

COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH REGULATIONS: A REVIEW OF NIGERIA'S CONSTRUCTION INDUSTRY

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ABSTRACT

The state of occupational safety and health (OSH) in Nigeria is poor, especially in the construction industry. Compliance with OSH regulations (OSHR) is one of the major factors for OSH improvement; regrettably, its level is low in Nigeria. Although studies on compliance with OSHR in developed countries abound, understanding the issues peculiar to the Nigerian construction industry as per compliance with OSH regulations is pertinent, as contextual issues can make the difference. As a result, this study, which contextualises Nigeria: examines compliance with OSHR in the Nigerian construction industry; unearths the key issues to compliance with OSHR in the industry; demonstrates the state of compliance with OSHR in the industry. Systematic review of available literature gathered through desk literature search and content analysis were done. It unearthed that key issues to compliance with OSHR in the Nigerian construction industry include: client's influence, inadequate enforcement (which ranks highest), lack of adequate regulations and unemployment, which rank lowest. It concludes that in the absence of government's involvement and adequate enforcement, stakeholders in the industry and management commitment can help compliance with OSHR proliferate. It also recommends that: OSH professionals should use the economic benefits of compliance with OSH to attract management commitment; contractors' OSH records should be a prerequisite for tender selection.

Keywords: Compliance, Construction industry, Nigeria, Occupational health and safety, Regulations.

INTRODUCTION

Occupational safety and health (OSH) in Nigeria has not received adequate attention and support. As a result, OSH statutory regulations and provisions are non-functional (Diugwu, Baba, & Egila, 2012), while the state of OSH in Nigeria is poor (Diugwu et al., 2012; Okolie & Okoye, 2012). According to Diugwu et al. (2012), the failed OSH system in Nigeria is due to the weak statutory OSH regulations and provisions. Also, it can be argued that the appalling level of compliance with OSH regulations in Nigeria (Diugwu et al., 2013; Idubor & Oisamoje, 2013; Okolie & Okoye, 2012) contributes to the poor OSH in the construction industry. Meanwhile, the continued exclusion of the Nigerian construction industry by the existing Factories Act of 1990 (Diugwu et al., 2012; Idoro, 2008), and the inefficiency of the Federal Ministry of Labour and Productivity Inspectorate Division in overseeing OSH in Nigeria as empowered by the Factories Act (Umeokafor, Isaac, Jones and Umeadi, 2013) do not help compliance either, despite the higher likelihood of construction workers to be killed at work if compared with other industries (Odeyinka, Davison, & Olomolaiye, 2005). Consequently, the construction contractors adopt regulations from the UK and the USA (Idoro, 2008; Diugwu et al. 2012), hence compliance and enforcement are marginal (Umeokafor et al., 2013). The above coupled with the tremendous impact of contextual issues on OSH management (Kheni, Dainty and Gibb, 2007) and that no detailed study of the subject of Nigerian

context was found make it pertinent to investigate the issues that determine compliance with OSH regulations in Nigeria, as strict compliance will improve OSH. Although compliance with OSH regulations is not a standalone solution to the necessitous step to improving OSH, it is a core element to OSH improvement. Against these backdrops, this study, which contextualises Nigeria and part of a doctoral study by the lead author examines and explores matters in regard to compliance with OSH regulations in the Nigerian construction industry. It also identifies issues relating to compliance within OSH regulations in the wider African construction firms and then relates them to the Nigerian construction industry. Critical systematic review of available literature gathered through desk review of existing literature (using a mixed literature search strategy), and content analyses of the data were done. Thereafter, recommendations for improving compliance with OSH regulations in Nigerian construction industry are noted.

CONCEPTUAL CLARIFICATION

In addressing the conceptual clarification of OSH, it is important to ask in this context "What are regulations?" According to Windapo (2013), regulations are products of legal efforts designed to instil law and order in the society. They should be: properly enforced, unambiguous, updated as required (Anderson, 2007) and properly complied with if the purposes for design are to be achieved, while OSH is defined by Kalejaiye (2013) to be an interdisciplinary area mainly burdened with protecting the safety, health and welfare of people in the workplace and people that will be affected directly or indirectly by the activities in a workplace. As such, OSH regulations are enforceable, unequivocal and compliant legal products designed to enforce the protection of safety, health and welfare of people that may be directly or indirectly affected by the activities in a workplace.

