

CONSTRUCTION SITE SUPERVISOR'S HEALTH AND SAFETY LEADERSHIP ROLES: A CASE OF MANAGEMENT OVERSIGHT IN NIGERIA

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Abstract

Health and safety (H&S) leadership of the top management in the construction industry has received great attentions over the years, in contrast to site supervisors. The need for H&S leadership at all levels of management in the industry came as a result of the rising costs of social and economic issues. This study aimed at investigating the perceptions of construction site supervisor's regarding 20 identified H&S supervisory leadership roles under the four headings: influence, inspiration, communication and motivation. Questionnaire survey was then structured from literature and administered to construction site supervisors within the South-South and South-West Geopolitical zones of Nigeria. Interviews were also conducted with supervisors and top management of construction companies. Data was electronically manipulated using popular survey research method common in behavioral science and communication studies for the analysis. The results of the questionnaire survey and subsequent follow-up interviews showed that over two thirds (2/3) of the supervisors agreed that they had H&S leadership roles that can promote a positive workplace H&S culture, but half said that they had the H&S leadership roles that were not fully exercised. Further interviews and on-site observations on construction sites were conducted in order to validate the findings. The study concludes that site supervisors' H&S leadership roles are critical factors for effective H&S management. However, it appears that from the results of the study, that supervisor's H&S leadership roles are not fully exercised in the Nigerian construction industry. Therefore, the study recommends that there is a need to develop and empower supervisors through supervisory and management H&S training. Supervisory and management H&S training not only makes site supervisor better H&S compliance but also improve their site H&S leadership skills and behaviour leading to improve poor site H&S records.

Keywords: Construction, health and safety, leadership roles, supervisor, Nigeria

Introduction

H&S leadership of the top management in the construction industry has received great attentions over the years, in contrast to site supervisors. The need for H&S leadership at all levels of management in the construction industry came as a result of the rising costs of social and economic issues. The social and economic impacts of construction site accidents on the companies, workers and their

families and the society at large are so enormous and should be prevented (Okorie and Aigbavboa, 2016: 164). Flin and Yule (2004: 45) assert that there is a great relationship between organizational success and its commitment to leadership practices. The paradigm shift from management to leadership is dictated by today's global economy. Leadership in both public and private organizations have significant

outcomes related to productivity, profit and workers' H&S ((Flin and Yule, 2004: 45; Hopkins, 2007: 587; Hughes and Ferrett, 2010: 36). However, it has been found that leaders often loss focus leading to poor performance. Globally, industry leaders are calling for prudent approaches to reduce the levels of workplace fatalities and injuries. Economic and social impacts of construction site accidents and incidents around the world have added more voices to this call. Therefore, managing today construction industry H&S requires leaders not managers. Achua and Lussier (2010: 12) point out that leadership is a key driver for a successful organisation. Leadership has been linked to a process by which a person influences others to accomplish objectives. According to Naoum (2011: 37) leadership is aligning people towards common goals and empowering them to achieve the needed objectives. The construction industry, particularly in the developing country like Nigeria is in dire need of leaders who have the influence and can align site workers to achieve the required goals.

Leadership in construction H&S is a very complex issue and often subjective, but an understanding exists that 'good H&S is good business' and the tenet that productivity and H&S are influenced by leadership quality remains unproven (Flin and Yule, 2004: 46). As noted amongst researchers such as Krause (2003: 9); Geller (2008: 451); Sunindijo and Zou (2011: 781), poor H&S leadership not only impacts on overall projects performance and stakeholders profit margins, but also has a serious negative impacts on workers' H&S behaviours. The CIDB (2011: 12) report on construction quality in South Africa: a client perspective notes that lack of integrity and openness found among construction managers at all levels of management manifest as poor construction quality, cost overruns and workers poor H&S performance.

Findings from the empirical research and the qualitative review on leadership and leaders' behaviours suggest that leadership at the site level can positively influence workers'

H&S behaviour by adopting active form of leadership, which promote a positive workplace culture and trusting employee-management relationship (Yukl, 2011: 34). Leaders, who pay attention to the importance of open communication with the workers/employees, build trust and develop good working relationship characterized with loyalty leading to better H&S performance. Flin and Yule (2004: 45) noted that leaders and leadership behaviour motivate and inspire workers for exceptional H&S performance. Taylor (2011: 57) argued that committed and visible leadership particularly, at the site levels is a prerequisite for sustainability of workplace H&S culture. Committed leadership at the site levels have been linked to proactive monitoring of workers and also noted for taking corrective actions where necessary. This leadership quality may be particularly relevant to construction site supervisors, as they are the conduit between management and workers

