

WORKPLACE INCIDENT REPORTING: A CASE STUDY OF THE NIGERIAN CONSTRUCTION SECTOR

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The complex nature of the construction activities, equipment involved and associated work environment creates the potential for increased incidence occurrence. The risk is significantly higher in Low to Medium Income Countries (LMIC) where negligence, non-compliance with safety rules and poor management commitment towards a positive safety culture prevails. Relatedly, it undermines the reliability of incident data in understanding workplace risks and development of adequate policies and procedures in these work environments. The present study assessed Nigerian construction workers perceptions and barriers associated with incident reporting and advanced measures, aimed at improving reporting culture to aid incident investigation process. An online cross-sectional survey encompassing forty questions was categorised into seven key sections and administered. The results revealed a significant percentage of the study population, comprising of construction workers, were under-reporting incidents or not reporting any form of incidents. To strengthen the reporting culture among workers, a blame culture that encourages negative consequences related to workplace incident exists, and this must be addressed appropriately.

Keywords: workplace accident; blame culture; incident; near miss; reporting culture

INTRODUCTION

The construction industry has been characterised by under-reporting of incidents making the incident statistics sources of some nations unreliable as they present unrealistic estimates of the actual figures (Heuvel *et al.*, 2017; Kamoli *et al.*, 2022). This under-reporting of incidents exists both at the individual and organisational levels. At the individual level, it involves the failure of workers to report workplace injuries and illnesses to internal authorities at their workplaces, while at the organisational level, there is under-reporting of reportable injuries and illnesses by businesses to the regulatory bodies (Probst *et al.*, 2019; Kamoli *et al.*, 2022). Another dimension to organisational level under-reporting is when organisations manipulate safety records by under-reporting incident and injury figures while presenting their Health and Safety performance data during the contract bidding process (Egwinatum and Awo-Osagie, 2019). Under-reporting of incidents results in the utilisation of inaccurate information and the consequences include inadequate incident investigation

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procedure, ineffective policies and recurrence of workplace incidents (Kamoli *et al.*, 2021). It has been estimated that around 33% of reportable incidents were not reported to the Health and Safety Executive under Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) in the United Kingdom (HSE, 2007).

Numerous regional studies have shown that the current system for generating national estimates of work-related injuries and illnesses significantly underreports both chronic conditions and acute injuries (Kamoli *et al.*, 2022; Ehiaguina *et al.*, 2024). The fundamental reason behind this commonly observed underreporting is that there exists a heavy reliance on self-reporting by employers and sometimes employees, resulting in significant biases and inaccuracies. In addition, the nature of the injury illnesses (acute or chronic), workplace culture and dynamics, along with statistical and administrative challenges at workplace further complicate the rates of reporting, as evidenced in studies conducted in Sweden, South Korea and Nigeria. It has also been established that policy and regulatory factors tend to play a crucial role in governing the injury and illness reporting rates (Ehiaguina *et al.*, 2024). It is important to note that the above outlined context discusses only the immediate or proximal causes of the accidents and may limit a comprehensive understanding of deeper accident causation. Theoretical frameworks such as the Systems-Theoretic Accident Model and Processes (STAMP) framework emphasize that accidents often arise from complex interactions between multiple system levels, including latent organisational and managerial factors (Zhang *et al.*, 2022). Well established models like the Reasons's Swiss Cheese model, commonly used in high hazard industries, illustrates how systemic weaknesses can align with active failures leading to accidents (Reason, 2016). By only considering immediate causes, there is a risk of overlooking deeper systemic and organisational issues that may predispose a system to eventual failure and increased incident frequency.

The construction industry is a hazardous industry, and the hazardous nature becomes more pronounced in a developing country like Nigeria due to inaccurate and unreliable safety records, outdated regulations and frequent workplace incidents. There is a high rate of work-related incidents in the Nigerian construction sector, and many go un-reported due to poor record-keeping and reporting by organisations (Agwu and Olele, 2014). Nigeria is experiencing steady growth in construction activities, but this is not commensurate with the health and safety performance (Okoye *et al.*, 2016), as workers are continually exposed to several health and safety risks such as fall from heights, vehicle incidents, cement burns, fractures, bodily injuries and backpain (Afolabi *et al.*, 2021). These workplace incidents result in pain to the victims, de-motivate workers, increases project costs, lowers productivity, delays project progress and damages the reputation of organisations (Okolie and Okoye, 2012). The Factories Act 2004 of Nigeria contains the legal requirements for the safety, health and welfare of every Nigerian worker. Embedded in this piece of legislation are legal obligations for reportable incidents with punishment for non-compliance set at N1,000 (less than £2), an amount incomparable with such an offence (Adaeze, 2021).

