ASSESSMENT OF CONSTRUCTION FIRMS' ACCIDENT REPORTING PRACTICES IN ABUJA, NIGERIA

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ABSTRACT

Failure to report and address Occupational health and safety incidents results to reoccurrence of such incidences. Despite the government sanctions relating to H&S standards, the occurrence of construction related injuries still persist in Sub-Saharan Africa. Nigeria is among the countries that have high rate of occurrence of construction site accidents and lack of reliable data makes it impossible to know the actual rate of occurrence of accidents in Nigeria. However, there is lack of accident report on construction site by construction firms to the Federal Ministry of Labour and Employment and the Ministry's lack of supervision in relation to accident reports in Nigeria. This study aims to assess construction firms' accident reporting practices in Abuja, Nigeria with a view of reducing the under-reporting of construction site accidents and enhancing safety practices in the construction firms. The study adopted survey design approach using quantitative data. The research population was the 255 construction firms registered with the Abuja Business Directory. Sample size for the study constituted 90 construction firms selected through purposive sampling technique based on some set criteria. A total number of 71 questionnaires were retrieved from the respondent out of the 90 questionnaires administered to the respondents in the construction firms. Data analysis was done using Relative Important Index (RII). The study revealed that lack of safety commitment by management (RII value of 0.79), no feedback, lack of any H&S regulatory body, lack of time (RII value of 0.78), and lack of experience factor (RII value of 0.77) are the major factors that have high influence on the practice of site accident reporting. Low priority (RII value = 0.82) and poor management commitment to accident recording (RII value = 0.81) are the key factors that have very high influence on the practice towards site recording by construction firms. The performance of all the identified roles of Government in regulating workplace occupational accidents by the required Ministry/Agencies were discovered to be low (RII 0.34 – 0.39). It was also revealed that increase in H&S awareness (RII = 0.93), continuous education and training, institute safety awards to motivate workers, holding daily and weekly H&S briefing session on site, good communication of defined safety goals to workers (RII =0.86) were the most effective strategies for enhancing the practice of construction firms towards accident reporting and record keeping. It was concluded that construction firms practice towards site accident reporting in Abuja is not effective. However, the study recommended that to improve the level of implementation of construction firms practice towards site accident reporting in Abuja, the responsible Ministry/Agencies should set up a mechanism for ensuring that construction firms implement the strategies for enhancing the practice towards accidents reporting and record keeping. This will lead to reduction of under-reporting and under-recording of accidents in the Nigerian construction industry.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Globally, the construction industry has been found to be among the most hazardous industry as stated by (Health and Safety Executive, 2011; Manu, 2012). Evidence shown by statistical records that, not less than 60,000 fatal accidents occur each year on construction sites around the world (Fewings, 2013). Due to the dangerous activities carried out on the construction site, the health and safety (H&S) of construction workers is affected which leads to injuries, death and fatal accidents (Asan and Akasah, 2015). Despite the government sanctions relating to H&S standards, the occurrence of construction related injuries still persist in Sub-Saharan Africa (Idoro, 2008).

The challenges facing implementation of existing health and safety regulations in most developing countries resulting to non-guaranteed of H&S of workers on construction sites due to non-compliance with H&S regulations and lack of enforcement of health and safety regulations (Mustapha *et al*., 2016 and Pradeep *et al*., 2020; James *et al*., 2013). According to Joshua *et al.* (2016), lack of performance in H&S still remains due to the high number of injuries and work-related illnesses, thereby resulting to increase in the need for adopting H&S management practices that could help improve the situation and in spite of these improvements realized through the adoption of these H&S management practices in developed countries, the extent of implementation of H&S practices by Nigerian construction firms remains unclear.

The risks related to accident and H&S in the construction industry are higher among other industries. However, injuries and fatalities have reached the peak in some developed countries such as United Kingdom and China (Duryan *et al*., 2020; Wang *et*

al., 2018). There have been numerous measures within the construction industry to ensure that the number of accidents in developed countries are reduced as discovered by some researchers which include the use of building information modelling for improving working conditions on site, institutionalization and transfer of knowledge across construction supply chain web-based spatial decision support system for proactive health and safety management and prevention through design practices (Cortés-Pèrez *et al.*, 2020; Duryan *et al.*, 2020); Atay *et al.*, 2019 and Che *et al*., 2020). As stated by Waziri *et al.* (2015) and Muhammed and Ashiru (2018) many developing nations of the world including Nigeria, have significant increase in the number of accident cases reported on construction sites with many unrecorded cases daily.

Nigeria is among the countries that have high rate of occurrence of construction site accidents and lack of reliable data makes it impossible to know the actual rate of occurrence of accidents in Nigeria (Agwu, 2014; Udo *et al.*, 2016). The structures of H&S in Nigeria as stated by Shibani (2013) are not regular and effective resulting to more exposure of the construction site workers to accidents and Injuries. A report as revealed by the Federal Ministry of Labour and Employment (2016) shows that under-reporting of injuries accidents to the Department of Occupational Health and Safety in the Ministry differs hugely from the figure of injuries data forwarded to Nigeria Social Insurance Trust Fund (NSITF). Over the years, accident data and reports on construction sites have not been officially documented in Nigeria. (Peter *et al*., 2017).

To reduce the occurrence of site accident and injuries, proper H&S legislation should be developed and enforced by the authorities responsible for H&S standard and it should be implemented to help curb accidents on future projects (Omobolanle and Smallwood, 2017). Latino *et al*. (2020) stated that reporting of occupational accidents usually exposes what incidents had occurred, while investigations to know the root cause of the

accident is analysed to clarify why the incident happened and what preventive plans should be established and implemented. The accidents that occur during the daily activities and operation on construction site accident results in no win situation, therefore it should be always reported immediately to the office of Health and safety to ensure that immediate action could be taken by the organisation.