Krause (2003) maintains that to achieve long-term change in workers' H&S related behaviours, it is necessary to examine supervisors' H&S leadership roles and authority/powers given to them. In support of the importance of leadership roles of supervisors in relations to workplace H&S management Geotsch (2014: 13), state that given supervisors the required leadership skills and authority could impact positively on construction site H&S performance. Lutchman et al. (2012:113) also maintained that supervisors' H&S visible leadership and commitment are critical factors in creating and sustaining a positive H&S culture in any organisation. As a result, supervisor's H&S leadership is an essential prerequisite to improving construction site accidents and incidents. Stressing the importance of supervisor in site H&S management Lingard and Rowlinson (2005: 71) maintained that supervisor acts as a conduit between senior management and the workforce, and therefore, plays an important role in shaping workers' understanding of what is expected of them

relative to company's H&S policy.

Much research attentions have been focused on top management H&S leadership and authority in accidents prevention, in contrast to supervisors' H&S leadership. This paper therefore, seeks to fill in the gap by investigating the perceptions of construction site supervisor's regarding 20 H&S supervisory leadership roles.

Theoretical overview of the study

The theoretical bases of the study go back to Fleming's (2001: 12) work that examined the impact of supervisory H&S leadership practices and safety climate on subordinates self-report risk taking and H&S behaviour. Fleming (2001: 12) found 20 supervisory leadership roles that influence subordinate risk taking and H&S behaviour. The 20 supervisory leadership tasks/roles are identified under the four headings: influence, communication, inspiration, and motivation. The leadership roles/tasks are listed under the four main headings as shown in Table 1.

The importance of supervisor's H&S leadership roles was demonstrated in a series of leadership intervention studies designed to modify supervisory monitoring and rewarding of workers' H&S behaviour (Zohar, 2002: 79). The findings indicated that increase in the frequency of H&S related interactions between supervisors and workers resulted in concomitant improvement in H&S behaviour and perceptions of organizational safety climate as well as a reduction in injury rates. The importance of supervisor's H&S leadership roles and site accidents was recognized by both the Common Laws and Statutes. For instance the Factories and Industrial Act of Nigerian (Amendment Act. 1986) imposes a duty on employers to provide adequate supervision to ensure health, safety and welfare of the workforce (Factories and Industrial Act, 1986 cited in Idoro, 2004: 212). However, little or no research on supervisor's H&S leadership roles has been conducted in Nigeria, but in the developed countries like, United Kingdom (UK), United States of

America (USA), and Germany considerable research have been conducted on supervisors' H&S leadership roles.

Over the decades, literature reveals that supervisors play important roles in accidents prevention (Heinrich 1941, Petersen, 1976, Heinrich et al., 1980: 45) because they are always on the front-line in production, work alongside with workers, and know what is happening at any moment on site. As a result, conducting a survey on supervisor's perceptions/views relative to their H&S leadership roles is essential prerequisite to improve construction H&S performance in Nigeria.

Research methodology

The popular survey research method common in behavioral science and communication studies was used for the analysis. The population of the study includes supervisors in building and civil engineering construction sites in the two Geopolitical Zones of Nigeria (South-South and South-West). A total number of eighty (80) supervisors were selected by means of purposive sampling technique taken from 12 companies operating within the two Geopolitical zones. The research questionnaire was structured from literature that made up of questions relating to respondents' demographic variables and questions that specifically pertaining to research objectives. Follow-up interviews were conducted with two supervisors each from three companies that participated for the study. Site-based studies were undertaken in order to observe supervisors and workers, in action and further analysis the situation and arrived at better conclusions.

The questionnaires consisted of over 80 questions designed to elicit information, framed around the four identified leadership attributes in Table 1. A total number of 120 questionnaires were administered face-to-face; only 95 copies were correctly completed and returned, resulting to response rate of 79.2 %. Face-to-face method was chosen to overcome the problems with site supervisors

citing time pressure as a reason for non-completion of the questionnaire. In addition, a face-to-face approach gave the researcher an ample opportunity to painstakingly explain the questions, and this added to the richness of the data collected.

The data collected were coded on a Likert scale and the analysis undertaken to compare responses with the sample by means

of correlation analysis. A 5% critical region was set for rejecting the null hypothesis but this was then taken as a starting point for further investigation of why such results occurred. The findings reported below were based on a rejection of the null hypothesis of the association between leadership and authority at the 5% confident level.