THE NIGERIAN STATUS QUO IN BRIEF

According to Idoro (2008), the origin of OSH regulations in Nigeria is traced to the UK 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 OSH legislation for the workplace (Labour, Safety, Health and Welfare Bill, 2012). Before September 2012, when the Labour, Safety, Health and Welfare bill of 2012, which awaits presidential assent was passed, there were no legislation or Bill covering the Nigerian construction industry. The existing Factories Act of 1990 does not include the construction industry in its definition of premises (Diugwu et al., 2012; Idoro, 2011; Idoro, 2008); therefore it is not enforceable as per construction sites and activities (Umeokafor et al., 2013). Consequently, the construction industry remains unregulated with accident and injury rates increasing; thus, construction firms resort to adopting UK/US regulations, which are not enforceable in Nigeria (Diugwu et al., 2012; Idoro, 2011; Idoro, 2008), hence leaving the implementation at the discretion of the construction firms or employers (Idoro, 2008), thereby resulting to nonchalant attitudes in regard to OSH issues. There is a consensus among OSH professionals on the need for strict compliance with OSH regulations in OSH improvement. Hence, Idoro (2008; 2011) use compliance with OSH regulations as one of the management efforts to determine if it correlates with OSH performance; while Okeola (2009); Smallwood and Haupt (2007) argue that compliance with OSH regulations brings about benefits not limited to avoiding direct & indirect costs (Windapo & Oladipo, 2012) but also contributes to organisations' competitive advantages. However, it is difficult to comprehend why these benefits seem not to attract the construction companies in Nigeria to comply with OSH regulations.

DETERMINANTS OF COMPLIANCE: OSH IN AFRICA (NIGERIA)

Beliefs

Smallwood (2002) argues along the general notion that accidents are inevitable in the construction industry because it is believed that the industry is inherently dangerous; therefore, used as an anchor for non-compliance with OSH regulations and also abridge the importance of OSH to secondary issues. In support of this, Kalejaiye (2013) asserts that prior to the enactment of the safety laws in England in 1833, it was believed that accidents were predestined and inevitable, but this was no longer acceptable after the enactment of the above laws. Furthermore, Idubor and Osiamoje (2013) identify religious beliefs to determine compliance with OSH regulations; they opine that some employers resort to fetish rituals to stop accidents instead of taking adequate safety precautions. Idubor and Osiamoje (2013) also posit that some believe accidents are acts of God i.e. accidents occur because God allows them. This is further emphasised by Sadeq and Ahmad (1996) cited in Smallwood (2002) who note that the Islamic 'Tawhidic' principles of justice & equality, dignity of labour and removal of hardship do not support intervention decisions based on cost benefits. As a result of the above arguments, contractors may do little or nothing to prevent these accidents; they may not take safety guidelines seriously. These therefore suggest that beliefs, be it religious or superstitious often filters into work environments resulting to lack of compliance with OSH regulations in the construction industry Africa wide.

Tendering process

Compliance with OSH regulations has prompted consumer buyer organisations to list ISO-9000 certification as a requirement for quality standard and a way of complying with OSH regulations (Nzuve & Lawrence, 2012). The literature so far reviewed shows that there is no standard of this nature in the Nigerian construction industry; most contractual documents appear not to highlight the importance of OSH compliance and the impositions of fines (penalties) for non-compliance. The action by consumer buyer organisations stated above can be adopted by the Africa's construction industry and its clients; they can standardise compliance with OSH regulations, not only in tenders as part of contract agreements (Windapo, 2013) but also in the instances where it is possible to that safety records and references from previous clients can be prerequisite for tendering for contracts to indicate the OSH performance of contractors. Therefore, priority should be given to construction firms without injury records; given that, Davies & Tomasin (1990) in Othman (2012) contend that successful projects have a 100% in OSH, time, cost and quality respectively.

