Challenges of Safety and Health Management Schemes among Construction Firms in Nigeria

Goma, Oraibi T. & Wordu, Chiduhiegem C. R.
Department of Technical Education
Ignatius Ajuru University of Education,
Port Harcourt.
oraibigoma@gmail.com, revchidiwordu@yahoo.com

Abstract
The study examined the challenges of safety and health management schemes among construction firms in Rivers State of Nigeria. The population of the study consisted of both indigenous and multinational workers operating in Rivers State. A total of 400 respondents (200indigenous and workers and 200 multinational workers) was the sample of the study selected through purposive sampling technique. One research question was posed and one hypothesis formulated for this study. A structured questionnaire validated and with reliability coefficient of 0.95 was the instrument used for data collection. Data collected were analyzed using statistical mean to answer the research question while z-test was used to test the null hypothesis at 5% level of significance. The result revealed that construction firms lack safety and health management scheme for handling engineering projects in construction sites, which arises from absence of safety and health personnel, lack of safety and health orientation and training, lack of top management support, ignorance of safety and health matters, and lack of regular safety and health meetings. It was therefore recommended that Management of construction firms should ensure that they support safety and health programs by organizing a safety and health orientation for the newly employed workers. Also, management of construction firms should ensure that there is regular safety and health training among the workers. More so, massive education campaign should be launched in every firm, be it indigenous or multinational in order to arouse awareness among all workers and avoid the occurrence of accidents on site among others.

Keywords: *Safety Management, Health Management Scheme, and Construction Firms.*

Introduction

Construction is directly tied into the fields of civil engineering and architecture. It is a process that consists of building infrastructures. As a result of this role or procedural description, a construction firm is responsible for building structures, in both the commercial and private sectors. Thus, a construction firm pools together a variety of resources to assemble all forms of structures in a streamlined and thorough process. Accordingly, a construction firm is not a single unit and does not carry out one role, for they are large-scale multitasking agencies that incorporate floods of human capital and machines (Halpin and Senior, 2010).

It is pertinent therefore, to note that whether the construction firms are multinational or indigenous; safety and health management scheme is paramount. Thus, Hudges and Ferret (2008), refers to safety is protection of people from physical injury. Whereas; they sees health as the protection of bodies and minds of people from medical conditions which results from materials, processes or proceedings used in the workplace.

According to Muiruri and Mulinge (2014), safety and health is an economic as well as humanitarian concern that requires proper management controls. Construction safety and

health planning deals with actions that managers at all levels should display toward creating an organizational setting in which workers will be trained and motivated to perform safe and productive construction work. The system should delineate responsibilities and accountabilities. It should also outline procedures for eliminating hazards and identifying potential hazards before they become the contributing factors to unfortunate accidents. More so, Safety and health according to International Labour Organization (ILO, 1999) and Griffith and Howarth (2004), is the prevention and maintenance of the height degree of physical, mental, and social well-being, the prevention of ill-health among workers caused by their working conditions, the protection of workers from factors adverse to their health in their employment, and the placing and maintenance of workers occupational environment adapted to their individual and psychological condition.

Wikipedia, (2016) sees Safety and health management scheme as a systematic and strategic approach used in determining the nature of the possible risks, hazards, challenges and conditions one faces in carrying out a construction work in a construction site. More so, the Builders Document 2 (2004) ranted safety and health management scheme to include among others: maintenance and promotion of workers health and working capacity; improvement of working environment; development of work organization and working culture in a direction which supports safety and health at work.

According to Gauci (2006), safety and health planning in construction sites serves two different purposes:

1. Pre-tender phase of a project: this brings together safety and health information's obtained from the client, designers, and the Project Supervisor for the Design Stage (PSDS), for the benefits of prospective main contractor and other contractors. The plan needs to be project specific and focused on the hazards from the proposed work.
2. Construction phase, safety and health plan should be drawn to the pre-tender plan, and should set out the arrangements for managing the project (including monitoring) taking account of the particular risks and should set out arrangement for welfare. The safety and health plan may need to be developed as the work progresses providing a focus for management and co-ordination of safety and health in the construction sites.

Dodo, Bulari, Manzuma and Andrew (2011) and FACTSHEET (2014), asserted that "Safety and health management plan aims at promoting and maintaining the highest degree of physical, mental and social well-being of construction workers".

Anita in Opene (2016) identified construction as one of the most dangerous occupations in the world that incur more occupational fatalities especially in the construction sites than any other sectors. He further noted that there is serious loses to the construction firm if there is omission or neglect of safety and health scheme as a management strategy for healthy and safe of workers considering the nature of the activities carried out in the construction sites: the will cause. Consequently, proper safety and health management scheme can curtail the risk of occupational injuries in the construction firm especially in the site. Therefore, the actualization of health and safety management scheme in construction sites becomes a serious challenge to construction firms in Nigeria; hence, this study.