Information regarding accidents in the Nigerian construction industry is not properly documented and this results to difficulty in obtaining relevant data (Olusoga and Fagbemi, 2018). Okeola (2009) stated that there are no reliable data on construction accidents in Nigeria due to the fact that most contractors fail to report cases of accidents to the ministerial departments in charge of such occurrences due to lack of proper records of the accidents occurrences. The reporting of an accident helps to reach a compensatory settlement which makes it very important to file construction accident reports immediately it occurs. Failure to report and address Occupational health and safety incidents as opined by Ngobi *et al.* (2021) results to reoccurrence of such incidences and the problem is worsened, this leads to non-compensation of many construction accident victims by their employers in a deserving manner and the enforcing bodies means of tracking such incidents are limited or not available in some instances.

1.2 Statement of the Research Problem

Andy (2007) carried out research on an existing accident investigation and reporting system implemented by local companies in Malaysia to identify the critical causes of accident under reporting in Malaysia construction industry. The responses obtained showed that human factors contribute mostly to the causes of under reporting and it is followed by organisation factors and lastly time factors. As stated by Nayanthara and Uthpala (2018), the rate of under-reporting in Sri Lanka construction industry by

construction firms was discovered to be 80% due to lack of effective accident reporting procedure and a centralized recording system for occupational accidents which creates difficulty in accessing reliable data in the construction industry. In Uganda, many Occupational Health and Safety (OHS) incidents on construction sites are not documented, reported, or investigated by the relevant authorities due to a number of factors including a rudimentary reporting and monitoring system. The current OHS incident reporting in Uganda still relies on a letter delivery system involving heavy documentation, high transportation, and handling costs and delays in conveyance of information (DOSH, 2018). Due to the challenges faced, this frustrates both the reporters of incidents and the enforcers of OHS, thereby affecting process of reporting and monitoring OHS incidents and results into underreporting and underestimation of OHS incidents in Uganda's construction industry (Ngobi *et al.,* 2021).

Regulatory authorities are responsible for ensuring that all occupational accidents are to be reported and to ensure that organizations comply with health and safety regulations but unfortunately it is reported to be below standard in the Nigerian construction industry as stated by (Adetunji *et al.,* 2021). Umeokafor (2018) reported a finding of a research that assessed the attitudes, commitment and impact of public and private sector clients' involvement in construction health and safety (H&S) in Nigeria. The findings revealed that clients' attitudes towards H&S are discouraging, but public client's commitment and attitudes to H&S in construction are better than that of private clients. The clients' involvement in H&S in the construction industry has led to reduction of accidents and compensation claims as stated by the researcher.

According to Idoro (2011) contractors with the best safety records in Nigeria still record substantially high numbers of injuries on their sites. Other studies have further

highlighted a high prevalence of non-compliance with safety regulations that require organizations to report accidents (Diugwu *et al.,* 2012).

In line with the above background, this study addressed the factors contributing to the lack of reporting and recording of construction site accidents by construction firms and also lack of enforcement by the government authority responsible for regulating construction site accidents reporting and recording in Nigeria. These result to under-reporting of construction accidents in the Nigeria construction industry.

1.3 Research Questions

To address the highlighted problem, the following research questions were duly answered:

i. What are the factors influencing the practice towards reporting of site accidents by construction firms in Abuja?
ii. What are the factors influencing the practice towards recording of site accidents by construction firms in Abuja?
iii. What are the roles of the government in regulating workplace occupational accidents reporting and record keeping by construction firms in Abuja?
iv. What are the strategies for enhancing the practice of construction firms towards accidents reporting and record keeping?

1.4 Aim and Objectives of the Study

The aim of the study is to assess the practice of construction firms towards site accident reporting in Abuja with a view of reducing the under-reporting of construction site accidents and enhancing safety practices in the construction firms.

To achieve this aim, the following objectives were formulated:

i. To examine the factors influencing the practice towards reporting of site accidents by construction firms in Abuja.

ii. To examine the factors influencing the practice towards recording of site accidents by construction firms in Abuja.

iii. To assess the roles of the government in regulating workplace occupational accidents reporting and record keeping by construction firms in Abuja.

iv. To propose strategies for enhancing the practice of construction firms towards accidents reporting and record keeping.

1.5 Justification for the Study

The understanding and identification of critical causes of under reporting of accidents in the construction industry will help to reduce the number of accidents to a minimal level and at the same time improve the safety of the people involved (Andy, 2007). A research study conducted to examine the health and safety practices by construction firms in Akure by Olusoga and Fagbemi (2018), revealed that small scale construction firms operate within their budget because they lack the resources to perform at a high level of health and safety performance which hinders such firms from undertaking accident reporting thoroughly. The knowledge regarding H&S information as identified by Ranti *et al.* (2020) among construction site workers in terms of first aid procedure, safety signs and symbols, use of personal protective equipment, procedure for safe operation and site regulations are said to be on an average level in Lagos. The result further showed that management commitment and lack of monitoring and enforcement had influence on the level of compliance.

In order to improve reporting of occupational accidents in the Nigerian construction industry, Adetunji *et al*. (2021) revealed that recording and reporting of the accident should be done continuously as it will serve as a reliable information concerning

accidents, awareness of health and safety precaution should be increased for better understanding by both the organization and the employee, allocation of resources for the management of health and safety should be adequately provided and safety training should be done continuously which will serve as a guide to identification of accidents.

The listed studies above focused on understanding critical causes of accident under reporting, H&S safety practices by construction firms, knowledge on H&S and benefits of reporting and recording of construction site accidents in Nigeria but the factors contributing to lack of reporting and recording of construction site accidents by construction firms and also lack of enforcement by government authority responsible for regulating construction site accidents reporting and recording in Nigeria were not assessed. This research will help to fill this gap by examining the factors influencing construction firms' practice towards reporting of site accidents as well as the factors influencing the practice of accidents record keeping by the construction firms so that a strategy can be proposed to enhance and encourage the construction firms to be involved in continuous reporting and recording of construction site accident in order to reduce site accident under-reporting and recording thereby leading to prevention of reoccurrence of such construction accidents, reduction of its occurrence and enhancing safety practices in the construction firms.