A strong correlation between the construction sector and the Nigerian economy exists as the growth of the construction industry leads to significant economic development (Oladinrin *et al.*, 2012). The construction sector contributed 3.88% to the nation's Gross Domestic Product (GDP) in 2015 (Abubakar *et al.*, 2018) while the projection for Nigeria's construction market is an annual growth rate of 3.2% from 2021 to 2050 (National Bureau of Statistics, 2015). The Nigerian construction worker is exposed to

several safety and health issues which include respiratory diseases, musculoskeletal disorders (MSDs), injuries to body and eyes, fractures and dermatitis (Afolabi *et al.*, 2021). In the construction safety literature pertaining to Nigeria, one study on 60 building construction sites revealed that the top causes of incidents were, lack of adherence to safety procedure, non-use of personal protective equipment, use of defective equipment and use of substandard construction materials, leading to injury from equipment, stepping on sharp objects and fall from heights (Orji *et al.*, 2016). Non-compliance with safety rules among workers has also been mainly ascribed to negative safety attitudes and reflecting poor commitment by management towards a positive safety climate (Moda *et al.*, 2022).

Furthermore, periodic inspections and safety audits by competent personnel are vital in assessing compliance with safety procedures and improving the safety performance of the Nigerian construction industry (Ayangade and Ikpo, 2021). While the number of work-related incidents in the construction sector in Nigeria is high, a lot of these incidents are not reported by contractors to the appropriate ministry and this affects the reliability of the Nigerian incident data (Agwu and Olele, 2014). Under reporting of incidents affects the implementation of health and safety policies as well as the prevention of injuries and illnesses (Adetunji *et al.*, 2021). In addition, it was established that increasing the health and safety awareness of personnel in the construction industry in Nigeria will have the highest impact in enhancing the reporting occupational incidents (Kamoli *et al.*, 2022). While previous studies have examined under reporting of incidents and injuries at the organisational level in the Nigerian construction industry, the present study assessed barriers to under-reporting of workplace incidents at the individual level with an aim to improve the incident reporting culture.

METHOD

A quantitative non-experimental research design involving the use of survey questionnaires was used to study the opinions of a representative sample within a population. The survey study was cross-sectional to collect data at a specific point in time. The questionnaire was developed using information from existing literature and the authors past experiences working in the construction industry in Nigeria. Pilot study was conducted to determine its suitability and quality in support of the planned research study. The questionnaire was distributed to one university lecturer, four construction health and safety professionals, and three construction workers in Nigeria to give their feedback concerning the validity, relevance, inclusiveness, and clarity of the survey questions. Feedback received was used to revise the questionnaire for the actualisation of the research aim. The final research survey questionnaire comprised of seven sections encompassing thirty-nine closed-ended questions and one open-ended question.

Only construction workers in the Nigeria construction industry, above the age of 18 years, participated in the study. The set of criteria used to ascertain workers eligibility to participate in the study were workers between 18 and 65 years, only construction workers working in Nigeria, construction workers (scaffolders, painters, electricians, labourers, plumbers), and construction workers who can read, write and have access to internet facility; exclusion criteria - construction workers outside Nigeria, construction managers, architects, designers, office personnel in construction companies. The URL link to the survey questionnaire was sent out via email messages, WhatsApp messages and selected construction industry professional bodies social media platforms (to

enhance participation in the survey). Prior to completion of the survey, participants were assured of their right to withdraw or refrain from answering any or all the questions of the questionnaire at the participant information page. The participants were able to access the questionnaire only after their consent was obtained digitally. The Nigerian construction sector has an estimated population size of 7 million construction workers. To achieve a 5% acceptable margin of error and a confidence level of 95%, the appropriate sample size using the sample size calculator (Moda *et al.*, 2022) was determined to be 385. In total, 386 responses were obtained and the data from these responses were used to inform the study findings. The survey data were collected between 28th June 2022 and 5th August 2022.

Statistical Package for Social Sciences (SPSS) (v.28) was used for the data analysis. Descriptive statistics were used to describe demographic characteristics of the study population, perceptions, knowledge and barriers to incident reporting. Pearson correlation was applied to measure the degree of association between the demographic data collected and barriers to incident reporting, incident management experiences and perceptions associated with incident reporting.

