



# **Level of Compliance to ILO Occupational Safety and Health Management System by Building Construction Companies in Ebonyi State, Nigeria**

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## **ABSTRACT**

This study assessed the level of compliance to occupational safety and health management system by building construction companies in Ebonyi State, Nigeria, using a descriptive research design. The population of the study comprised of ninety- one (91) professionals which include thirty (30) Architects, twenty-five (25) Builders, and thirty-six (36) Quantity Surveyors who are responsible for policy making in the building construction industry. The instrument for data collection was a structured 40- item questionnaire titled “Assessment of the level of compliance to occupational safety and health management system by construction companies (ALCOSHMSCCQ) Questionnaire. The instrument was validated by three experts in Building department. Cronbach Alpha reliability technique was used to determine the reliability of the instrument which yielded an overall reliability coefficient of 0.81. Data for the study were collected by the researcher with the help of three research assistants. Out of 91 copies of questionnaire administered to the respondents, 81 copies were completely filled and returned representing 89% rate of return. The data collected were analyzed using frequency for demographic information of respondents, mean and standard deviation for answering the research questions while the null hypothesis were tested using chi-square at 0.05 level of significance. The result show that there is low level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management practices by building construction companies in Ebonyi state. The implication of this study from the finding is that, the study will serve as eye opener to the management of the construction companies on the need to comply with occupational safety and health management system. Based on the findings, the study among others recommended that: there should be there should be enforcement of Occupational safety and health management practices on building construction companies by Ebonyi state government

**Keywords:** Compliance, Occupational Safety and Health Management, Building Construction Companies

## **INTRODUCTION**

Construction industry is a particular sector that has noticeable effect on the lives of human creatures. The world’s gross domestic product (GDP) indicates that the construction industry accounts for a significant portion of it. In most developing countries, the construction industry provides employment to the poor masses. This construction sector provides a source of revenue collections, which helps the government collect both direct and indirect taxes to provide for the public services (Elyas and Gabriel 2017). The

construction industry is labour intensive in nature and request human involvement at the production stage. This shows that construction industry is complex in nature, due to the kind of works accomplished in the sector, it has made the construction industry the most dangerous or highly hazardous sector( Smallwood and Haupt 2002).The construction industry proceeds specifically with planning, financing, designing and still proceed until the project is built and recognized ready to be used. This goal is accomplished by the parties in the project based firms that work together. During the process of achieving this goal, the construction workers encounter some hazards which affect their lives drastically (Ayangade, 2000).

According to Muiruri and Mulinge (2014), the building sector experiences hazards on various occasions when compared to other sectors in terms of accident cases during the production stage, the construction workers in the industry encounter different challenges which pose threat to their health. This indicates that accidents occur regularly in building industry. Unsafe behavior is a factor attributed to cause of accident in the construction industry. Accidents or injuries encountered in the construction industry might bring loss to the construction worker and the industry at large. The effect of injuries or accident does not only cause life of the construction worker but create economic losses. This in turn creates a vacuum for loss of productive time until the construction environment atmosphere is normalized.

According to Kalejaiye, (2013) occupational health and safety management system is pertinent if the organization hopes to remain competitive in the industry. This should be seen by management as a duty of care to the employees of their organizations, which should be pursued with commitment and cooperation. Occupational hazards due to unsafe and unhealthy practices in an unregulated environment have been identified to lead to injuries, and other fatalities and ultimately death. Some workplace illnesses that have been identified by experts include: skin diseases, different kinds of lung diseases, respiratory diseases and other forms of health disorders some of which are permanent and can make the employee incapacitated and unproductive all through life. According to Idoro (2008), the origin of OSH regulations in Nigeria is traced to the United Kingdom and US, where majority of them are adopted from. Foremost, the OSH Bill of 2012 in Nigeria is designed to ensure a safe working environment in all industrial sectors both the formal and informal sectors. The National Council for Occupational Safety and Health is empowered to oversee the Bill. It seeks to repeal the Factories Act 1990 and serve as comprehensive Occupational Safety and Health legislation for the workplace (Labour Safety Health and Welfare Bill, 2012). This is because the provisions and requirements of OSHMS encourage greater awareness of responsibilities and aspects of health and safety, highlighting the impact of poor health and safety standards on the performance of organizations (Diugwu, Baba, and Egila, 2012).

Hawkins (2002) describes compliance as applying measures designed to comply with legal requirements with the regulator being primarily more concerned with improved outcomes than prosecution results. According to Idubor and Osiamoje (2013) lack of strict enforcement of OSH regulations enables non-compliance to OSH regulations; while Umeokafor, Isaac, Jones and Umeadi (2014) state that non-compliance to OSH regulations is a major contributor to the poor state of OSH in Nigeria. Hence compliance with Occupational Safety and Health legislations can increase productivity in industries by reducing accidents, because accidents result in decreasing productivity and damage to equipment or property (Hawkins, 2014).