1.6 Scope of the Study

The scope of this study encompasses building construction firms located in Abuja with experience in building construction works only. This is because Abuja being the nation's capital has a lot of construction being carried out and ongoing as compared to other states in the country, and also a lot of construction firms are located in Abuja.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Health and Safety Challenges in the Construction Industry

The construction industry globally is characterized as a dangerous industry as stated by Khosravi *et al.* (2014) due to the kinds of activities carried out in the industry. Activities such as lifting and movement of heavy equipment, working on high rise buildings and other hazardous that are carried out by the workers results to injuries and accidents on site. The workers are often unaware of this injuries that may likely happened to them that results from falling from height and hit by any falling objects (Hughes and Ferrett, 2016; Rahman, 2015). Alhajeri (2011) and Bashir (2013) identified lack of compliance of safety regulations and act, lack of technical knowledge, poor site management, disobedience in working procedures and lack of cooperation and teamwork by construction workers are among the causes of accidents that lead to high fatality rate of about 300 million as reported by International Labour Organisation (ILO, 2016). Construction activities are more labour intensive in developing countries like Pakistan, Ghana and Nigeria than the developed countries which result to more accidents on the construction sites (Al-Kilani, 2011).

Studies have shown that challenges are being faced by developing countries in regards to H&S in the construction industry (Idoro, 2011). The construction firms lack systematic procedures for H&S, and their stakeholders and owners i.e. the clients show no commitment in H&S (Farooqui *et al*., 2008). The construction environment in developing countries makes matter worse as corruption, insecurity, and poor safety culture have negative impact on construction H&S practices (Umeokafor and Isaac, 2015). Idubor and Oisamoje (2013) stated that lack of enforcement of safety rules lead to non-compliance by the organizations which result to failure in giving proper accounts

of accidents that happened on construction site by the firms. Some reasons for governments' ineffective enforcement of safety regulation are a lack of monitoring personnel and the inherently corrupt implementation system.

The state of health and safety in developing nations like Nigeria is worse than what prevails in developed nations because of the absence of concern (Idoro, 2010). As Stated in Abbas *et al.* (2019), H&S is an inevitable aspect of construction due to its nature of being made up of the conglomerations of people from diverse background and disciplines with each individual output determining the level of success to be recorded at each construction stages. Despite the socio-economic significance of the construction sector, it has an inevitable reputation in terms of Occupational H&S. Accident and injury rate in developing country like Nigeria is generally considered to be higher than developed countries. This has been attributed to lack of appropriate consideration of H&S management measures in the construction project delivery process (Adeogun and Okafor, 2013). Despite being a party to the occupational health and safety convention 1981, Nigeria continues to lack behind in the implementation of occupational health and safety practices. In Nigeria, health and safety has not been given the required attention to reduce or prevent hazards and accidents on construction sites, thereby posing serious threats to workers and even non workers creating the need for a quick solution for the issue to be addressed (Abbas *et al.,* 2019).

Okeola (2009) asserts that health and safety in construction is all about preventing people from being killed or injured at work or becoming ill through appropriate precaution and providing a satisfactory working environment, some researchers have attributed the poor safety performance to dysfunctional health and safety laws and regulation (Diugwu *et al.,* 2012). Due to poor regulations of H&S in the Nigerian construction industry as stated Umeokafor (2014), the stakeholders and workers show

no concern towards H&S and this results to high level of underreporting of accidents (Idoro, 2008).

2.2 Site Accidents in Construction Industry

Construction sites accidents according to Wong *et al*. (2010), occur as a result of poor H&S attitude of construction firms, workers' disregard for H&S standards, errors by workers based on lack of awareness or understanding of H&S manuals and instructions, disorganised labour, a high rate of turnover resulting in little or no training for new employees, lack of a proactive approach to risk management and substandard personal protective equipment. Shibani *et al.* (2013) stated that the main cause of accidents on sites were as a result of technical weakness of building designs which led to the evolvement of new equipment to expedite such designs, yet accidents still reoccur and thus the main cause of accident was discovered to be lack of adequate management on construction sites. Factors such as human and environmental factors also contribute to accident occurrence on site (Kazan, 2013). Accident as defined by Mwombeki (2005), is an unexpected action that results to loss of production, injury to personnel, damage to plant and equipment of a planned work. Accidents can lead to both direct and indirect cost thereby causing the interruption of an activity completion (Okeola, 2009). Accident causation refers to factors which lead to occurrence of an accident, hence understanding what causes unsafe situations to occur is important in implementing measures to help prevent reoccurrence (Olusoga and Fagbemi, 2015).

Furthermore, a research conducted by Kadiri *et al.* (2014), identified the causes of site accidents to be carelessness and negligence, failure to follow safety rules, improper use of safety items, reckless action, poor safety conscientiousness of managers, non-certified skill labour, poor equipment and maintenance, non-rigorous enforcement of

safety regulations, non-definite organization commitment, non-effective operation on safety regulations, poor education of labourers, poor safety conscientiousness of labourers, non-strict operation procedures, non-perfect of safety regulations, overtime work for labour, shortage of safety management, and poor information flow. As stated by Goh *et al.* (2015), the causes of construction accidents are grouped into; man-made factors, environmental factors, as well as machinery factors. A research conducted by Ahmed (2019), shows that the major causes of accidents are; lack of workers' awareness on safety-related issue, lack of protective equipment, lack of design that eliminate safety hazards, unfit equipment and lack of knowledge and training on equipment respectively. In addition to the causes of site accidents, Orji *et al.* (2016), investigated Fifteen (15) causes of accidents on construction sites and concluded that the major causal factors of accidents are failure to use personal protective equipment, injuries from equipment, sub-standard construction material, ignoring safe procedures and unsafe/incorrect construction method.

Ibrahim and Tasiu (2018) stated that causes of accidents on confined construction sites are material handling, difficulty in providing temporary facilities, congestion, ergonomic hazards, difficulty in managing waste and lack of adequate storage. In a research conducted by Irewolede *et al*. (2021), the key indicators and dimensional causes of accidents were discovered. Key indicators such as behavioral factors, work and personal factors, proximate factors, attitudinal factors and design factors. The major dimensional causes include; non-use of PPE, lack of experience, working in confined spaces, disobedience to work discipline and innovative technology.

Hence, all the above mentioned factors contributing to cause of site accidents are related and are considered to be the causes of site accident in the construction industry as identified in the past studies.