Enforcement of OSH regulations

Nzuve and Lawrence (2012) found that low level of inspection and examination of workplaces might determine the level of compliance with OSH regulations as evident in workplaces in Nairobi. The same can be said of Nigeria, where lack of enforcement characterises regulatory institutions (Idubor & Osiamoje, 2013), most laws appear to fulfill all righteousness or are used for political or victimisation reasons, and the institutions alleged and proved to be corrupt and arbitrarily exercise its powers (Onyeozili, 2005). These ill characteristics of the regulatory institution in Nigeria also weaken its legal system. The contention being that the efficiency and effectiveness of the OSH enforcement bodies may determine the level of compliance with OSH regulations in workplaces. These explain why researchers posit, that lack of: strict legislation enforcement (Idubor & Oisamoje, 2013; Onyeozili, 2005); competent professionals i.e. OSH officers (Federal Ministry of Labour and Productivity 2010 in Idubor & Oisamoje,

2013); trained safety officers (Okeola, 2009), all enable non-compliance with OSH regulations in Nigeria. However, although the quality of enforcement may be marginal, enforcement at organisational level perhaps via safety officers should be made mandatory to Nigerian construction contractors (Okeola, 2009), as it will improve OSH enforcement. Equally important, Idubor and Oisamoje (2013) argue that the weak legal structure and absence of law enforcement in Nigeria allow foreign companies to take advantage of the ineffective statutory regulation. The same can be said of the construction industry. That may also suggest that these foreign firms may not have plans to comply fully with the OSH regulations in Nigeria or have a OSH management system similar to those obtained in their countries of origin, as they intend to reduce expenses and added cost to construction outputs.

Reputation of firms

In light of Idubor and Oisamoje's arguments above, it is evident that multinational corporations are able to provide developing countries such as Nigeria with critical financial infrastructure for economic and social development, and at the same time the much-needed OSH regulations. However, these institutions may also bring with them relaxed codes of ethical conduct that serve to dilute the developing nation's regulations rather than to provide the critical support to compliance that ensures improved OSH in organisations. Multinational corporations should promote their reputation through good OSH practices instead of cutting corners in countries where OSH systems are not as rigorous, granted that the images of organisations to the public should contribute to their competitive strength in the market. Indeed, Nzuve and Lawrence (2012) maintain that non-compliance with OSH regulations often reflects the organisation's image and bottom-line, which must be protected; Jacobi (2012) also supports this view by arguing that organisation's image determine the level of their compliance with OSH regulations.

Higher profit margin

Accidents result to injuries, loss of materials and time, payment of compensation and payments to injured staff when off duty, hence increasing the cost of production and affecting the profit margin of the organisation. As such, to reduce the cost of production, improve productivity and maximize profits, many firms seek to improve OSH in their organisations and this includes compliance with OSH regulations (Windapo & Oladapo, 2012). This explains why Nzuve and Lawrence (2012), Smallwood and Haupt (2007) posit that increased and sustained level of productivity often reflect on the level of compliance with OSH regulations. As such, the question as to why compliance is not at its peak is vital, as compliant organisations will benefit economically. However, ignorance of these benefits of compliance may be the answer the question. Be it as it may, organisations may comply with OSH regulations to save cost thereby increasing their profit margin, but may not comply if the cost of compliance is too much when compared with the profit margin.

Inadequate funding

Nzuve and Lawrence (2012); Idubor and Oisamoje (2013) contend that capital is required to provide adequate facilities in order to avoid cutting corners. In that lack of facilities such as clamps, safety belts may mean that desperate workforce will risk lives instead of going hungry, hence will not comply with OSH regulations. This explains why Diugwu et al. (2012) argue that lack of resources can hinder OSH management efforts. On the other hand, most enforcement bodies/institutions in the developing world lack the basic tools and amenities, which need funds to promote OSH regulations, educate the society, enforce the regulations, and disseminate information.

Perception of stakeholders in the industry

It is generally believed that construction industry is one of the most expensive industries; therefore, anything that will increase cost of construction should be avoided. This view is echoed by Windapo (2013) that construction contractors in South Africa perceive compliance with construction regulations as costly, time consuming and unnecessary, hence they deem compliance with OSH regulations as unnecessary. The same argument is repeated in Nigeria, where most construction organisations spend little or nothing on OSH management (Diugwu et al., 2012), perhaps because they perceive it as cost. This view simply results to nothing in terms of budget allocated to OSH management; consequently, there is likely to be high level of non-compliance with OSH regulations in these organisations.