The prevalence of health and safety abuses on construction site among construction stakeholders calls for an intensive investigation into the level of health and safety knowledge and compliance of construction workers. This is because enforcement and compliance with OHS regulations are not the stand alone steps for improving OHS, as improving organizational culture can also improve OHS (Umeokafor, Isaac, Jones and Umeadi, 2014). This therefore, implies that regulation without strict compliance and management commitments amounts to waste of time and resources.

Safety can be viewed as a point at which all associated risks with a particular job are well managed in a reasonable manner (Brueggman, 2001). Brueggman (2001) defined safety as unique event that is paramount to continuous attainment of productivity. In the same vein, Ahmad, Iqbal, Rashid, Iqbal and Roomi (2016) opined that safety focus on curbing accidents at work setting and its negative effect on the workers in all manner. Assessment of various researchers such as: Aniekwu (2007); Idoro 2011; Okolie and Okoye (2012); Idubor and Oisamoje (2013); and Umeokafor *et al.*, (2014); on provisions and

management of safety in construction project reveals that adoption and compliance with health and safety provision served as catalyst in optimizing construction production process. On the other hand, without compliance to health and safety practices, more accident will result in pains, accidents and legal actions thereby escalating production cost. Kolawole (2014) who stated that low compliance to; provision of Personal protective equipment, provision of signpost indicating danger zone on construction project site, provision of health and safety facilities in case of injuries, payment of medical bills to injured workers, provision of safety supervisors on construction site, updating health and safety plans after completion of projects, health and safety training for site safety supervisors and also government safety act for construction activities lead to incessant occurrences of accidents among construction companies. Okoye, Ezeokonkwo, and Ezeokoli (2016) also observed that low safety awareness and compliance among the sites operatives, resort into low project performance among building construction workers'. Based on this, Famakin and Fawehinmi (2012) stated that safety practices are parameter to measure successful project delivery which is most paramount to the client because they greatly influenced in achieving efficiency and effectiveness amongst professionals and even workers in the construction industry. The anomalies as seen in the construction firm's failure to comply with minimum requirement of health and safety practices might cause the victim waste of time and loss of money to the firms. Although construction firms may be covered with life assurance for their staff from certain direct costs resulting from injury suffered, however some tectonic cost may be involved which cannot be insured against, such as loss of trained personnel, loss of production hours due to other operatives stopping the progress of the work out of concern or assisting the injured persons (Aniekwu, 2007). Thus, the lack of adherence to safety practices will delay the production process of construction activities.

Diugwu, Baba, and Egila, (2012) argued that Occupational safety and health (OSH) in Nigeria has not received adequate attention and support. Some specialist training activities in a construction site like such as first aid, fire prevention, forklift truck driving, overhead crane operation, scaffolding inspection and statutory health and safety inspections, have been provided but they are not being enforced or practiced. This is as a result of Occupational health and safety statutory regulations and provisions which are non-functional, while the state of Occupational health and safety in Nigeria is poor. According to Diugwu *et al.* (2012), the failed Occupational safety and health (OSH) system in Nigeria is due to the weak statutory Occupational safety and health (OSH) regulations and provisions. Also, he argued that the appalling level of compliance with OSH regulations in Nigeria, contributes to the poor Occupational safety and health (OSH) in the construction industry. Meanwhile, Idoro, (2004) observed that the continued exclusion of the Nigerian construction industry by the existing Factories Act of 1990 and the inefficiency of the Federal Ministry of Labour and Productivity Inspectorate Division in overseeing OSH in Nigeria as empowered by the Factories Act do not help compliance either, despite the higher likelihood of construction workers to be killed at work if compared with other industries.

Recently, Ebonyi state is not left out in the issue of compliance to occupational safety and health among the construction companies. The construction companies within this specific area are really affected by accidents and injuries, which occur in various construction industries and turn out to affect their performance. The construction industry in Ebonyi state has actually encountered series of accidents in which some are not recorded which adversely affect performance of these workers in the construction industry. The construction industry in Ebonyi state has performed below expectation in the area of worker's safety. On the contrary, compliance with Occupational safety and health regulations is not the major bullet to the improvement of OSH, as organizational culture and enforcement can also improve OSH (Umeokafor, 2013). However, there is consensus that compliance with OSH regulations cannot be isolated in the improvement of OSH (Umeokafor *et al.*, 2014)