Statement of the Problem

Safety and health management is primarily for the development of knowledge, skills, habits and attitudes necessary to prevent death and injuries. It is not possible that all potential hazardous condition can be eliminated or totally avoided; hence safe living demands the ability to function at optimum level in the presence of hazards (Windapo and Jegede,

2013).In contrary to the assertion above, Health and Safety Executive (HSE, 2004), observed that genuine mistakes are usually made by workers because of the failure of the construction firms to explain or instruct them on the dangers, risks or hazards posed by the materials and methods involved in construction sites. It is therefore important that safety and health management in the construction sites be developed in the workplaces in order to prevent accidents as much as possible, to minimize the loss of lives and properties from unpleasant and undesirable occurrence, as well as ensuring sound welfare and well-being of workers. It is therefore, the concern of this study to examine the challenges of safety and health management schemes among construction firms in Nigeria.

Research question

One research question guided the study:

What are the challenges of safety and health management schemes among construction firms in Nigeria?

Hypothesis

Also, one null hypothesis was tested at 0.05 level of significance:

There is no significant difference in the mean responses of respondents on the challenges of safety and health management schemes among construction firms in Nigeria.

Methodology

The study employed descriptive survey design. A sample of four hundred (400) copies of structured questionnaires with ten (10) items was administered to indigenous and multinational companies that operate within the State.

The instrument used for the collection of data was a structured questionnaire tagged 'Challenges of Safety and Health Management Practices among Construction Firms in Rivers State of Nigeria (CSHMPCFRSN)' with 10 items on a 4-point scale of Strongly Agree (SA) =4, Agreed (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. The instrument 'CSHMPCFRSN' was validated by three experts. The reliability of the instrument was ascertained using the Pearson Product Moment Correlation (PPMC) Reliability on the data collected through a pilot test on 40 respondents selected from indigenous and multinational firms operating in Rivers state who were not part of the sample of the study. The coefficient of reliability obtained was 0.95. This was adjudged high enough for the instrument to be used for the main study.

The researchers personally went to the firms to administer the 400 copies of the questionnaire. All were properly completed and retrieved on the spot. The statistical mean was used to answer the research question. An item with a calculated mean value equal or greater than 2.50 (2.50 – 4.00) was regarded as agreed, while the calculated mean of an item less than or equal to 2.49 (0 - 2.49) was regarded as disagreed. An inferential statistics of z-test was used to test the only null hypothesis at 0.05 level of confidence. It was decided that where z-calculated value was equal or greater then table z-value, it indicates significance difference, so reject the null hypothesis but otherwise, accept the null hypothesis.

Results

The results of the analysis of the study are presented in Tables 1 and 2

Table 1: Respondents' Mean Score and Standard Deviation on the challenges of safety and health management schemes among construction firms in Nigeria

S/N	Items	Indigenous Workers; N = 200 $\bar{X}$	SD	Multi-national Workers; N = 200 $\bar{X}$	SD	Grand $\bar{X}$	Remark
1.	Inadequate provision of PPE wears	3.27	0.69	2.95	0.80	3.11	Strongly Agreed
2.	Absence of safety and health personnel	3.22	0.64	3.05	0.59	3.14	Strongly Agreed
3.	Lack of safety and health training personnel	3.12	0.71	2.95	0.55	3.04	Strongly Agreed
4.	Lack of safety and health orientation	2.98	0.64	3.13	0.33	3.06	Strongly Agreed
5.	Lack of top management support	3.23	0.72	3.22	0.72	3.23	Strongly Agreed
6.	Absence of adequate enforcement measures/ mechanisms	2.93	0.95	3.35	0.65	3.14	Strongly Agreed
7.	Insufficient funding	2.76	1.03	3.38	0.48	3.07	Strongly Agreed
8.	Unawareness of safety and health matters	3.29	0.46	3.18	0.49	3.27	Strongly Agreed
9.	Absence of safety and health committee	3.22	0.78	3.25	0.43	3.24	Strongly Agreed
10.	Lack of regular safety and health meetings	3.24	0.48	2.95	0.59	3.09	Strongly Agreed
Grand Total		**3.13**	**0.71**	**3.141**	**0.563**	**3.13**	**Accepted**

Table 1 revealed that Indigenous workers agreed with all the 10 items with mean values of the above 2.50. On the other hand, multinational workers also agreed with all the 10 items with mean values above 2.50.

Table 2: z-test of respondents' on the challenges of safety and health management schemes among construction firms in Nigeria

Respondent	N	$\bar{X}$	SD	z-cal	z-crit	P	Df	Remarks
Indigenous Workers	200	3.13	0.71	-0.08	±1.96	0.05	398	Not Sig.
Multinational Workers	200	3.141	0.563					

From Table 2, since the calculated value of z-ratio (-0.08) was less than the critical value of z-ratio (±1.96); the null hypothesis was accepted indicating that there is no significant difference in the perception of respondents on the challenges of safety and health management schemes among construction firms in Nigeria.