Inadequate training of staff and workplace issues

Technical failure and inadequate training coupled with harsh work environment and unsafe methods of working *inter alia* are among the causes of non-compliance with OSH regulations in developing countries' construction like South Africa (Othman, 2012). This view is supported by Windapo and Oladapo's study of 2012, which demonstrates that lack of adequate training and unsafe work environment can determine how construction firms handle the issues of compliance with OSH regulations. In concordance, Adenuga, Soyingbe, and Ajayi (2007); Idubor and Osiamoje (2013) highlight that inadequate training is a hindrance to OSH regulations compliance. In correspondence, Idubor and Osiamoje (2013) maintain that the performance and productivity of staff is a function of the level of their expertise and skill, which is a function of the standard of training and education received. These imply that if adequate OSH training and education are not given to staff, their OSH performance e.g., compliance with OSH regulations will be affected. It can therefore be misunderstood, in simple terms to just result to lack of knowledge and information which in-turn depend on the level of acquired training and education. The facts are that management related issues, individual willingness to participate in self-development, self-determination within a value oriented work environment will encourage compliance to OSH Regulations.

Management commitment

Argument must be made that the absence of safety consciousness in major construction organisations in Nigeria is common and must be deemed as bad examples. Adenuga et al. (2007) further show that some construction companies do not attach importance to workers' safety. Similarly, Smallwood (2002) agrees that top management should value safety notwithstanding that lack of value for safety may be as a result of the perception that safety is only cost related as argued by Hinze (1997) in Smallwood (2002). Should that be the case, it therefore indicates that the construction industries are not concerned with the safety of their employees as their watchword; instead, it suggests the absence of management commitment to OSH in the Nigerian construction industry. This explains why, Windapo and Oladipo (2012) contend that management commitment should be seen as the determinant factor to compliance with OSH regulations in the construction industry.

Activities of the informal construction sector

Tanko and Anigbogu (2012) pen that the informal construction sector in Nigeria engages in informal construction activities, which constitute about 70% of construction outputs; meanwhile, Kalejaiye (2013) posits that the informal construction sector has little or no access to occupational health. Their main methods of project execution involve employing workforce who do not have ideas of adequate safety practices required, therefore cannot advise the client to comply with OSH regulations. The argument therefore is that if 70% of the construction activities are executed through the informal practice, the construction industry is shooting itself on the foot, as they will never conform to OSH regulations; rather, they contribute to majority of the unsafe

construction activities, thus hindering OSH improvement. As such, to improve OSH regulation in Nigeria, greater attention should be given to this sector (Tanko and Anigbogu, 2012) perhaps through adequate regulation. However, It can be argued that the informal sector is difficult to regulate because of the nature of its operations. From the above, it is therefore not misleading to state that this sector contributes hugely to non-compliance with OSH regulations in the Nigerian construction industry.

Unemployment

Idubor and Oisamoje (2013) identify unemployment as one of the factors that embolden non-compliance with OSH regulations. The level of unemployment in Nigeria is so high and increasing. According to Trading Economics (2013), unemployment in Nigeria rose from 21.10 % in 2010 to 23.90 % in 2011, this amounts to high volume of men and women given to the employer to pay low wages or impunity to take advantage of workers to work under dehumanising conditions provided they have jobs. Therefore, if construction works being carried out violate OSH regulations at the same time under dangerous conditions, the workers are unable to complain, for they risk losing their jobs.

Fear of legal sanctions

Nzuve and Lawrence (2012) maintain that organisations may also comply with OSH for fear of legal actions. In affirmation, Idubor and Oisamoje (2013) assert that legal sanctions organisations may face if they do not comply with OSH legislation may result to high financial cost to the organisations, thereby reducing their profit margin, in that they comply with OSH regulations. This implies that fear of legal sanctions may make cooperate organisations comply with OSH regulations. However, given what this study has established so far, it will be the bigger organisations that benefit most either way.