More so, while studies exist to support need for safety and health in construction industries to avoid injuries in the construction industry (Kalejaiye, 2013 and Diugwu *et al.* 2012) didn't specify the need for compliance to occupational safety and health management system. Therefore, it is on this backdrop, that the present study seeks to assess the level of compliance to occupational safety and health management system by construction companies in Ebonyi state, Nigeria

### **Statement of the Problem**

Construction accident has continued to generate a great concern among construction companies in Ebonyi state, irrespective of the level of awareness which encourages safety and health of construction workers over the decade. Health and safety practice of construction workers is characterized with the workers conduct in regards to safety provision, the workers attitude in performing their task in order to minimize accidents and maximize the organization goal. Regardless of the regulatory control system which abides in the construction industry in Ebonyi state, there is an increase of casualties surrounding the construction workers which affects their performance in the construction sites. The problem of the study is the unabating cases of fatalities, injuries, deaths of construction workers and poor project performance attributed to negligence to compliance to occupational safety and health on construction sites in the Nigerian building industry as a whole and in Ebonyi State in particular.

### **Aim of the study**

The aim of this study was to assess the level of compliance to occupational safety and health management system by building construction companies in Ebonyi state, Nigeria.

### **Objectives of the study**

The research objectives include, to;

Establish the level of compliance to ILO occupational safety and health management system by building construction companies in Ebonyi state of Nigeria.

### **Research Question**

What is the level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system?

### **Hypothesis**

**HO:** There is no compliance with ILO occupational safety and health management system by building construction companies in project delivery in Ebonyi state, Nigeria.

## **METHODOLOGY**

The study adopted descriptive survey design. The study was carried out in Ebonyi state, Nigeria. The population for this study comprised of ninety- one (91) professionals which include thirty (30) Architects, twenty-five (25) Builders, and thirty-six (36) Quantity Surveyors who are responsible for policy making and are working with the registered building construction companies with the Ebonyi state ministry of Housing and Urban Development. There was no sampling. Therefore, the entire population was used for the study. The data for the study were collected using a structured questionnaire titled "Assessment of level of compliance to occupational safety and health management system by construction companies' questionnaire" (ALCOSHMSCCQ). The instrument was subjected to validation to three experts (one in building department and the other in Educational Measurement and Evaluation, all from Nnamdi Azikiwe University, Anambra state were used for the validation exercise. Cronbach alpha method was used to determine internal consistency of the questionnaire items. The instrument yielded an overall reliability coefficient of 0.88 was obtained for the entire instrument. The 91 copies of the instrument were distributed to the respondents by the researcher with the help of three research assistants. Out of the ninety- one (91) copies of the questionnaire administered to the respondents, eighty-one (81) copies were completely filled and returned representing 89% rate of return. The descriptive statistics of mean and standard deviation were used to answer the research questions. The hypotheses were tested using chi-square at 0.05 level of significance. Chi square was used to test the hypotheses since data obtained are nominal data and it summarizes the discrepancies between the expected numbers of times each outcome occurs and the observed number of times each outcome occurs, by summing the square of the discrepancies, normalized by the expected numbers, over all the categories

**RESULTS**

**Table 1:** General/ Demographic information of respondents

Demographic variables	Frequency	Percentage (%)
<b>Professional background</b>		
Architect	26	32
Builder	25	31
Quantity Surveyor	30	37
<b>Gender</b>		
Male	75	93
Female	6	7
<b>Years of Experience</b>		
1-5 years	27	33
6-10 years	20	25
11-15 years	15	19
Over 15 years	19	23
<b>Highest Educational Qualifications</b>		
HND	25	31
B.Sc/B.Tech	32	39
MSc/MPM	20	25
Phd	4	5

Data in Table above 1, shows that Quantity Surveyors- constituting 37% of the population sample. Architects constitute 32% of the respondents, 31% of the respondents are builders. Among the respondents 93% accounted for the male counterparts while 7% of the respondents are female professional in the construction industry. About 33% of the respondents possess 5 years professional experience in the construction industry, 25% possess 6-10 years' experience, 23% possess over 15 years professional experience and 19% possess 11-15 years' experience. Respondents with HND were found to hold adequate academic qualification constituting 31% of the respondents, while the rest of the respondents (39% and 30%) possess B.Sc/B. Tech and Masters Degrees respectively as their highest educational qualification.

