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EXPLORING THE INTERACTIONS BETWEEN WORKFORCE ENGAGEMENT AND SAFETY IN NIGERIAN CONSTRUCTION INDUSTRY

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Abstract

The concept of worker engagement is about construction workers on a construction site actively participating in improving health and safety so that every worker on site benefits from safe and healthy working conditions. It includes workers proactively involved and collaborating in matters related to their health, safety and wellbeing at work. This paper reflects on the complex interactions between workforce engagement and health and safety procedures in the Nigerian construction sector. This study adopted a descriptive research design using 60 survey questionnaires to explore worker participation, including their level of training, leadership support, and incentive schemes. The findings suggest that the level of training available to workers and their level of participation in health and safety-related practices were positively correlated suggesting that workers' commitment to upholding a safe workplace is favourably impacted by the investment in systematic training programs. Leadership support and incentives could potentially encourage increased worker involvement in promoting health and safety and that engagement from senior leadership could influence and promote safety culture within the workplace.

Keywords: Workforce engagement, Nigeria, safety, training, leadership, incentives.

1. INTRODUCTION

The everyday use of the word engagement refers to enthusiasm, commitment, involvement, passion, dedication, immersion, absorption, zeal etc, and existing studies struggle to agree on the absolute concept of workforce or employee engagement within the workplace. Worker engagement in construction is a process where every worker on a construction site could actively participate in improving health and safety by influencing others [5]. This approach recognizes that workers have valuable knowledge and experience in their occupations, making their participation essential for creating environments that are safer and better. Employee involvement in OSH has changed over time in the Nigerian construction sector as a result of a variety of reasons, including legal changes, growing public knowledge and awareness of safety issues, and an understanding of the advantages of incorporating employees in safety matters. Lawani et al., (2017) consider worker engagement as: "A process where every worker on a construction site is motivated and empowered to participate in improving health and safety through meaningful discussions with workers in advance of decisions being taken, influencing others, and is committed to sharing their experiences and knowledge; and managers positively encourage workers to identify and resolve health and safety problems in a culture of trust, leading to every worker on site benefiting from safe and healthy working conditions."

To encourage better working conditions within the Nigerian construction industry, there are rules and regulations through organizations like the Federal Ministry of Labour and Employment and the National Council for Occupational Safety and Health. Even with these regulatory initiatives, the Nigerian construction sector experience issues relating to lack of enforcement of safety standards, lack of extensive training programs, and a subpar safety culture resulting in higher incidence of accidents and health hazards among construction workers [8].

The issues of health, safety and wellbeing of workers goes beyond the provision of a safe and good working environment for workers but also includes the engagement and the attitude regarding safe working in the industry. The causes of accidents in the construction industry include unsafe working methods, improper work plans, the human element, inadequate job site conditions, unsafe equipment, and poor management. The human element and poor management of occupational safety on site depends on the engagement of workers around the issues of safety on construction sites. Dester & Blockley (2003) suggested that better management of risk can bring significant opportunities to add

value to the construction team including the client. However, it is thought that a primary source of dangerous behaviour could be the employees' lack of adopting effective safety measures when they undertake their duties and this is subject to their perception of risks and the safety information available to them on construction sites. Workers' perceptions and understanding of the sources of risk and available safety information within the workplace could change in relation to workers' general cognitive abilities [3]. Construction workers are subject to significant physical and mental workload as they perform their work, which alters their risk perception and comprehension [2]. The [9] report on Nigerian construction market size was estimated to be \$136.6 billion in 2023 and there are projections of an Average Annual Growth Rate of 3% during 2025-2028 with investments in electricity, transport, industrial, infrastructure, and oil and gas projects. This increase is in line with other emerging nations. The lives and safety of those working in the construction sector are unfortunately put at risk as a result of poor safety practices and procedures. To guarantee that health and safety permeate every level of the organizational structure from management to the construction workers on job sites, an all-inclusive proactive measure need to be adopted. This include workers education and engagement on safe working practices; promoting involvement and leadership of senior management as a proactive strategy to ensure a safe work environment. This study explores the interaction between workforce engagement and OSH practices in the context of the Nigerian construction industry through the lens of the interactions between levels of worker engagement relative to training; leadership support, and available incentive support to workers.