2.3 Workplace Occupational Accident Reporting and Recording

Accident reporting according to Safe World HSE (2021) is defined as establishment of the procedures or method for notifying any incidents. Reporting of accidents aids companies to identify which health and safety procedures works as well as providing safer environment for the workers and preventing the reoccurrence of such accident. Jamie (2021) stated that reporting of accidents prevents more serious accidents, improve other health and safety measures, save time and resources, boost overall well-being of companies as well as protect the companies against huge risks. According to Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), a legal requirement enforces a responsible person (employers, the self-employed and individuals) to notify and keep records of specified workplace incidents which entails certain workplace accidents, occupational diseases and certain dangerous occurrences (including near miss accidents). The responsible person must notify the relevant HSE enforcing authority and local authorities about deaths, injuries, occupational diseases and dangerous occurrences in order to utilise the gathered to in identifying where and how incident occurred and prevent re-occurrence of such incident. Accurate reporting of work-related injuries and illnesses is paramount to the success of every safety management system. It helps the employers to identify unsafe work environments and work practices; monitor workers' health and well-being; and eliminate hazards; or, at least, control the health and safety risks to employees (Lander *et al.,* 2011). A safe working environment aids employees in working without having any worries or difficulty.

Accident Record Keeping on the other hand stores related information on accidents, incidents, and ill health which can be used as an aid to risk assessment, developing solutions to potential risk and control cost from accidental loss (Health and Safety

Executive, 2021). As stated by RIDDOR (2013), accurate records of any RIDDOR incidents must be maintained as this can assist in ensuring that health and safety is managed appropriately. In addition to RIDDOR incidents, any incident resulting in a worker being away from work or incapacitated for more than three consecutive days must be recorded. The records must include details regarding the incident or disease, personal details of the individual(s) involved, time and place of the event and the date and method of reporting. Records must be kept for at least three years from the date on which they were made.

In most countries, employees have to report work related injuries to their employers and the employers are responsible for recording and reporting accidents to the relevant government authorities. The recording and reporting systems for each country varies depending on their legal structures Jilcha and Kitaw (2016), while the official notification forms are similar. However, there are differences in these forms depending on the country's requirements. For example, Finland uses a single form to report fatal accidents, while Spain has two types of forms depending on the gravity of the consequence i.e. with or without injury (Jacinto and Aspinwall, 2004). Setting up of a successful reporting scheme, planning of accurate data bank and acquiring the needed information has been revealed to be difficult for a specific national prevention policy Drudi (2015); ILO (2012), but developed nations have gathered important knowledge in reporting systems and implementing the knowledge.

Countries with national health and accident insurance schemes with a wider coverage of their employed have a clear benefit in leveraging employees and health compensation systems for information management purposes (Thomas, 2017). Countries without federalized or national legislative insurance and compensation systems like the United States where each state supervises employee compensation depend heavily on the

regulatory recording, databanks, and statistical methods to compute workplace injuries (Lenore *et al.*, 2002; Thomas, 2017). It is not possible to doubt that the gathering and computing of occupational diseases and accidents remains a challenge in many countries. Also, many nations lack a consistent and harmonized link for the gathering, collation, and distribution of simple and expert information and training on OHS (Muchiri, 2009). Therefore, the need to build a national infrastructure that efficiently backings these activities are important for a well-functioning Occupational Health and Safety Management System (OHSMS). Whether the training and information are sought from local or national information centers, professional institutions, all establishments, and employees should have access to it and it must be of good quality.

2.4 Under-reporting of accidents in construction industry

Accident under-reporting can be either an establishment accident under-reporting which is when an organization fails to report injuries happening at work to the appropriate regulatory authorities and employee accident under-reporting happens which is when a worker fails to report injuries at work to the employer (Laura *et al.*, 2015). Accident underreporting as explained by Laura *et al.* (2015), represents a serious individual, organizational, and public health concern for a number of reasons. In relation to the individual employee, failure to report an accident often results in the worker's injury going untreated, from the perspective of the employer, underreporting can lead to reoccurrence of accident in future and affect other employees due to the unfixing of the root cause. On the part of a public health perspective, inaccurate accident reporting undermines national surveillance statistics and policy efforts to develop safer and healthier workplaces.

Xiuwen *et al.* (2011) compared the trends in nonfatal injuries, fatal injuries, illnesses and employment in the construction sector from 1992 to 2006 in the U.S, the study

indicated that construction illnesses and nonfatal injuries are immensely under-reported, particularly by small contractors and establishments or those with 10 or less wage-and-salary workers. Between these small organizations, estimated figures suggest that 75% of nonfatal injuries to Hispanic employees were not reported, and 40% of injuries were unreported for white, non-Hispanic employees. Nayanthara and Uthpala (2018) revealed that 80% of accidents in construction accidents are under-reported. In the construction industry as shown by Hadi *et al.* (2017), there was a high record of non-reporting accidents, approximately 94.7% of employees in the sector did not report an accident.

Marianela *et al.* (2008) estimated that only 1 out of 22 cases that sought medical attention were reported to the national register in Nicaragua. Noe *et al.* (2004) highlighted that 3801 work-associated injuries were recognized that accounted for 18.6% of the whole 20425 injures recorded by the surveillance system, only twenty-seven work associated fatalities were documented, equate with the 1998 ILO figure of 25 work-related fatalities for entire Nicaragua. Shannon and Lowe (2002) highlighted that 143 had incurred an entitled injury out of 2,500 respondents of whom 57 had not filed a workers' compensation claim. Occupational diseases and accidents under-reporting contributed to the problems of workplace health and safety (ILO, 2020). Absence of employer awareness of reporting procedures, adequate measures, responsibility disputes and difficulty in identifying the occurrence of an injury are among the numerous causes of under-reporting of accident (William, 2014).

Mba and Hilda (2014) highlighted that there are less dependable data on accident cases in the Nigerian construction industry as a result of non-reporting of occupational accidents to the appropriate authorities. Umeokafor (2014) emphasize that infringement of regulations plays a role in the poor state of health and safety in the Nigerian construction industry. Organizations do not report accidents due to the perception that

they might be subjected to disciplinary actions by regulatory authorities (Federal Ministry of Labour and Employment, 2016). Inadequate resources and bad reporting mechanisms could support the under-reporting of occupational accidents (Adetunji *et al.*, 2021).