Table 1 Supervisor's leadership roles and authority

20 identified roles	Percentage of supervisors who felt that they had leadership roles	Percentage of supervisors who felt that they had no power/authority
Influence		
Address worker with empathy	56.3	33.4
Show love and care to workers	73.2	57.1
Be a role model	83.7	67.3
Wearing correct PPE	77.6	70.3
Have listening ear	62.8	56.1
Make phone call to absent or sick worker(s) from work	73.4	75.3
Inspiration		
Recommend fringe benefits to worker(s)	44.4	32.2
Show concern to worker(s) with personal problem	47.3	35.1
No blame culture	48.7	39.3
Create feeling of belong among work team	51.8	40.7
Communication		
Discuss H&S problems with management	43.7	32.1
Prioritizing worker's H&S over productivity	32.7	31.3
Communicating H&S practices to workers	45.1	37.3
Hold regular site H&S meeting/toolbox talks	47.7	38.5
Complying with organization's H&S policy and regulations	37.4	31.8
Orient new worker on company' H&S policy	56.1	41.3
Motivation		
Grant pay raise to worker(s)	32.2	28.1
Authorize maintenance or repair of tools/equipment	41.7	31.9
Encourage reporting of unsafe conditions and unsafe behaviours	47.1	36.7
Discuss H&S problems with management	40.7	32.5

Hypotheses of the study

In order to understand those supervisor's skills and competencies that influence their leadership qualities, four hypotheses are postulated *inter alia*:

H1. Supervisors do not know exactly what leadership roles they have in carrying out their daily H&S supervisory duties.

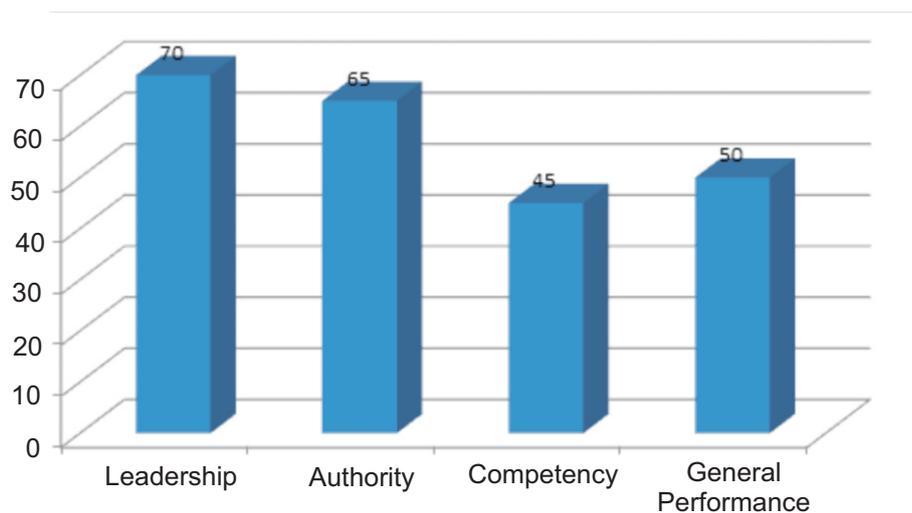
H2. Supervisors do not have adequate authority from management to perform their H&S leadership roles.

H3. Supervisors do not have the competency to perform their leadership roles.

H4. Supervisor's H&S leadership roles are generally poor.

Presentation of findings

Data collected were analyzed in terms of supervisor's perceptions of their H&S leadership roles on construction sites. With regard to twenty (20) identified supervisor's H&S leadership roles, Figure 1 shows that 70% indicated that they had leadership roles, while 65% indicated that they had no authority to exercise those leadership roles. This implies that a large proportion of supervisor did not understand what H&S leadership roles they had. The implications and significance of this finding are discussed below.



Supervisor's H&S leadership roles

Good number of supervisors agreed that they had H&S leadership roles to play on construction site, such as communicating H&S to workers, show love and care to workers, be a role model by wearing correct PPE, hold regular site H&S meeting/toolbox talks, have listening ears, make phone call to absent or sick worker(s), create feeling of belong among work team, orient new worker on company's H&S policy, complying with

organization's H&S policy and regulations.

However, the great majority of the supervisor/ respondents indicated that they had no authority to perform the following H&S leadership roles: grant pay raise to worker(s), authorize maintenance or repair of tools and equipment, prioritize workers' H&S over productivity and recommend fringe benefits to workers, encourage reporting of unsafe conditions and unsafe behaviours, and recommend changes in

organization's H&S policy. These findings are certainly contrary to H&S practice as outlined in H&S manuals and also contrary to the general guidelines embodied in the organization's H&S policy.