Bribery and corruption

Onyeozili (2005) states that Nigeria's regulatory institutions and the police force are perceived and have been proved to be corrupt; 'God-fatherism' determines the decisions of the inspectors. This is reinforced by Transparency International (2012) ranking Nigeria 139 out of 176 in terms of corruption perception index. In support, Idubor and Oisamoje (2013) assert that bribery and corruption are the biggest hindrances to proper compliance with OSH regulations in Nigeria; citing an instance where companies would not comply with the standard regulations and still get an 'okay' from the inspectors during inspection as a result of being bribed.

Neglect of human rights

From the human right perspective, Idubor and Oisamoje (2013); Puplampu and Qartey (2012) debate that human rights are the core elements of OSH. In that human rights are not well rooted in OSH rights of corporations because of lack of strict judicial references in Nigeria (Idubor & Oisamoje, 2013). This suggests that lawmakers neglect human rights, and this may lead to human rights abuse. Also, Puplampu and Qartey (2012) argue that human rights must be accessible to promote OSH. Therefore if inferred, the absence/neglect of human rights may influence OSH and perhaps its compliance.

Weak legal structures

Discussing the above, Idubor and Oisamoje (2013) maintain that the legal structure in Nigeria is weak in terms of interpreting and applying the governing laws. In the Nigerian construction industry where different regulations are in use, there is no uniformity in interpretation of regulations, while Idoro (2008) argues that implementation of the regulations are left to personal discretion. With regard to the penalty for non-compliance with OSH regulations, Windapo and Oladapo (2012) found that non-severe penalties for non-compliance with OSH regulations determine compliance with OSH regulations in

the South African construction industry. The same can be said of Nigeria, where the penalties for violation of some OSH laws are insignificant. However, the Labour, Safety, Health and Welfare Bill of 2012, stipulates stronger punishment for offenders (Idubor & Osiamoje, 2013). A downside of the legal system in Nigeria is the procedure in reality, where court cases take longer than allotted time frame, and OSH regulations are only enforceable upon trial and conviction (Idubor & Osiamoje, 2013). This suggests that majority of casualties may be discouraged from going to court because of the weak legal system in the country and the high cost of seeking justice without legal aid, as such encouraging employers to violate the regulations.

Client's influence

Famakin and Fawehinmi (2012) acknowledge the influence of clients in improving OSH in the construction industry by citing Huang and Hinze (2006), who assert that clients' involvement is a core requirement for ensuring a zero accident rate in construction projects. This is reinforced by Smallwood and Haupt (2007), who propose that clients should take the lead when it comes to OSH in their projects, as the OSH regulations like the South African Construction Regulations of 2003 place high level of responsibility on the client. These above suggest that low level of compliance with OSH regulations can be traced to the client who should ensure that the regulations are adhered to, hence ensuring optimum OSH in all projects. Lamentably, this is not applicable or evident in the Nigeria, especially in the informal construction practice where violation of OSH is endemic, and some clients have not heard of OSH. Moreover, Okeola (2009) records that one in six of the contractors in the 13 projects studied took an insurance policy. This suggests clients and contractors' neglect, as the client is required by law to ensure that the contractors comply with OSH regulations.

Lack of awareness and improper medium for information dissemination

The argument that lack of knowledge and understanding of OSH regulations determine the level of compliance within construction regulations is made by Windapo and Oladapo (2012), in that there is lack of awareness in most developing countries (e.g., Nigeria) for OSH regulations and practice, an issue that is also echoed by Idubor and Osiamoje (2013). Therefore, Diugwu et al. (2012) contend that lack of knowledge for details and implications hinder OSH management in the construction industry. They found that construction workers in Minna, Nigeria (if not the whole country) do not know the enforcer of OSH regulations in Nigeria. If workers do not know or understand the regulations, they will not know when their rights have been violated. Puplampu and Quartey (2012) note a similar issue that lack of adequate Information and statistics hinder the compliance with OSH in Africa; while Diugwu et al. (2012), Idubor and Osiamoje (2013) identify same for Nigeria. The above is explained by Diugwu et al. (2012), whose study argues that OSH information dissemination in Nigeria is ineffective, and has minimal impact to target groups, hence blaming the government for it. This demonstrates that enacting laws without adequate effort to make it available to the public is as a good as not formulating one at all.