RESULTS AND DISCUSSION

A total of 386 respondents completed the questionnaire and 40% of the respondents are between 36-44 years (40%) and 42.6% had 1-10 years' experience in construction. Table 1 shows the respondents knowledge of the importance of incident reporting in the workplace. Majority of the respondents (83%) had sound knowledge of what an incident entails which includes injury to worker, damage to equipment and near-misses (e.g., worker being almost injured). Forty-six (46) of the respondents, representing 12% of the participants, were not knowledgeable about what constitutes an incident. With a high proportion of the respondents in the age brackets 27-35 years (33%) and 36-44 years (40%), the group of construction workers falling between 27 and 44 years accounted for 73% of the Nigerian construction workers. The construction industry is a male dominated industry, and this was reflected in our study with 80% of the respondents being males and only 15.1% females. These coherent metrics of age and gender distribution among our study respondents indicates that our study population is an acceptable representation of the real-time global and regional construction worker populations.

Table 1: Respondents knowledge on the importance of incident reporting

Knowledge Assessment	Yes, n (%)	No, n (%)	Not Sure, n (%)
Does an incident include all the following: injury to worker, damage to equipment and worker being almost injured?	318 (83.0)	46 (12.0)	19 (5.0)
Do you know it is important to report all incidents?	370 (96.6)	9 (2.4)	4 (1.0)
Do you know reporting of incidents enables management to be aware of the issues and hazards in the workplace?	377 (98.5)	2 (0.5)	4 (1.0)
Do you know reporting of incidents will allow for proper investigations to be carried out to determine the causes?	371 (96.9)	5 (1.3)	7 (1.8)
Do you know reporting of incidents/incidents helps to improve the health and safety measures in the workplace?	369 (96.6)	3 (0.8)	10 (2.6)
Do you know that you are to report incidents/incidents helps to prevent it from happening again?	371 (96.6)	6 (1.6)	7 (1.8)

The greater proportion (96.6%) of the respondents agreed on the importance to report all workplace incidents Table 1. Relatedly, 98.5% of the construction workers surveyed were positive that reporting incidents would enable management to be aware of the hazards as well as the health and safety issues in the workplace. Ninety-six percent (96.9%) of the respondents affirmed that reporting of incidents allowed for proper investigations to be carried out to determine the causes, while 1.3% differed and 1.8% maintained a ‘not sure’ position on the issue. This knowledge is vital as it guides workers in identifying incidents to report them appropriately (Kamoli *et al.*, 2022). Table 2 showed 41.6% of the respondents either agree or strongly agree that they would not report an incident if nobody was injured in the process, and this was the topmost reason for their refusal to report workplace incidents (Table 2).

Table 2: Reasons for the under-reporting of incidents in the workplace by construction workers

Incident reporting barrier	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Nobody was injured because of the incident	55 (14.4)	168 (44.0)	96 (25.1)	63 (16.5)
Lack of proper response from management from previous reports	35 (9.2)	189 (49.9)	102 (26.9)	53 (14.0)
The fear of losing one’s job	48 (12.5)	186 (48.3)	106 (27.5)	45 (11.7)
It may result in the punishment of co-worker	44 (11.5)	196 (51.0)	116 (30.2)	28 (7.3)
The reporting tool is complex	40 (10.4)	214 (55.9)	113 (29.5)	16 (4.2)
The fear of being punished / victimized by management	42 (11.0)	202 (52.7)	98 (25.6)	41 (10.7)
Lack of awareness on how to report incidents	50 (13.1)	209 (54.7)	93 (24.3)	30 (7.9)
Someone was injured but not a serious one	78 (20.5)	213 (55.9)	68 (17.8)	22 (5.8)

Cross-tabulation of key barriers to incident reporting in relation to construction workers’ years of experience is shown in Figure 1. Across all experience levels, the most common reason for not reporting incidents was the perception that nobody was injured because of the incident. This was particularly prevalent among workers with 21-30 years of experience (53%) and those with 1-10 years (45%), suggesting a persistent cultural norm in the industry that prioritises outcomes (i.e., injury or damage) over proactive safety practices like near-miss reporting. A notable trend across experience groups was the fear of being punished or victimised by management, which was reported by 45% of workers with 0-1 years of experience and increased slightly with years of experience, peaking at 50% for the most experienced group (21-30 years). This finding implies apprehension regarding retaliation is not limited to early-career workers, but remains an entrenched barrier across career stages, reflecting a systemic issue in safety culture and trust.

