is characterised by high labour turnover, constantly changing environment and conditions on site, and different types of work being carried out simultaneously by several contractors. These features would further increase the health risks of workers. When compared with other labour-intensive industries, the construction industry has historically experienced a disproportionately high rate of disability, injuries and fatalities for its size (Hinze, 1997). The construction industry alone produces 30% of all fatal industrial accidents across the European Union (EU), (McKenzi; Gibb and Bouchlaghem, 1999). In the United States of America (USA), the construction industry accounts for 22% of all fatal accidents (Che Hassan; Basha and Hanfi, 2007). In other countries such as Japan, United Kingdom (UK) and Ireland, the situation is even not better (Okolie and Okoye, 2012). Bomel (2001) noted that in Japan, construction accidents account for 30% - 40% of the overall industrial accidents, with the total being 50% in Ireland and 25% in the United Kingdom (UK). This situation is worse in the developing countries, like Nigeria, where there are no reliable sources of data for such accident records.

Types of health hazards in construction industry

There are many types of health hazards in the construction industry. Falls are the leading cause of construction-related fatalities in most countries as they account for more than 33 percent of all construction deaths. An example of such incidents in Nigeria was the crane accident in a proposed High Court Building Site at Abuja on 30, May 2006 that led to the loss of six lives. Falls are a common cause of occupational injuries and fatalities, especially in construction, extraction, transportation, health care and building cleaning and maintenance. Machines are common in many industries, including manufacturing, mining, construction and agriculture, and can be dangerous to workers. Non-fatal injuries, such as cuts and lacerations, eye punctures and back injuries are common among construction workers in all countries (Bindra and Rinehart, 2008). More workers die while working on construction than in any other industry. Construction workers make up about 5 percent of the workers in the U.S., but they account for about 20 percent of the workers' deaths.

Construction workers are exposed to a variety of risks and health hazards (Danso, 2012). These range from noise, resulting in noise-induced hearing loss (NIHL); skin diseases from close contact with irritant or sensitizing materials; to respiratory irritation

from dusts, fumes and gases; as well as developing more serious lung diseases related to exposure to asbestos and other fibrogenic materials (Danso, 2012). Construction sites have many noisy operations and could be a significant source of noise exposure (Occupational Health and Safety Administration Pocket Guide, 2011). Loud noise can also reduce work productivity and contribute to workplace accidents by making it difficult to hear warning signals. Hearing loss limits construction workers' ability to hear high frequencies and understand speech. It also reduces their ability to communicate, which can lead to social isolation. Besides, they may be two to three times more likely to suffer from serious heart disease than workers who were not exposed (Gan, 2004).

Issues of occupational health and safety in the Nigerian construction industry

The construction industry has so many issues with regard to occupational health and safety of the workers. There are many reasons given for non-compliance with safety policy in construction industry. These include absence of required legislation, non-enforcement of the existing safety rules, lack of basic adequate training, management non-commitment to safety issues and poor safety culture among the employees. Okoye and Okolie (2014) stated that the construction industry is indisputable for its overt position in the economy of any nation. However, the poor safety performance of the construction industry has continued to give international cause for concern. The health and safety performance of the industry remains a staring challenge in its effort to tackle the developmental initiative of many nations, including Nigeria. Despite Nigeria being among the countries that signed the occupational health and safety law in the Geneva Convention of 1981, the pathetic health and safety situation in the construction industry made Idoro (2011), to conclude that the contractors' management efforts on occupational health and safety do not reflect in their scope of operations and the accident and injury rates of the Nigerian construction industry are high.

Ahmed and Newson-Smith (2010) identified some of the main reasons for not fully implementing occupational health and safety policy in most developing countries. The reasons include lack of effective enforcement system, lack of information and accurate records of occupational diseases and accidents, and lack of basic professional training in occupational health and safety. Bindra and Rinehart (2008) also raised some of occupational health and safety issues in construction industry as incomplete or no safety training for workers, no access to training and skill-building opportunities, as well as, extensive turnover of mostly migrant workers who are vulnerable to exploitation.

Also emphasizing the importance of adequate and effective training programme as a cogent factor for occupational health and safety of workers, Garcia, Boix and Canosa (2004) stated that interventions over workers' behaviour intended to risk prevention are usually based on specific training programmes. This simply implies that safety training is an important factor which can affect workers' behaviour to safety at workplace. Cohen and Colligan (1998) argued that these programmes are generally devoted to increasing workers' knowledge of job hazards and promoting safer work behaviours. In addition, Garcia, Boix and Canosa (2004) asserted that workers' behaviours regarding risk prevention are influenced by other factors besides proper training. These factors should be evaluated and their relative effects on the

workers' behaviour measured in order to develop integral programmes for workplace hazards control. This shows that efforts geared towards achieving efficient and effective management of occupational health and safety must take into consideration all the factors involved. Some of these other factors, as identified by Garcia, Boix and Canosa (2004), are organisational, including management's policies and practices regarding occupational risk prevention which may also affect implementation of workers' safety training.