Moral values

Nzuve and Lawrence (2012) believes that managers comply with OSH regulations due to the presumed severity of injury that the workers may suffer if accidents happen, this explains why Okeola (2009) argues that if morally obligatory, compliance should be on humanitarian grounds. In affirmation, Smallwood and Haupt (2007) demonstrate statistically the humanitarian motivation for OSH related regulations and the need for putting construction regulations into law through public announcement; asserting that analyses of severity rates of accident, disabling injury rates to buttress the above must be deemed key and relative to moral values. In contrast, Windapo (2013) shows that the extent of risk and perceived severity of physical hazard that may happen due to non-

compliance with OSH regulations are not connected to the standards complied by South African construction contractors. Nevertheless, it can be argued on moral grounds, that employers in construction industry may often consider the OSH of their employees as superficial, therefore convenient to comply with OSH regulations when required.

Cost of compliance/production

Windapo (2013) found that increase in the cost of compliance with the OSH requirements determines the building constructors' compliance with statutory regulations in South Africa. In that some contractors may weigh the cost of compliance with OSH regulations and the overall cost of production against the profit margin and decide to comply at a convenient level. The implication of the above when factored in is that the cost of compliance (a factor of production) increases the cost of production, in most cases is often high and expensive. This supports Idubor and Osiamoje (2013) who agree that the high cost of production in Nigeria like cost of providing electric power drives organisations to cut corners as per OSH. In contrast, avoiding direct & indirect cost of accidents (a cost of production) can make them comply with OSH regulations as argued elsewhere in this paper. In short, it can be argued that factors of production influence compliance with OSH regulations in the Nigerian construction industry.

Absence of OSH representatives

The absence of OSH representatives in Nigeria's construction industry has detrimental impact according to Diugwu et al. (2012); who argue this in their study of "construction practices in Minna, Northern Nigeria". They found that 79.5% of most of their respondents do not have OSH representatives in their organisations. Hence, the absence of these representatives is a violation of the OSH regulations, which require organisations to have trade union appointed representatives or employee elected safety representatives. These representatives' main duty are to protect the OSH interest of the workforce. The argument being that these OSH representatives will help in ensuring compliance with OSH. These important factors and the role of safety officers are identified and reverberated by Okeola (2009) in facilitating and encouraging the construction contractors on safety issues, hence recommends mandatory roles for them.

Lack of adequate regulations

Idubor and Osiamoje (2013) uphold that poor national OSH standards hinder compliance with OSH in Nigeria. This factor is evident in the Nigerian construction industry, where the local OSH law (Factories Act of 1990) does not technically cover it (Diugwu et al., 2012; Idoro, 2008; Idoro, 2011), thus not enforceable in the industry. Consequently, some construction firms adopt regulations from developed countries, and enforcement is at adopter's discretion (Idoro, 2008). Hence, Diugwu et al. (2012) found that lack of adequate regulation, lack of support as some of the constraints to OSH management in the Nigerian construction industry. It may also determine compliance with OSH regulations.

Culture: The safety culture

While Kalejaiye (2013) highlights lack of safety culture in the family, education sector as some of the challenges facing the OSH environment in Nigeria's workplace, Idubor and Osiamoje (2013) contend that cultural dimension determines compliance with OSH regulations. They further posit that an organisation with safety culture will have a lower accident rate than one without safety culture. Further on culture, Nigeria as a nation has its own cultural norms; however, there is neither enforcement culture nor implementation culture. Idubor and Osiamoje (2013) describe this culture (i.e. way of doing things) in Nigeria as 'lack of political will (The Nigeria factor e.g., inadequate/unsuitable laws)'. They maintain that lack of implementation of plans is a major setback to the compliance with OSH regulations. Okolie and Okoye (2012) may

agree with the above, they posit that national cultural dimension is correlated with safety climate that constantly influence the safety perception and behaviour of construction workers in Nigeria. The findings of their study that the safety perception and attitude of construction workers in Nigeria are influenced by culture, further buttress the view above. Suggesting that compliance with OSH regulations by construction workers is determined by national cultural dimension.