Similarly, lack of proper response from management was a significant barrier across all groups, with the highest incidence (59%) reported by those with over 20 years of experience. Possibly due to repeated exposure to unaddressed reports, experienced workers may develop cynicism toward the incident reporting process. The findings highlight that while some barriers, like procedural awareness, diminish with experience, others—such as fear of retaliation, lack of management response, and normalisation of under-reporting—persist or even increase over time. The perception of the Nigerian workers to the reporting of incidents is described in Table 3 where one

third of the respondents (36.5%) felt that incident investigation process was mainly for supervisors and managers and 64.5% confirmed that construction workers are not involved in the incident investigation process (Table 3).

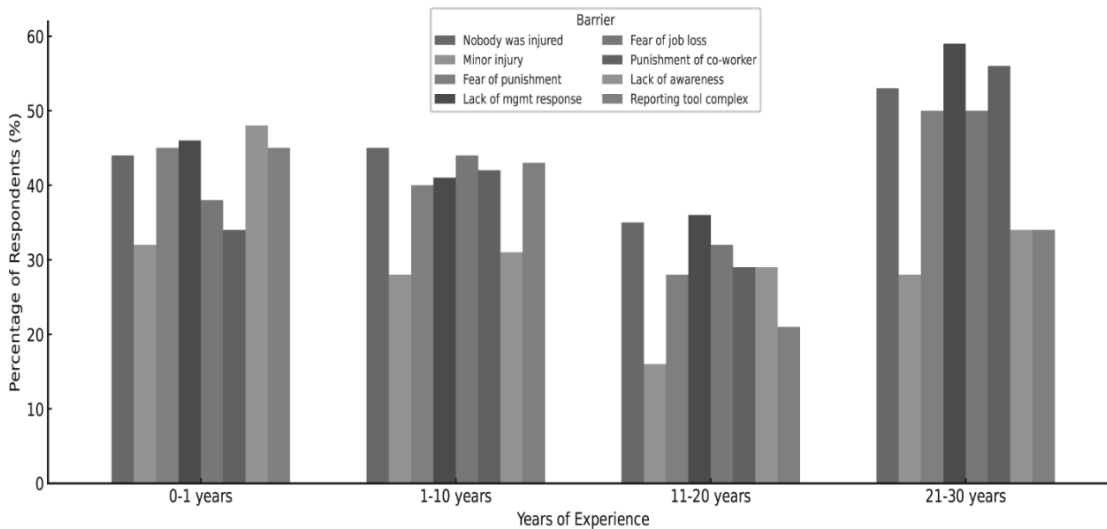


Figure 1: Cross tabulation of incident reporting barrier with years of experience

Close to half of the respondents (44.4%) believed that reporting a workplace incident may put them in some sort of trouble. Ninety-Four respondents, which represented 24.7% of the study population, believed that incidents should only be reported when it had resulted in an injury to a worker or equipment/property damage. It has been reported that some organisations blame and punish workers for causing workplace incidents and this has resulted in the under-reporting of workplace incidents (Eskandari *et al.*, 2017).

Table 3: Nigerian construction workers perceptions to incident reporting

Nigerian construction worker perceptions to incident reporting in the workplace	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
Reporting of incidents is the responsibility of health and safety personnel	56 (14.7)	213 (55.7)	87 (22.8)	26 (6.8)
The incident investigation process is for supervisors and managers	67 (17.5)	176 (46.0)	118 (30.8)	22 (5.7)
Reporting of incidents may put me in trouble	30 (7.8)	183 (47.8)	146 (38.1)	24 (6.3)
Reporting of incidents should be done only when there is injury to personnel or property damage	87 (22.8)	200 (52.5)	69 (18.1)	25 (6.6)
As a construction worker, I should be trained on incident reporting before/during construction projects.	12 (3.1)	15 (3.9)	167 (43.7)	188 (49.3)
Reporting of incidents is not effective as management will not respond positively	66 (17.3)	191 (50.0)	89 (23.3)	36 (9.4)