2. BACKGROUND

The Nigerian construction industry contributes significantly to the economy but the industry struggles with the occupational health and safety (OSH) of the workforce. The Institute of Safety Professionals of Nigeria (ISPON) is Nigeria's focal point for safety standards and regulations. In accordance with [19], occupational health and safety is considered as the science of anticipation, recognition, evaluation, and control of workplace hazards arising from work activities that could impair human health and safety. This emphasizes the significance of identifying potential risks and hazards, evaluating their potential impact on human health and safety, and implementing appropriate measures to control and mitigate these risks. The Federal Ministry of Labour and Employment [7] has statutory responsibility for safeguarding and promoting the safety, health and wellbeing of workers in their various workplaces (Factories), through workplace Inspections, accident investigations, Safety and Health awareness campaigns, workplace Safety and Health audit, etc. It is also involved in developing policies, regulations, guidelines, codes of practice and other instruments, with a view to preventing the occurrence of work-related accidents, injuries, diseases/ill health, and deaths and enhancing occupational safety and health performance levels for higher productivity among the workforce. These involve the promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations, including risk prevention and control as well as the requirement of customizing working conditions to the capabilities of the workforce.

Therefore, the concept of construction workforce engagement highlights the value of worker involvement, knowledge, and opinions in identifying workplace and work-related hazards, mitigating risks, and developing a safe culture. This can build on workplace trust and genuine benevolence within the organisation [13] through cooperation, communication, and taking an active role in OSH activities, employees can actively contribute to a safe and healthy workplace. Worker engagement is especially important in the context of Nigerian construction industry because the industry struggles with poor regulatory compliance, and a lack of training opportunities resulting from contractors that are more profit-conscious than securing the H&S of their workers [1]. Engaged employees actively and favourably contribute to the safety culture, going above and beyond merely adhering to safety laws. This culture encourages open communication, companionship, and a shared dedication to safety. When workers are engaged, it increases the likelihood that they will recognize potential risks, make suggestions for improvement, and take part in safety measures which ultimately could increase safety performance [22]. Employee empowerment and participation are geared towards an enhanced OSH outcome and are also aligned with the concepts of worker engagement globally [12]. Organizations can benefit from the practical experience of workers who are regularly exposed to hazards by incorporating them in decision-making related to safety policies, practices, and hazard identification. This participation not only improves assessing and addressing work-related risk assessment, but could also raise the morale of the workforce and job satisfaction.

Within the Nigerian context, there are obstacles to overcome in order to achieve genuine worker participation and engagement in the construction sector. Effective workforce engagement is hampered

by multi-ethnic language barriers [21], inadequate training, hierarchical organizational structures, and restricted access to safety information, including the cultural diversity [16]. A holistic strategy in the forms of specialized or tailored training programs, improved communication channels, leadership support and enabling employees to express their concerns without fear of reprisal are broad initiatives capable of promoting worker engagement and providing safer working conditions for construction workers. A workplace that places a high priority on safety sends a message of consideration and respect to its employees. Employees are more likely to feel valued and supported when their employer implement measures to ensure their safety. This, in turn, leads to improved job satisfaction, higher morale, and increased engagement with their tasks. The sense of empowerment of workers allows employees to focus their energy on their responsibilities, leading to higher productivity, performance and improved wellbeing [12].

Many Nigerian construction employees are not aware of their rights to a safe workplace or the significance of OHS procedures. A lack of appropriate instruction and training results in a lack of knowledge of potential risks and protective measures and some level of awareness of Design for safety (DfS), training and education related to DfS could be beneficial to the workers [14]. Nigeria has OSH legislation and regulations; however, they are frequently not enforced, specific, monitored or put into practice [1]. Due to the lax regulatory environment, both businesses and employees may fail to comply with the regulatory requirements [20]. Personal protective equipment (PPE) is a vital component of guaranteeing worker safety in the construction sector, yet access to PPE is limited and many Nigerian construction operatives undertake their tasks without suitable PPE, thus putting them in danger [15]. Worker participation in OHS practices may be hampered by other cultural traits and attitudes toward safety, shortcuts and disdain for safety procedures and pervasive poor safety culture. A sizeable percentage of the Nigerian construction industry operates unregulated, and employees frequently lack official employment agreements and benefits. As a result of their potential for job loss or reprimand, employees may be reluctant to voice safety concerns due to the informal nature of their employment. Nigeria is a multi-ethnic and multi-lingual nation, with several distinct languages spoken in various parts of the country [21] and language difficulties might make it difficult to effectively disseminate safety training and information.