The follow up interviews indicate that supervisors had no authority to perform good number of H&S leadership roles compared to what are obtained in the developed countries like United Kingdom (UK) and United States of America (USA). The implication of the findings in the Nigerian construction industry is that H&S management system failures are likely to occur, as supervisors in all sections need adequate authority to get their work done. Supervisor's lack of authority implies problems in deciding, in acting, and communicating with workers on how to achieve organizational H&S set goals. For instance, the lack of authority to prioritize worker's H&S over productivity, grant pay raise to worker(s) and authorizes maintenance/repair of tools and equipment when needed, have serious negative H&S implication on construction sites. According to Goetsch (2014: 67), authority rests within a position, and supervisors by virtue of their position and roles should inherit the authority and its corresponding power. It has been found that workers under those supervisors not having authority to perform their supervisory roles are unlikely to perform as safely as workers whose supervisors have adequate authority to perform (Goetsch, 2014: 68).

Data from the survey results indicate that Nigerian construction site supervisors do not know exactly what H&S leadership roles they have on site because, management have not informed them, nor educated them, on their leadership roles. Follow up interviews conducted with top contracting management firms and

supervisors corroborated the survey findings that top management had neglected to promote good H&S supervision, even though both Common Laws and Statues required an employer to provide and maintain a competent supervisor on site. Both survey results and interviews conducted pointed out that Nigerian construction site supervisors do not know exactly what leadership roles they have because management have not communicated to them what were their leadership roles nor had the supervisors attended supervisory and management H&S leadership courses. In addition to the above factor, the dominance of medium and small sized construction firms in the developing countries like Nigeria could be another factor that exacerbated the situation in Nigeria. In instances, where supervisors were not given the adequate authority to exercise their supervisory roles, there will be problems in communicating, influencing, motivating, and inspiring workers towards H&S compliance. Findings from the empirical research and the qualitative review on supervisor's leadership suggest that they need authority to perform effectively on their daily supervisory roles (Yukl, 2011: 12).

H1. Supervisors do not know exactly what leadership roles they have in carrying out their daily H&S supervisory duties.

Construction site supervisors, however, know that they have H&S leadership roles in the areas such as show love and care to workers, create feeling of belong among work team, make phone call to absent or sick worker(s) from work, have listening ear, no blame culture, address worker with empathy, be a role model, show concern to

worker (s) with personal problem, nonetheless they were less aware of their H&S leadership roles in areas such as granting pay raise to worker(s), encourage reporting of unsafe conditions and unsafe behaviours, and recommending changes in organization's H&S policy. In those areas where they were aware of their H&S leadership roles, there was often a disparity in the authority they were given to carry out those H&S leadership roles. This state of affairs often results in failure of H&S management in an organization. Nonetheless, supervisors are they interface between the management and the workforce; they should be given the requisite authority and power to carry out their daily H&S leadership roles in order to achieve the desired H&S improvement in the industry. Yukl (2011: 13) argues that leaders, who pay attention to the importance of open communication with the employees, build trust and develop good working relationship characterized with loyalty leading to better H&S performance. In addition, Taylor (2011: 34) argues that commitment and visible leadership is a prerequisite for sustainability of workplace H&S culture.

H2. Supervisors do not have adequate authority from management to perform their H&S leadership roles

It has been alluded to, that supervisors have no authority to grant pay raise to worker(s), encourage reporting of unsafe conditions and unsafe behaviours, and recommend changes in organization's H&S policy, authorize maintenance/repair of tools/equipment, and prioritize workers' H&S over productivity, and recommend fringe benefits to worker(s). However, the lack of authority in these areas by supervisor could undermine their H&S

leadership roles on sites. The consequences could be poor site H&S performance.

A number of supervisors said that, in many instances, they could have stopped unsafe acts or prevented unsafe conditions on sites, but they had no authority to do so. For instance, prioritizing worker's H&S over productivity, where production conflicts with workers' H&S. Undoubtedly, this scenario could lead to some supervisors to feel powerless. According to Yukl (2011:12) that powerlessness is associated with lack of personal motivation and influence. Motivation and influence are vital ingredients to leadership quality. Lacks thereof, reduced the supervisors to a bull dog that barks but never bite. By not given supervisors the requisite authority required by their position for effective site H&S supervision, the potential exist for failure in organization's H&S management. The importance of supervisors as the key men in industrial accident prevention as dated back as early as 1941 by Henrich without authority is defeated. Hughes and Ferrett (2010: 68) maintain that effective implementation of any site H&S management largely depends on the ability and authority given to site supervisors.