On the other hand, the findings of Lauver (2007) were in contrast with Harshbarger and Rose, (1991); Reber, Wallin and Duhon, (1993); Letho and Salvendy, (1995) because he did not find a connection between training and organisational safety outcomes. He ascribed training measure, including both supervisory and employee training as reason for this lack of relationship. Although, Harshberger and Rose (1991) found that training was more important at both levels, Harvey, Bolam and Erdos, (2001) found training to be more important at the supervisory level. The findings of Lauver (2007) might also be due to how performance evaluation was conceptualized in his study. Both formal performance evaluation and more general feedback questions were included, whereas most often, studies examine the more general feedback and derive this measure from employees.

In Africa and especially in Nigeria, Puplampu and Quartey (2012) opined that the prevalence of occupational health and safety issues is due to inadequate attention given to occupational health and safety (OHS) by industries. This is a great concern for the government and also many international and Non-governmental organisations. The majority of the African countries are struggling to foster an effective occupational health and safety, as most of them have poor health and safety culture (Regional Committee for Africa Report, 2004). This could also lead to poor occupational health and safety competencies exhibited at workplace. Another reason is the greater emphasis laid on increasing productivity and profitability, while compromising health and safety standards, procedures and policies.

Another OHS perspective for Africa is slowness in promoting occupational health and safety due to colonialism and its effects on socio-economic development (Meredith, 1986). The colonial administration situated occupational health and safety in certain viable and relevant sectors in pursuit of their colonial ambitions. Many African countries have weak procedural and administrative justice systems to handle occupational health and safety issues. These have retarded the development and promotion of occupational health and safety in African countries.

Nnedinmaik and Umeadi (2014) viewed safety culture as one of the important factors affecting the compliance of construction workers with occupational health and safety regulations; thus affirming that the safety competencies of Nigerian construction workers have an impact on the level of safety maintained at the workplace. They commented on the contributing effect of safety culture at workplace by comparing the views of Kalejaiye (2013) and Idubor and Osiamoje (2013). While Kalejaiye (2013) mentioned lack of safety culture in the family and the education sector as some of the challenges facing the OSH environment in Nigeria's workplace, Idubor and Osiamoje (2013) contended that the cultural dimension determines compliance with OSH regulations. An organisation with

safety culture will have a lower accident rate than one without safety culture.

Nigeria has its own safety cultural norms. However, there is neither enforcement nor implementation of the safety culture. Idubor and Osiamoje (2013) described this culture in Nigeria as 'lack of political will and lack of implementation of plans is a major setback to the compliance with occupational health and safety regulations'. Okolie and Okoye (2012) posited that national cultural dimension is correlated with safety climate that constantly influence the safety perception and behaviours of construction workers in Nigeria. The safety perception and attitude of construction workers in Nigeria are influenced by culture. This implies that compliance with occupational health and safety regulations by construction workers is determined by national cultural dimension.

Recommendations and Conclusion

Given the strategic position of construction industry in the economy of any nation, it is germane to pay attention to the occupational health and safety of the workers. It is, therefore, important to address the various challenges which are militating against the prevention of the occurrence of accidents and compliance with safety rules in order to achieve high level occupational health and safety. The following recommendations are made, arising from the diverse issues discussed above.

(i) Legislations, rules and regulations upholding occupational health and safety in the construction industry should be made available, accessible and enforced. Proper and adequate sanctions should be given to those who violate such regulations.

(ii) All the stakeholders in the construction industry must be made responsible for keeping of safety rules. Management of construction industry should also show a high level of commitment to the occupational health and safety of their workers. They should provide adequate health and safety facilities which can help in the prevention of accident occurrence.

(iii) There should also be clear administrative justice systems where employees can easily register their displeasure in cases when their employers who may even be the government violate the OHS rules or trample on their rights as workers with regards to OHS issues.

(iv) Adequate safety training, using appropriate andragogical methods suitable for adults should be embarked upon regularly if there will be continous improvement in the occupational health and safety of workers in the construction industry. This can also enhance the safety culture of both the workers and the employers in the industry.

(v) Prompt reporting of detection of hazards, occurrence of accidents and any other information relating to the OHS of construction workers will also help in improving the OHS of workers in the industry.

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