The participation of workers in OSH practices has presented various difficulties for the Nigerian construction sector. Despite existing legal frameworks and rules, a low level of engagement has been attributed to a lack of knowledge, insufficient training, and insufficient enforcement of safety regulations. Even in situations where workers demonstrate some level of engagement, their ideas and proposals are frequently disregarded, resulting in a sense of disempowerment, diminished level of trust and lowers their enthusiasm to actively engage in safety activities [12,13]. Therefore, the aim of this study is to explore the degree of workforce engagement and the interaction with OSH practices because it is crucial in the Nigerian construction sector, given the fast-paced urbanization and infrastructural developments and construction projects currently being undertaken in the country.

3. STUDY DESIGN

This study adopted online questionnaire because of the flexibility and efficiency of data acquisition from construction workers situated in Nigeria. The closed-ended questions adopted a five-point Likert scale for determining respondents' levels of agreement with certain items central to the questionnaire design [4,10], including some open-ended items for further feedback. Five-point Likert scale of: "1 - Strongly Disagree," "2 - Disagree," "3 - Neutral "4- Agree," and "5 - Strongly Agree" was adopted. The study assigned categories to each variable and divided the data into various groups using nominal scales. Ordinal scales, on the other hand was used to rank data and determine the relative order or level of participant agreement. The ordinal scale was crucial in sorting data according to pre-established criteria, but the nominal scale was crucial in classifying data into groups. The main participants were construction industry professionals and a stratified sampling strategy was adopted [18] and analysis conducted using both descriptive and inferential statistics. The dataset was heavily weighted toward quantitative characteristics, and SPSS was used for analysis [17]. The descriptive research approach that permits a thorough investigation using questionnaires to assess aspects of employee engagement, including the level of training, leadership support, and incentive schemes were explored. The 60 construction workers, (with requirement to be either project engineers, project managers, supervisors, and construction operatives) make up the participants for this study (**Table 1**). This group were considered for this study because they directly contribute to the execution and management of construction projects, and their involvement in occupational health and safety practices is essential to the success of the sector

as a whole. Sixty survey questionnaires with closed-ended options with a carefully curated list of predetermined answers and open-ended item were deployed.

Table 1: Demographic information

| | Frequency | Percent | Valid Percent | Cumulative Percer | |
|---------------------------|-----------------------------|---------|---------------|--------------------|-------|
| Valid | Male | 43 | 71.7 | 71.7 | |
| | female | 17 | 28.3 | 28.3 | |
| | Total | 60 | 100.0 | 100.0 | |
| Educational Qualification | Frequency | Percent | Valid Percent | Cumulative Percent | |
| Valid | Engineering-related Degrees | 50 | 83.3 | 83.3 | 83.3 |
| | Other Degrees | 10 | 16.7 | 16.7 | 16.7 |
| | Total | 60 | 100.0 | 100.0 | 100.0 |

4. FINDINGS AND DISCUSSIONS

The findings regarding the relationship between the extent of training provided to workers in the Nigerian construction industry and their level of engagement in occupational health and safety practices ($P \leq 0.05$) suggests a significant relationship (**Table 2**). The correlation coefficient(r) of 0.650 suggests that there is a moderate positive significant relationship between the extent of training provided to workers and their level of engagement with occupational health and safety practices. The lack of adequate training of workers, lack of adequate safe work equipment including PPE [15], tight deadlines and workplace pressure are suggested as some of the factors that deter workers from taking safety as a priority. This finding suggests that investing in worker training could help to enhance safety procedures and outcomes, and this could have practical benefits for safe work practices.

Table 2: Correlations between the extent of training and level of engagement

| | | Worker engagement | Extent of training |
|--------------------|---------------------|-------------------|--------------------|
| Workers engagement | Pearson Correlation | 1 | .650** |
| | Sig. (2-tailed) | | .000 |
| | N | 60 | 60 |
| Extent of training | Pearson Correlation | .650** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 60 | 60 |

** . Correlation is significant at the 0.01 level (2-tailed).

The findings on the relationship between leadership support (government, and policymakers) and workforce engagement in occupational health and safety activities in Nigeria are shown in Table 3. Table 3 with correlation coefficient (r) 0.815 implies high positive link between the two variables. With P value 0.00 lower than $P \leq 0.05$, it is suggested that support from leadership and workforce engagement in occupational health and safety activities are strongly correlated and statistically significant. This suggests that increased leadership support could lead to increased trust and an empowered workforce [12,13] leading to high level of engagement in occupational health and safety activities. The role of empowered supervisors within a construction project could foster a culture of trust amongst the workers; leading by example and highlighting the significance of following safety procedures. Direct engagement of supervisors by the leaders and provision of feedback to co-workers will suggest that safety is not just a protocol but a shared value. A shared commitment to safety could also be fostered by the leadership of supervisors as they consequently act as the initiators of good change where safety is not only a requirement but a shared culture. This could have wider implications for managerial and policy choices that are associated with better workplace health and safety procedures.