RESEARCH DESIGN AND METHODS

This study relied on secondary data through desk study. Systematic and extensive searches of databases like (EBSCOHOST, Sciverve Sciencedirect, Swetswise, ASCE Library, EMERALD, *inter alia*) were done. It used lunch words like 'Occupational health and safety regulations in Nigeria', which yielded only three indirectly related papers to the above topic, so further searches were done with lunch words like 'health and safety management in Nigeria', 'Occupational health and safety regulations in Africa' and some data were found. Those that are directly or indirectly related and relevant to the topic were chosen for the second search strategy. The above methodology was used in order to eliminate bias, ensure transparency and create room for repeatability. Because of the shortage of OSH literature as per Nigeria and its construction industry, the citation search approach that is an accepted and widely used search strategy for a paper of this nature was adopted. This strategy required the use of useful article(s), reference lists of papers and books relevant to the required topic (De Montfort University Leicester, 2008). As a result, the citation approach was used on papers found in the search sessions. Content analyses of all the data collected were also done and the result presented. Content analysis is a methodology in research used for analysing and understanding the content of collected text (Tharenou, Donohue, & Cooper, 2007). This can be done systematically and objectively (Holsti, 1969 in Tharenou et al., 2007) and/or by inference. In this study, all three techniques and theme-grouping pattern were adopted; inductive and derived explanations of the themes identified were done and the interpretive style used, as this study generates new insight in line with Tharenou et al. (2007).

RESULTS AND DISCUSSION

This study was able to unearth and examine key issues to compliance with OSH regulations in the Nigerian construction industry. These major issues are: socio-cultural, socio-economic, institutional/legal, organisational and industrial issues. Organisational issues identified by this study include: reputation of firms (Jacobi 2012; Nzube & Lawrence 2012); higher profit margin (Nzube & Lawrence, 2012; Smallwood & Haupt 2007; Windapo & Oladapo, 2012); inadequate training of staff and workplace issues (Adenuga et al., 2007; Idubor & Osiamoje, 2013; Othman, 2012). Through critical analyses of Adenuga et al. (2007); Smallwood (2002); Windapo and Oladipo (2012); it was inferred that management commitment to OSH would determine compliance with OSH regulations. One of the key arguments being that as long as the Nigerian government do not tackle OSH challenges in the construction industry, organisations should endeavor to champion the improvement of OSH as they would benefit immensely. Literature reviewed so far suggests gross negligence in the part of both the government or enforcement authority. As the government does not take reasonable measures to preventing unsafe practices, then little is expected of the construction industrial operatives; thereof, Smallwood (2002) hypothesises that cultural norms start from the upstream of management to the downstream sector. Therefore, it can be argued that the recorded neglect by the government and industry suggest the absence of safety culture in Nigeria and lack of governmental support.

In terms to institutional/legal issues relating to compliance with OSH regulations, it was evident that the construction industry issue was technically omitted when the Factories Act of 1990 was drafted and during implementation. Enforcement of OSH regulations (Federal Ministry of Labour and Productivity 2010 in Idubor & Osiamoje, 2013; Okeola, 2009; Nzuve & Lawrence, 2012; Onyeozili, 2005; Idubor & Osiamoje, 2013); weak legal structures (Idubor & Osiamoje 2013); bribery and corruption (Idubor & Osiamoje, 2013; Onyeozili 2005); lack of funding (Idubor & Oisamoje, 2013; Nzuve & Lawrence, 2012); absence of OSH representatives (Diugwu et al., 2012; Okeola, 2009); lack of adequate regulations (Idubor & Osiamoje, 2013) were found to be determinants to compliance with OSH regulations in the Nigerian construction industry. Through critical review of Idubor and Osiamoje (2013); Puplampu and Qartey (2012), it was inferred that neglect of human rights would also determine compliance with OSH regulations in the Nigerian construction industry. Additionally, critical reviews of a conceptual study by Idubor and Oisamoje (2013); an empirical study by Nzuve & Lawrence (2012) highlighted that fear of legal sanctions can also determine compliance with OSH regulations in the said industry.