Discussion

The study revealed that construction firms lack safety and health management scheme for handling engineering projects in construction sites, which arises from absence of safety and health personnel, lack of safety and health orientation and training, lack of top management support, ignorance of safety and health matters, and lack of regular safety and health meetings. The result is in conformity with the findings of Adeniye (2002) and Anderson (2007), who opined that the challenges of safety and health issues in the construction sites includes but not limited to; inadequate personal protective equipment, poor maintenance of personal protective equipment, lack of top management support in the management of safety and health in construction sites, and lack of equipped first aid kits on the construction sites. They further noted that lack of monitoring and evaluation team among others are also the factors that rise to be the challenging issues for the management of safety and health scheme on construction sites.

The study also revealed that the construction workers are unawareness of safety and health issues since there are absence of safety and health personnel in the construction firms. It further revealed that top management of construction firms do not sustain safety and health scheme especially in the site where the real work is done. This result has strong similarity with the findings of Achalu (2000), who observed that lack of top management support, absence of safety and health committees among others are the challenges confronting construction firms.

Conclusion

The implications of high rate of accidents in construction sites in Nigeria among the construction firms cannot be overemphasized. The paper therefore concludes that there are still awful dilemma of accidents in construction sites due to the absence and insufficient safety and health management scheme. The paper therefore recommends the followings and it is believed that if employed accordingly will go a long way in reducing the challenges of safety and health management scheme in construction sites among construction firms in Nigeria;

1. Management of construction firms should ensure that they support safety and health programs by organizing a safety and health orientation for the newly employed workers.
2. Management of construction firms should ensure that there is regular safety and health training among the workers.
3. Massive education campaign should be launched in every firm, be it indigenous or multinational in order to arouse awareness among all workers and avoid the occurrence of accidents on site
4. The existing legislation on safety and health management scheme should be amended to put more emphasis on the role of safety and health management personnel on construction sites.
5. Provisions should be made by the government to make it a statutory duty for every construction firm and their contractors to attend a safety and health management course at least quarterly a year.

References

Achalu, E.I. (2000). *Occupational Health and Safety.* Lagos: Simarch Nigeria Limited: Splendid Publishers.

Adeniye, A.A. (2002). Health and Safety on Construction Sites. *The Professional Builder Journal 4*, (1), 39-43.

Anderson, J. (2007). Health and Safety-Matching Legislation and Enforcement. *Proceedings*

of the Institute of Civil Engineers Management, Procurement and Law, 2007. P. 11-15

Builders Document 2. (2004). *Project Healthand Safety: Plan Template*, by CORBON.

Dodo, M., Bulari, M., Manzuma, A. & Andrew, M. (2011).Perception of Builder's Documents as Contract Documents and the Imperatives for there use.*Journal of Environmental Studies*,*3*(1&2), 89-103.

FACTSHEET.(2014). Health and Safety on Small Construction Sites. Retrieved; March 24, 2016, from *http://en2004.osha.ev:int*

Gauci, M. (2006).Code of Practice for the Construction Industry. Retrieved; February 4th 2016, from *http://ohsa.org.nit/portals/o/docs/cop-06.pdf.*

Griffith, A. & Howarth, T. (2004).*Construction Health and Safety Management*. London: Imperial College.

Health and Safety Executive (HSE), (2004).*Improving Health and Safety in the Construction Industry*.The Stationary Office, London.

Hudges, P., & Ferret, E. (2008).*Introduction to Health and Safety in Construction* (3rd Edition*).* Oxford. E/Sevior Ltd-health.

International Labour Office (ILO), (1999).*Safety Health and Welfare on Construction Sites, a Training Manual.*Geneva; ILO.

Kalejaiye, P.O. (2013). Occupational Health and Safety; Issues, Challenges and Compensation in Nigeria.*Peak Journal of Public Health and Management 1,* (2), 16-23.

Muiruri, G. &Mulinge, C. (2014).Health and Safety Management on Construction Projects Sites in Kenya.A Case Study of Construction Projects in Nairaobi Country.Retrieved February 2, 2016, from *http://www.fig.net/resources/proceedings/fig-proceedingd/fig2014/papers/ts07IC/T507k-muiruri-mulinge-6847.pdf.*

Opene, K. O. (2016). Effective safety and health planning on construction sites in Ogba, Egbema, Ndoni Local Government Area of Rivers State.*Unpublished B.Sc. (Ed.) Project*, Ignatius Ajuru University of Education, Port Harcourt.

Wikipedia, (2016).Definition of Safety and Health Planning on Construction Sites.Retrieved February 15, 2016 from *http://en.m.wikipedia.org/wiki/occupational-safety-health.*

Windapo, A. O., &Jegede, O. P. (2013).A Study of Health, Safety and Environment (HSE) Practices of Nigeria Construction Companies.*The Professional Builder Journal 4*, (1) 100-150.