Table 3: Correlations between leadership support and workforce engagement

| | | Worker engagement | Leadership Support |
|--------------------|---------------------|-------------------|--------------------|
| Workers engagement | Pearson Correlation | 1 | .815** |
| | Sig. (2-tailed) | | .000 |
| | N | 60 | 60 |
| Leadership Support | Pearson Correlation | .815** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 60 | 60 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the findings on the relationship between incentive programs and workforce engagement. The correlation coefficient(r) of 0.744 suggest a strong positive relationship between incentive programs and workforce engagement in relation to OSH. With the p-value of 0.00 which is less than 0.05, there is a significant relationship between incentive programs and workforce engagement in relation to the adoption of occupational health and safety initiatives. Employee engagement with workplace safety practices could be strongly influenced and encouraged by associating skill development to career advancement. Workers may be inspired to continuously follow safety rules if they understand that their commitment to workplace safety could be an incentive for their professional development. Employers could potentially foster a culture where workers that are highly committed to adhering to the safety regulations as well as highly driven to improve their skills and professional advancement are incentivised. This all-encompassing strategy for employee development would not only benefit the individual worker but could also help the organisation to a safer, more productive, and cohesive workplace.

Table 4: Correlations between incentive programs and workforce engagement

| | | Worker engagement | Incentive programs |
|--------------------|---------------------|-------------------|--------------------|
| Workers engagement | Pearson Correlation | 1 | .744** |
| | Sig. (2-tailed) | | .000 |
| | N | 60 | 59 |
| Incentive programs | Pearson Correlation | .744** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 59 | 59 |

** . Correlation is significant at the 0.01 level (2-tailed).

The study suggests a relatively positive and statistically significant association between workforce engagement in occupational health and safety practices and the level of training available to them. This knowledge emphasizes the crucial part training and education could play in affording workers the skills and knowledge required to manage and prioritise OSH practices within the workplace. The findings also allude to the significance of top-down leadership support and policy implementation useful in creating a safety-conscious culture within the industry. Incentive programs and workforce engagement suggest how effective incentive programs could be towards motivating workers to actively participate in safety-related activities. The findings show the interdependence of training, incentive programs, and leadership support with workforce engagement as essential precursors for improving OSH practices and standards and potentially reducing workplace accidents in construction.

5. CONCLUSIONS

An engaged workforce with awareness of safety procedures and knowledge of workplace safety issues, could become invaluable asset to the organization if they are further provided with the opportunity to be regularly involved in OSH training, provided adequate leadership support, and incentives to stimulate their involvement in workplace OSH practices. An understanding of how training, leadership support,

incentive programs interact to influence workforce engagement within the context of the Nigerian construction industry was explored and emphasis on the strong link between training and workforce engagement highlights the crucial importance of OSH education and skill development. This interaction suggests that the Nigerian construction industry could prioritise and invest in OSH training programs capable of empowering workers with the skills they require towards achieving a safer working environment and reduced incidents. The influence of leadership support on workforce engagement and OSH practices and potentially safety culture within the construction industry could be significant. This highlights the importance of a top-down strategy that promotes OSH within the workplace, sets an example for workers, and strengthens a compliance culture from the senior management of the business to the entire workforce. The introduction of an effective reward, incentive, or recognition scheme could be a mechanism for workers to be influenced and encouraged to adopt safe behaviour and at the same time enhance employee participation whilst also fostering a sense of responsibility and ownership of the organisational OSH practices. A methodical strategy involving improved and targeted workforce OSH training, strong leadership commitment, and well-designed incentive systems could have the ability to shape the safety culture landscape within the Nigerian construction industry. This study would have benefitted from a more robust exploration by adopting a mixed method approach that could have provided a more holistic set of outputs from the lens of the participants.

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