2.5 Government Agencies responsible for Regulating Occupational H&S in Nigeria

Countries like United States have in each of their states an agency that supervises employee compensation which depends on the regulatory recording, databanks, and statistical methods to compute workplace injuries (Thomas, 2017). The National Policy on Occupational health and safety developed in 2006 has been a driving tool for the advancement of Occupational health and safety in Nigeria. The revised edition of the policy was necessitated by the need to align with the provisions of the ILO Occupational Health and Safety Promotional Framework Convention, 2006, (No. 187) and its accompanying Recommendation R197 (No.197). The Department of Occupational Health and Safety of the Federal Ministry of Labour and Employment is the competent authority responsible for the laws and regulation governing Occupational Health and Safety and it is being enforced by one Government Ministry, Department or Agency (MDA) or the other. There are however no nationally approved Codes of Practices, Standards and Guidelines on Occupational Health and Safety in Nigeria, but they are a few existing sectoral based codes of practice, Standard and guidelines that are derived from ILO Codes of Practice.

There are two regulations that are responsible for occupational H&S in Nigeria namely Factory Act, 1990 and Employees Compensation Act, 2010 (Omobolanle and Smallwood, 2017). The UK Factory act of 1961 has a localised version in Nigeria which

is the Nigerian Factory act 1990 currently revised to Factory Act, 2004 adopted to tackle anything related to H&S in Nigeria.

2.5.1 Duties of the statutory authority in regulating accident reporting in Nigeria

The Statutory Authority shall be the Federal Ministry of Labour and Employment, which shall ensure that the following functions are carried out according to Revised Factory Act, 2004:

i. Establishment and Application of procedures for the notification of occupational accidents and diseases by employers, appropriate insurance institutions and others directly concerned in the production of annual statistics on occupational accidents and diseases.

ii. Holding of enquires where cases of occupational accidents and diseases, work related ill-health, or any other injuries to health which arise in the course of or in connection with work appears to reflect situations which are serious.

iii. Establishment and coordination of a National Incident Management System (NIMS) on occupational accidents, injuries, diseases, and death, so as to provide a data bank linked to National Health Information Management System (NHIMS). This will assist in providing information concerning occupational safety and health to all stakeholders for occupational safety and health services and planning in the country.

2.5.2 Duties of the employers in regulating accident reporting in Nigeria

It is the duty of every Employer to ensure, so far as is reasonable practicable, the safety, health and welfare of all their workers. The matters to which that duty extends include:

i. All occupational safety and health reports and activities should be made available to the chief executives in all organisations to demonstrate their

involvement and commitment to the promotion of the organisation's occupational safety and health policy and programs.

ii. Verify the effectiveness of applicable standards on occupational Safety and Health periodically, using safety audits, environmental monitoring and health surveillance of workers, and keeping records of such verification, including records of all notifiable occupational accidents, injuries, and occupational diseases, records of authorizations and exemptions, and data concerning exposure to specialized substances, agents and work processes.

iii. To undertake appropriate risk assessments in the workplace to identify risks and hazards that may affect employees.

iv. To ensure Compensations for work related disabilities or deaths of workers, rehabilitation of such workers as enshrined in the Employees Compensation Act, 2010.

v. To report all injuries and deaths to the relevant external authorities.

2.5.3 Duties of the workers in regulating accident reporting in Nigeria

It is the duty of every worker in the formal or non-formal sector, while at work:

i. To report forthwith to their immediate supervisor any situation that could present a hazard, and report any accident or injury to health to the employer, and if need be, to the inspector of factories or relevant sectoral regulator closet to the work place.

ii. Upon the report, to temporarily withdraw from such hazards or undue risks considered to be life threatening, pending a rectification.

2.5.4 Notification of accident, dangerous occurrence and dangerous diseases

Accident and dangerous occurrences are to be reported as stated in part iv, section 30-32 of the Factories and Machinery act, 2011

31. Whenever any accident which-

a. Causes loss of life to any person.

b. Causes serious bodily injury to any person

c. Causes serious bodily injury to any person so that the person is prevented from following his normal occupation for more than three clear days excluding the day of the accident

d. Causes serious damage to machinery or other property or any dangerous occurrences takes place in any factory or in connection with any machinery, the occupier shall report the accident or dangerous occurrences to the inspector having jurisdiction for the area in which the accident or dangerous occurrence has taken place by the quickest means available and subsequently with the least possible delay report in writing to the inspector in the prescribed form the fact of the matter so far as they are known to be.

2.5.5 Notification of major accident

In accordance to section 23 of the Occupational Safety and Health Act (control of industrial hazards regulations 1996)

23. Where a major accident occurs on a site a manufacturer shall notify the nearest occupational safety and health office of the accident by the quickest means available and the manufacturer who makes the notification shall provide-

(a) The following information relating to the accident as soon as it becomes available:

(i) the circumstances of the accident;

(ii) the hazardous substances involved;

(iii) the date available for assessing the effects of the accident on persons and the environment; and

(iv) the emergency measures taken.

(b) A statement of the steps envisaged to alleviate medium or long term effects of the accident, if any, and prevent the recurrence of such an accident.

2.5.6 Penalty as stated in part vi

In accordance to section 24 of the Occupational Safety and Health Act (control of industrial hazards regulations 1996)

24. (1) A manufacturer who commits an offence against any of the provision of these regulations for which no corresponding penalty is provided by the Act shall, on conviction, be liable to a fine not exceeding ninety-eight thousand, eight hundred and twenty naira or to a term of imprisonment not exceeding three months or to both.

(2) An employer who commits an offence against any of the provision of these regulations for which no corresponding penalty is provided by the Act shall, on conviction, be liable to a fine not exceeding ninety-eight thousand, eight hundred and twenty naira or to a term of imprisonment not exceeding three months or to both.

2.5.7 Notification of accident, dangerous occurrence, occupational poisoning

As stated in part viii, section 32-33 of Occupational Safety and Health act and regulations, 2012

32. (1) An employer shall notify the nearest occupational safety and health office of any accident, dangerous occurrence, occupational poisoning or occupational disease which has occurred or is likely to occur at the place of work.