Furthermore, unemployment (Idubor & Oisamoje, 2013); lack of awareness and improper medium for disseminating information (Diugwu et al., 2012; Idubor & Osiamoje, 2013) were the socio-economic issues recognised by this study that also determine compliance with OSH regulations in the Nigerian construction industry. A popular saying in Nigeria states that "Knowledge is power"; should that be the case, it could be assumed that the Nigerian society is not empowered in terms of OSH due to lack of knowledge in this instance. The studies further show that injury and accident are common in the construction sites in Nigeria; however, people that suffered from occupational diseases or incidents would not know the necessary steps to take for compensation or to stop the reoccurrence.

In addition, socio-cultural issues were well covered by empirical studies by Othman (2012), Smallwood (2002) and a conceptual study by Kalejaiye (2013). They reported that beliefs determine compliance with OSH regulations in the construction industry. While culture (safety culture) (Idubor & Osiamoje, 2013; Kalejaiye, 2013); client's influence (Famakin & Fawehinmi, 2012; Okeola, 2009; Smallwood & Haupt 2006) were identified as determinants to compliance with OSH regulations, critical review of Nzuve and Lawrence (2012); Okeola (2009), Smallwood and Haupt (2007); Windapo (2013) showed that moral values influence compliance with OSH regulations in Nigeria's construction industry. Also, client's influence on compliance with OSH regulations seems overlooked in the Nigerian construction industry, as has been unearthed by this study.

Industrial issues such as tendering process (Nzuve & Lawrence, 2012; Othman 2012; Windapo, 2013); perception of stakeholders in the industry (Windapo, 2013); cost of compliance/production (Idubor & Oisamoje 2013; Windapo, 2013) were revealed as factors that determine compliance with OSH regulations in the construction industry. Critical analyses of studies (Kalejaiye, 2013; Tanko and Anigbogu, 2012) indicated that activities of the informal sector determine if the said industry would comply with OSH regulations. It should also be noted that the informal sector contributes to about 70% of construction activities in Nigeria (Tanko & Anigbogu, 2012); implying that the informal sector could be a major contributor to the high level of accidents in the construction industry.

From the above, it can be seen that a greater percentage of the authors (35%), discussed enforcement of OSH regulations as a reason for non-compliance with OSH regulations in

Nigeria, while 30% believe that lack of governmental support and weak legal structure which accounts for 25% influence compliance, hence ranking second and third respectively. On the other hand, 5% of the academic papers reported unemployment, bribery and corruption, lack of adequate regulations, where the three rank the lowest as determinants of compliance.

CONCLUSION AND RECOMMENDATIONS

This study demonstrates that the state of OSH and compliance with OSH regulations in the Nigerian construction industry is poor; it has revealed that the key issues to compliance with OSH regulations in the Nigerian construction industry and perhaps the whole country are mostly related to socio-cultural issues, institutional/legal issues, organizational issues, socio-economic and industrial issues, with the activities of the informal sector as a major contributor. This study goes further to recommend that to sustain the rapid economic growth and infrastructural development in Nigeria and improve OSH in the nation's industry, government's involvement in OSH with adequate enforcement mechanisms, management commitment and support from stakeholders, can help improve compliance with OSH, hence improve productivity, chances of competition in the market *inter alia*. Most importantly, governments of developing countries like Nigeria should improve OSH awareness and education by using enlightening agencies like the National Orientation Agency of Nigeria; OSH education and training should be mandatory and integrated in the school syllabus right from secondary level. OSH practitioners and promoters should use increase in profit margin *inter alia* as OSH promotion instruments to attract the public and top management interest. Furthermore, mandatory OSH section in contract documents should be adopted and strictly enforced in the developing countries' construction industry, preferably verified and referenced before payment. Also, reference as per OSH performance form contractors' previous clients should be a prerequisite for tender selection, hence preference given to those with good OSH records. Meanwhile, naming and shaming organisations of poor and appalling OSH records should be adopted, as they will not like their images with the public and competitive levels in the market to be affected. Government and stakeholders should strictly regulate activities of the informal construction sector in order to promote OSH in developing countries; whereby, the building planning departments in local councils will be used as an OSH enforcer in the grassroots level just as they enforce planning permission.

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