Table 4 shows the incident management experiences of the Nigerian construction workers. The documented response showed that 86.5% of them responded positively to having received some level of training on incident reporting, while 80% had been informed about the incidents which occurred on their construction sites or projects. This shows that the respondents have a good level of awareness and communication regarding workplace incidents, which aligns with studies emphasising the role of training and communication in effective safety management and incident reporting (Hinze *et al.*, 2013). However, only 35.5% of the respondent either agree or strongly

agree that they are involved in any investigation process when necessary, indicating a gap in participatory safety practices (Table 4). This limited involvement may reflect a top-down approach to incident reporting and management, which can hinder safety outcomes at the workforce level (Reason 2016; Probst *et al.*, 2019). On management's response to incidents, 72.2% of the construction workers responded that management responded swiftly when incidents were reported and an overwhelming majority (90%) of the respondents agreed that they were aware of the different channels created by management for the reporting of incident in the workplace. Although these are positive indicators, the received responses showed that 19.5% of the respondents and their colleagues have either been punished or victimised for reporting a workplace incident and is a significant cause of concern. Fear of retaliation can severely undermine trust in reporting systems leading to underreporting, as observed in several studies on organisational safety culture (Probst *et al.*, 2019).

Table 4: Incident management experiences of the Nigerian Construction workers

Incident management experiences	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
As a construction worker, I am trained on incident reporting before/during construction projects.	10 (2.6)	41 (10.9)	229 (60.4)	99 (26.1)
As a construction worker, I am informed about the incidents which has occurred on the construction site	19 (5.0)	57 (15.0)	205 (53.9)	99 (26.1)
The lessons learned from incidents on the construction site are shared with us.	18 (4.8)	59 (15.6)	198 (52.7)	101 (26.9)
I/my colleague is/are involved in the investigation processes	35 (9.1)	212 (55.4)	106 (27.7)	30 (7.8)
Management responds quickly to incidents reported.	20 (5.2)	87 (22.6)	221 (57.6)	56 (14.6)
I am aware channels to report incidents	8 (2.1)	30 (7.9)	255 (66.9)	88 (23.1)
The incident reporting channels are effective and result in positive responses from management	13 (3.4)	86 (22.8)	215 (56.9)	64 (16.9)
I/my colleague have been punished/victimized for reporting an incident	43 (11.3)	263 (69.2)	55 (14.5)	19 (5.0)

The perception of the respondents that incidents should only be reported when there had been an injury to personnel or damage to property, in addition to most of the workers being oblivious to the importance of reporting near-miss incidents, indicates that reporting of near-miss incidents, a proactive approach to resolve hazards and prevent the occurrence of injury to personnel or damage to property, is very much lacking (Sheikhtaheri, 2014). Majority (93%) of the respondents agreed that construction workers should be trained on incident reporting to improve the incident reporting culture. This would help in blame-free reporting and learning from incident causative factors, an important component emphasized by global organisations on safety (WHO, 2022). To effectively investigate an incident, 63.5% of the respondent disagree with the view that leaving the investigation to supervisors and managers might not efficient but rather carrying every party along is seen as a better strategy (Table 3). It is vital that management and workforce are involved in the incident investigation process for a beneficial outcome as the inclusion of workers or their representatives in the investigation process would allow the harnessing of their practical knowledge when defining appropriate corrective actions (HSE, 2007).

Additionally, this would drive home the message that incident investigation is for the benefit of everybody in the workplace.

CONCLUSION

The complexities of construction activities coupled with the negligence and non-compliance with safety measures has significantly increased the risk of exposure to incidents in the Nigerian construction industry. This study gave insights into the knowledge level, perceptions and the reasons for under-reporting of incidents with a view to improve the incident reporting culture. In the current study, it was observed that more than 1/3rd of the participating construction workers attested to not reporting a workplace incident and this needs urgent intervention. It was further evident that employees are hesitant to report on-site occurrences due to reasons like job security concerns, and even when reported, the level of responsiveness and immediate action from senior management was found highly lacking. Hence, there is a need for organisations to focus on encouraging workers to report workplace incidents even if nobody was injured in the process, without the fear of losing their jobs. Considering the high perception among the construction workers that incidents should be reported only when there had been an injury to personnel or damage to property implied that near misses were not viewed as actual incidents and there exists an urgent need for management to enhance safety awareness on this subject, especially among Nigerian construction workers. It is important to note that the study primarily focused on the perceptions and experiences of construction workers within the Nigerian construction industry. As a result, the findings may not be fully generalisable to all construction sectors and geographic areas, especially considering the diversity in organisational practices and varying regional safety enforcement levels. In addition, the study relied on self-reported responses from workers, which may be subject to response bias.

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