(2) Every registered medical practitioner or medical officer attending to, or called in to visit, a patient whom he believes to be suffering from any of the diseases listed in the third schedule of the factories and machinery act 1967, or any disease named in any regulation or order made by the Minister under this Act, or occupational poisoning shall report the matter to the Director General.

33. (1) If in the opinion of the Director General, an inquiry ought to be held into the nature and cause of the accident, dangerous occurrence, occupational poisoning or occupational diseases, he may cause such an inquiry to be held by the occupational safety and health officer.

(2) The Director General may appoint one or more persons of engineering, medical or other appropriate skills or expertise to serve as assessors in any such inquiry.

2.5.8 Investigation into any accident in accordance to part iii of the occupational H&S

13. (1) A safety and health committee shall inspect the place of work, as soon as it is safe to do so, after any accident, near-miss accident, dangerous occurrence, occupational poisoning disease has occurred at the place of work.

(2) Where a person is employed as a safety and health officer, he shall furnish the chairman of the committee with a report of his findings subsequent to an investigation conducted by him into an accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which has occurred at the place of work; and the chairman shall as soon as it is practicable, convene a meeting of the committee to discuss the report.

(3) Where no safety and health officer is employed at place of work, the employer or his authorised manager shall forthwith inform the chairman or the secretary of the committee of any accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which has occurred at the place of work, and the

chairman or the secretary shall as soon as practicable, after the committee has inspected the place of work, convene a meeting to investigate into such accident.

(4) At the meeting of the committee convened under sub regulation (2) or (3), the committee shall the discuss the cause of the accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease and make recommendations to the employer of the measures to be taken to prevent the reoccurrence of such incident.

2.5.9 Notification of reporting accident

As stated in part ii, section 5 of Occupational Safety and Health (notification of accident dangerous occurrence, occupational poisoning and occupational disease) regulations

(5). (1) Whenever any accident arising out of or in connection with work which caused any person either-

(a) death; or

(b) serious bodily injury, as specified in first schedule, which prevents the person from following his normal occupation for more than four calendar days,

or where a dangerous occurrence, as specified in second schedule, takes place in any place of work, the employer shall-

(aa) forthwith notify the nearest Department of Occupational Safety and Health office by the quickest means available; and

(bb) within 7 days send a report thereof in an approved form.

(2) Whenever any accident arising out of or in connection with work which causes bodily injury to any person which prevents the person from following his normal occupation for more than four calendar days, the employer shall, within 7 days send a

report thereof in an approved form to the Department of Occupational Safety and Health office.

(3) Where an employee, as a result of an accident arising out of or in connection with work, has suffered an injury or condition reportable under sub regulations (1) which causes death within one year of the date of that accident, the employer shall inform the Director General in writing of the death as soon as it comes to his knowledge, whether or not the accident has been reported under sub regulation (1).

2.5.10 Maintenance of all records of accident

As stated in part iv section 10 of the Occupational Safety and Health (notification of accident dangerous occurrence, occupational poisoning and occupational disease) regulations

10. (1) Every employer and self-employed person shall record and maintain a register, in an approved form, of-

(a) all accidents and dangerous occurrences which have occurs; or

(b) all occupational poisonings or occupational diseases which have occurred or are likely to occur, arising out of or in connection with work under his control, whether or not the accidents, dangerous occurrences, occupational poisoning and occupational diseases have been reported under sub regulation 5(1) or 7 (1).

(2) The record shall be kept at the place where the work to which it relates is carried on or, if this is not practicable, at the usual place of business of the employer or self-employed person and an entry in the registry shall be kept for at least 5 years from the date on which it was made.

(3) The employer or self-employed person, as the case maybe, shall send to the Director General before 31 January of each year, such extracts from the registry for a period of 12 months ending 31 December of each year.

2.5.11 Penalty as stated in part v, section 13 of occupational health and safety

13. Any person who contravenes any provision of these regulations commits an offence and shall, on conviction, be liable to a fine not exceeding nine hundred and eighty-eight thousand, two hundred naira or to imprisonment for a term not exceeding one year or to both.

2.6 Factors Influencing Construction Firms Practice of Reporting Site Accidents.

The underreporting of accident that occurs in the built environment challenges the effective management of safety in the construction as stated by (Leigh *et al.*, 2004). Reason for underreporting of incidence in construction workplace differ, some are either done intentionally while others are not intentional due to lack of awareness. Under-reporting happens at different level ranging from the stakeholders, workers, supervisors and managers (Schofield *et al.*, 2013).

Studies have shown that under-reporting of construction accident is a general problem globally, but the problem varies from one country to another country depending on cultural differences and variation in reporting systems and legislation (Daniels and Marlow, 2005).

At organisation level, the factors influencing the practice of under-reporting of site accident at organisation level includes; general safety climate, specific industrial sector, company size and lack of management commitment to safety (Daniels and Marlow, 2005). Safety climate refers to employee's perception regarding their employers approach to safety. Safety climate on accident under-reporting can be as a result of lack

of safety concerns and lack of appropriate measures relating to reporting of site accident by the senior managers/ supervisors of a construction firm. Small construction firms usually pay little or no attention to accident reporting due to implementation cost and less involvement on site as compared to large construction firms which incorporates any safety related issues into their management system and provide the resources to deal with such. Hence, this leads to underreporting of site accident by smaller construction firms due to their size. This shows that workers/employees fail to report accident due to fear of action or threat by the employers, lack of concern by employees in relation to accident and fear of Job loss.

In addition, as stated by McCraven (2012), underreporting prevents companies from obtaining an effective feedback mechanism and utilizing the information to implement changes in the work when required. According to Muawiya *et al.* (2018), possible barriers to accident reporting on construction site include; lack of time, lack of budget, unfair treatment to the workers, lack of employee knowledge on incident/accident reporting, no access to usable reporting method, lack of incentives to workers on incident/accident report, lack of management knowledge on incident/accident recording, lack of available safety managers in the Projects, lack of experience and lack of any health and safety regulating body.