H3. Supervisors do not have the competency to perform their H&S leadership roles

A strong link exists between supervisor's H&S competency and effective site H&S supervision. The position of site supervisors as a site leader, motivator, and coordinator to workers demand that supervisors have relevant H&S skills and competencies (Hinze, 2006: 211; Brauer, 2009: 23). However, supervisors indicated that their competencies/skills in H&S

leadership roles are limited such as recommendation of fringe benefits to worker(s), authorizing maintenance or repair of tools/equipment, and prioritizing worker's H&S over productivity. The findings are not surprising as supervisors are not given the requisite authority or appropriate supervisory and management H&S leadership training in Nigeria. It is suggested that the Nigerian construction companies should take this key important areas seriously in order to improve site H&S performance. Supervisors without the H&S requisite skills and competencies are at high risk to themselves and workers (Goetsch, 2014: 101). In fact, besides site safety officers, supervisor is the next person on site who is believed to be knowledgeable on H&S. Therefore, supervisors should possess the requisite H&S skills for effective conduct of site supervision. According to Hinze (2006: 102), lacks of skills and competencies among site supervisors not only impact negatively on site H&S performance, but also on overall projects performance. The overwhelming impression received from supervisors during interviews showed that supervisors are willingly to perform their supervisory H&S leadership roles but were frustrated by both poor H&S education and training and lack of authority by management.

H4. Supervisor's H&S leadership roles are generally poor

Drawing inference from survey findings and interviews results one might argue that supervisors' H&S leadership roles in the Nigerian construction industry is poor. However, this view must be carefully considered. However, the finding results indicate that site supervisor's H&S leadership is poor, but this not completely a

failing on the part of supervisors themselves. Analysis of the data indicates that supervisors are not clear as to what their H&S leadership roles should be. This could be related to, in part, from a lack of formal authority in relation to their H&S leadership roles and poor H&S education and training. In addition, many supervisors generally believe that their H&S supervisory roles are limited to specific areas.

Generally, there is gross failure on the part of management for not clearly defining supervisors' H&S leadership roles, nor ensures that adequate formal authority is given to them to perform their daily H&S supervisory roles. In addition, the failure of top management to empower supervisors through H&S education and training impact negatively on site H&S performance.

Conclusions and recommendations

Supervisors do not know precisely where their H&S supervisory leadership roles begin and where it ends. Although some site supervisors knew their H&S leadership roles such as making phone call to absent or sick worker(s) from work, wearing correct PPE on site, be a role model, have a listening ear, creating feeling of belonging among the work team, and discussing H&S problems with management, holding regular site H&S meeting or toolbox talks, however, they were less aware of their leadership roles in areas such as granting pay rise to worker(s), recommending fringe benefits to workers, authorizing maintenance or repair of tools or equipment, and recommending changes in organization's H&S policy to management. However, in those H&S leadership roles the supervisors are conversant with, there are

still gaps in the authority given to them by management to perform the tasks or roles effectively. This reflects a failure or oversight in H&S management system in an organization. Site supervisors are the interface between management and the workforce and therefore, they play a key role in ensuring that site H&S management system operates effectively. In the Nigerian construction, it appears from the results of this study that the H&S leadership roles of site supervisors are not properly performed. The oversights associated with it, are the areas requiring urgent attention by both the large, medium and small sized construction companies in Nigeria. The study therefore, recommends that:

- Site supervisors should be given formal authority to perform their daily supervisory roles.
- Construction companies irrespective of their sizes should ensure that supervisors in any section/ department attend supervisory and management H&S leadership courses.
- The selection and appointment of staff for supervisory position should be based on skills and competency. Supervisors must have the necessary skills and aptitude for supervisory activities, such as communication, and leadership qualities that could help them to gain respect from workers.
- Top management should allocate adequate financial and other resources for supervisory and management leadership training to all categories of supervisor.

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- Answers to reviewer's comments
- 1) The novelty in the work is supervisor's health and safety (H&S) leadership roles as supposed to supervisor's H&S management roles. Globally, organizational effectiveness is moving away from management to leadership, construction industry inclusive.
 - 2) Researches on health and safety leadership have focused attention on top management (Directors), managers', and site managers' safety roles. Little or no research on site supervisor H&S leadership has been conducted in the South-South part of Nigeria. This adds to existing body of knowledge.
 - 3) The safety behavioral aspect pointed out has been addressed.
 - 4) The recommendations issues have been addressed.
 - 5) Harvard referencing style adopted
 - 6) Typographical errors addressed.