**Research Question:** *What is the level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system?*

**Table 2: Mean and Standard Deviation on the level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system**

SN	Items	VHL	HL	LL	VLL	N	$\bar{x}$	SD	Decision
1	Provision of personal and protective equipment (PPE)	2	15	38	26	81	1.91	0.77	Low Level
2	Provision of signpost indicating danger zone on construction project site	1	2	44	34	81	1.62	0.60	Low Level
3	Provision of health and safety facilities	1	5	46	29	81	1.72	0.63	Low Level
4	Payment of medical bills of injured workers	2	5	45	29	81	1.75	0.68	Low Level
5	Provision of safety supervisors on construction site	-	17	42	22	81	1.93	0.69	Low Level
6	Updating health and safety plans after completion of projects	2	2	50	27	81	1.74	0.62	Low Level
7	Health and safety training for site safety supervisors	4	10	33	34	81	1.80	0.84	Low Level
8	Rewarding workers for safe work behaviour	1	17	39	24	81	1.93	0.74	Low Level
9	Proper documentation for accidents and policy violation during the execution of projects	-	10	46	25	81	1.81	0.63	Low Level
10	Undertaking periodic safety management auditing	1	5	52	23	81	1.80	0.60	Low Level
<b>Grand Mean</b>							<b>1.80</b>	<b>0.68</b>	Low Level

**Source:** Researcher's Field Work, 2021.

Result on table 2 shows that respondents in items 1, 2, 3,4,5,6,7,8,9 and 10 showed that there is low level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system. This is buttressed by the mean scores of 1.97, 1.62, 1.72, 1.75, 1.93, 1.74, 1.80, 1.93, 1.81 and 1.80. Therefore, it could be seen that the individual mean scores are less than the average mean score of 2.50. This means that respondents in item 1,2,3,4,5,6,7,8,9 and 10 disagreed that ;there is provision of personal and protective equipment (PPE), there is provision of signpost indicating danger zone on construction project site, Provision of health and safety facilities, Payment of medical bills of injured workers, Provision of safety supervisors on construction site, updating health and safety plans after completion of projects, health and safety training for site safety supervisors, rewarding workers for safe work behaviour, Proper documentation for accidents and policy violation during the execution of projects and undertaking periodic safety management auditing. The grand mean of 1.80 shows that there is low level of compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system

### Testing for Hypothesis

**Table 3: Chi-square Analysis of Mean Ratings of the Students Responses on compliance with ILO occupational safety and health management system by building construction companies in project delivery in Ebonyi state, Nigeria**

	D.f	X <sup>2</sup> .cal	X <sup>2</sup> .crit	Decision	Significance
Chi-square		9.064	40.11	Accept HO	Not significant
Number of valid Cases	81	27			

Decision rule: Accept Ho: if  $X^2_{critical} > X^2_{calculated}$ , Reject Ho: if  $X^2_{critical} < X^2_{calculated}$

### **Decision:**

From table 5, the Chi-square table shows a calculated value of 9.064, degree of freedom  $df = 27$ . The  $X^2_{\text{calculated}}$  (9.064) are less than the values of the  $X^2_{\text{critical}}$  (40.11) gotten from the chi-square distribution table. We accept the null hypothesis that 'Health and safety risk has no significant management process in the Nigeria construction industry'; thereby rejecting the alternate hypothesis.

### **DISCUSSION**

The research question sought to determine the level of compliance to ILO- occupational safety and health management system by construction companies in Ebonyi state, Nigeria. The findings as shown in Table 3 of chapter 4 indicated that there is low level of compliance by building construction companies in terms of ; Provision of personal and protective equipment (PPE), Provision of signpost indicating danger zone on construction project site, Provision of health and safety facilities, Payment of medical bills of injured workers, Provision of safety supervisors on construction site, Updating health and safety plans after completion of projects, Health and safety training for site safety supervisors, Rewarding workers for safe work behaviour, Proper documentation for accidents and policy violation during the execution of projects and Undertaking periodic safety management auditing among construction companies in Ebonyi state, Nigeria.

This result is in line with Kolawole (2014) who stated that low compliance to; provision of Personal protective equipment, provision of signpost indicating danger zone on construction project site, provision of health and safety facilities in case of injuries, payment of medical bills to injured workers , provision of safety supervisors on construction site, updating health and safety plans after completion of projects, health and safety training for site safety supervisors and also government safety act for construction activities lead to incessant occurrences of accidents among construction companies and Okoye, Ezeokonkwo, and Ezeokoli (2016) observed that low safety awareness and compliance among the sites operatives, resort into low project performance among building construction workers' .

### **CONCLUSION**

The summary of results of the study base on the professionals responses are:

1. That the ILO-Occupational safety and health management practices do not exist in building construction companies in Ebonyi state, Nigeria.
2. There is no compliance by building construction companies in Ebonyi state to ILO occupational safety and health management system.

### **RECOMMENDATIONS**

1. There should be enforcement of Occupational safety and health management practices on building construction companies by Ebonyi state government.
2. The government of Ebonyi state through the Abakaliki Capital Territory Development Board (ACTDB) commission should ensure that sites where works are going on are visited to ensure these build construction companies comply with ILO- Occupational safety and health management practices.

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