Barriers to accident reporting in a system can also be categorized under three groups as stated by (Andy, 2007). These include;

i. Leadership/Management
ii. Process and Procedures &
iii. Culture/Individual behaviours

2.6.1 Leadership/management

Management of organisations contributes to under-reporting of accident on site due to no target set regarding reporting of site accident or set targets that are not realistic, not leading by example, lack of management response on report, pressure on job performance, no feedback mechanism, no incentive to encourage the workers to report accident and lastly lack of regular enforcement on the management part.

2.6.2 Process/procedures

The deficiency in procedures involving reporting of site accident such as inadequate procedures, procedures not followed, difficulty in reporting, complicated report system, availability of material, poor descriptors within system are among the key factors that influences the reporting of site accident.

2.6.3 Culture/individual behaviours

Individual behaviours like inaccuracy of reporting, time pressure of reporting, lack of training, lack of experience relating to hazards, no awareness of requirement, cultural difference among workforce, concerns over loss of job for raising reports, peer pressure, staff unwilling to speak up are barriers to reporting of accidents on the individual level.

2.6.4 Inefficient training

In relation to accident reporting in construction, inefficient training can lead to non-reporting of accidents, injuries and death by either new or old workers in a firm as a result of no adequate and enough training sessions and orientation organised by the management of the firms. On the part of employers, managers, and supervisors of a firm, inefficient training can be as a result of no training on reporting of accident by the safety regulatory body in order to protect the workers and give adequate response to workers reports and concern. Researchers have shown that inefficient training causes

improper filling and recording of accidents and also insufficient analysis of the reports (Andy, 2007; Muawiyah *et al.*, 2018).

2.6.5 Lack of any health and safety regulating body

The lack of health and safety regulating body is one of the major barriers to reporting of accidents in construction as result of no written law for enforcement. This can also be as a result of lack of enforcement due to absence of no safety officers to direct and provide supervision relating to the procedures of reporting accidents in the firms. Mba & Hilda (2014) highlighted that there are less dependable data on accident cases in the Nigerian construction industry as a result of non-reporting of occupational accidents to the appropriate authorities. The state of health and safety in developing nations like Nigeria is worse than what prevails in developed nations because of the absence of concern (Idoro, 2010).

2.6.6 Lack of Budget

Where adequate provisions are not made in terms of reporting site accident by management, this will result to non-reporting of site accident on the part of the workers. It can also be lack of funds for compensation by government for the injured workers. Nations with national health and accident insurance schemes that have a wider coverage of their employees provide health compensation systems for information management purposes (Thomas, 2017). Some workers are not covered by employees' compensation insurance, specifically domestic employees and self-employed, therefore, injuries to them are not reported (Adetunji *et al.*, 2021).

2.7 Factors Influencing Construction Firms Practice of Recording Site Accidents

Muawiya *et al.* (2018) opined that the recording of accidents and near misses is very important for analysis because the reports show the root cause of the accident and also

preventive measures can be taken to avoid further occurrence. Also stated in their study, construction professionals identified poor safety culture, inadequate systems in place for reporting dangerous occurrences, inactive management commitment to the factors influencing poor accident record practices. According Adnan *et al.* (2007), factors that are hindrance to safety performance on construction site in Gaza includes; lack of relevant accident data, lack of safety regulations, low priority of safety, small size of construction firms, absence of safety planning, Low concern of safety training, absence of contractor's safety prequalification. The listed factors are related to safety performance but can also be considered as factors influencing accident record keeping by construction firms.

According to Scott (2013), the challenges confronting accident investigations can be summed up into five as highlighted below;

i. Unrealistic timeframes
ii. Failing to differentiate potentials for serious outcomes
iii. Narrow focus
iv. Undermining the culture and
v. Ineffective communication of investigation results

2.7.1 Unrealistic time frames

An interesting and confounding aspect of many accident investigation processes is the requirement that an investigation be completed in 24 hours. This requirement may have begun due to the importance of collecting as much information as possible within a 24-hour window because things like people's memories and conditions at the accident location can change. Another reason this rule might exist is belief that it demonstrates management's seriousness about safety. However, there is need to consider the

unintended consequences of setting up a process suggesting that a high quality investigation is desired, but is limited to that brief time frame (Manu *et al*., 2010).

2.7.2 Failing to differentiate potentials for serious outcomes

It is not practical or necessary to do an in-depth accident review in every case, but it is important to do so when there is the potential for serious outcomes. A good accident investigation process assures that the appropriate level of review is` given to every incident by following several important principles as highlighted below:

i. The expectation is set that all accidents are to be reported, but clarify that all reports do not necessarily mean there will be a detailed root cause investigation.
ii. A mechanism is created to evaluate whether the incident had serious injury or fatality potential.
iii. For low-potential accidents, an abbreviated investigation is used to assure there are no immediate items that need to be addressed to prevent recurrence, or collect data and on a routine basis look for a high number of low-potential incidents that have similar causes.
iv. For high-potential accidents, investigate each one, but apply more rigor to the investigation and development of the action plan. If another high-potential incident happens, determine if the accident(s) involved the same root causal factors. Review the status of the action plan and see if it is adequate or if it was fully implemented.

2.7.3 Narrow focus

In most organizations, each accident investigation is conducted, reviewed, and communicated as an isolated event. When that happens, the opportunity is missed to conduct longitudinal analysis, looking across multiple accidents and accident

investigations to identify common themes and common factors. Failing to look longitudinally can result in addressing one manifestation of an underlying issue without addressing the underlying issue itself.

For instance, in the accident event narrated earlier, the investigation identified a corporate policy that had gotten in the way of safety. If we looked at a group of investigations and saw several instances of various corporate policies emanating from different corporate departments that each in its own way impeded safety, we might recognize a need to systematically address the process used for policy setting.

2.7.4 Undermining the culture

When an accident occurs, it is important to learn from the individuals involved what happened and why, so that the causes can be understood and addressed (Jannadi and Almishari, 2003). However, the process of being interviewed following an accident can sometimes feel to the injured party like an exercise in placing blame. When information gathering causes the injured party to perceive that the objective is only to find something that person did wrong, that person and his colleagues will perceive that the organization is not truly interested in making work safer, or that the organization values them. When this happens it becomes more difficult to get good information, and workers will stop making discretionary efforts to improve safety and other aspects of organizational performance. Information should be gathered in a collaborative way. Accident investigation team must be open minded in seeking facts, and not allow their preconceptions or biases to influence what they ask or how they ask questions.

2.7.5 Ineffective communications

Reports on the results of investigations of serious accidents are likely to be complex and involve extensive information, from interviews to data analyses. It is easy for people to

get lost in the minutiae and lose sight of what is truly valuable information. While documenting the investigation is important, when communicating the results, it is important to focus on the big picture about the root causes and how to address them. This places attention where it belongs on how to prevent recurrence of this and similar incidents. Algan *et al.* (2021) investigated the factors affecting safety practices in the construction industry and can also relate to factors influencing accident recording on site by construction firms includes; lack of management support, lack of fall protection systems, lack of regular safety controls and effective communication, lack of clear and acceptable objectives, teamwork, worker attitude, lack of appropriate supervision and safety training, lack of training, poor safety awareness of management, unwillingness for safety and improper operations, lack of site supervision and site condition, organizational and individual characteristics, lack of safety awareness, training and conducting safety control, lack of social support and production pressure, lack of knowledge, incentives and rewards, lack of resource allocation and safety training and lack of personal awareness and communication.

2.8 Strategies for Enhancing the Practice of Accidents Reporting and Recording

According to safety bank (2019), safety of workers in relation to accident reporting can be improved through; appointing of a dedicated health and safety individual on site or project, holding daily and weekly H&S briefing session on site, providing platform for employees to access H&S resources, gathering of feedback from workforce and continuously review of processes. Teo and Ling (2006) stated that occupational health and safety management certification and this can be related to site accident reporting and recording which can be achieved by the following; encouragement and enhancing safety awareness, promotion of safe work practice, raising safety standard of the construction industry. Also identified by Bottani *et al*. (2008), adoption of safety

management system improves the safety of an organisation through; definition of safety and security goals, communication of the defined safety goals to the workers, update risk data and perform risk analysis, identification of risks and definition of corrective actions; and development of employees' training programs.

A field survey conducted by Ogundipe (2017), revealed that daily health and safety briefing on site, assigning safety responsibility to all levels, provision of safety awards to encourage workers, allocation of budget for safety management and conduction of safety training are measures used in improving the safety of workers. Adetunji *et al.* (2021) identified the following strategies in improving accident reporting of occupational accident; increase in health and safety awareness, continuous education and training, occupational health and safety auditing for both employers and employees, making reporting easier, health and safety policy approval as a prerequisite for contract bidding, encourage submission of self-assessment report to health and safety department, trade union participation and increasing illness and accident surveillance.

In addition, Okoye *et al.* (2016) and Orji *et al*. (2016), emphasized the need to establish safety commissions at the state level if regulation enforcement is to be effective. This suggestion implies that the government is considered a major player in the struggle to improve worker safety. Therefore, site accident reporting and recording can be enhanced by construction firms when the safety strategies identified by these researchers are implemented. Thus, this will lead to reduction in under-reporting of site accident in the Nigerian construction industry.

2.8.1 Increase in health and safety awareness

Increasing the awareness of health and safety will inform organizations and employees about the importance of data such as for planning and formulation of policy for the

prevention of occupational accidents, allocation of resources, improving understanding of occupational hazards, and better work practices and procedures (Adetunji *et al.*, 2021). To reduce under-reporting and under-recording of site accidents as stated by Nawarathna and Nayanthara (2014), awareness programs should be carried out and improved as well as development programs relating to accident reporting and recording in order to enhance the health and safety management system.

2.8.2 Continuous education and training

Safety training will become more useful if it involves safety inspection to determine the outcome after the programme and appraise whether the workers apply the safety knowledge learned from the training (Tan and Nadeera, 2014). OSHA (2015), indicates that part of the features of a safer firm are providing workers on the project site with training and orientation before commencing work.

2.8.3 Engagement of workforce

Employees in the construction firms need to be equally engaged in the Health and safety procedures as well as briefings, discussion and training by appointing a dedicated health and safety individual on each site or project, holding of daily and weekly H&S briefing sessions on site, Provision of platform for employees to access H&S resources, acknowledgement of H&S successes and gathering of feedback from and reviewing of processes continuously (Safety bank, 2019).

2.8.4 Effective communication

According to Safety bank (2019), information regarding the health and safety should be distributed across all the levels in an organisation. The use of digital tools aid in the distribution of information easy and accessible by the workers and also creates a storage for essential information to be stored. Making emphasis on the importance of reporting

and recording of accident through repetition of information to the workers will lead to improvement of accident reporting as well as recording of site accident in organisations (Arttu, 2020).

2.8.5 Provision of online incidents report

Reporting and recording of accidents done manually can take a lot of time and can be tedious. Therefore, making provision of software that can be accessed easily for the workers to enable instant and autonomous accident reporting and recording. The software should enable securing of cloud based storage for all H&S data, easy access to accident reports and ability to attach files (Safety bank, 2019). The procedures in accident reporting and recording through the use of mobile incident management platform are more efficient and easy (Arttu, 2020).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

Van-Wyk, (2015) defined Research design as the overall plan for connecting the conceptual research problems to the pertinent empirical research. It articulates what data is required, what methods are going to be used to collect and analyses the data (Van-Wyk, 2015). This study adopted a survey design approach using quantitative data. Survey design is deemed suitable for this study because the factors considered are those identified from the literature to which their applicability in construction firms is to be verified in this study. Data was collected through structured questionnaire administered to respondents within the selected construction firms in Abuja, the Federal Capital Territory (FCT) of Nigeria. Abuja was selected because a lot of construction firms are located in Abuja and it has a lot of ongoing construction activities.

3.2 Study Population

Statistical population is defined as a set of similar items or events that is of interest for some questions or experiment (Loke, 2013). Population can be defined as a group of individual(s) or object that a researcher is interested in for the purpose of carrying out a research (Fabos and Isotalo, 2014). The population for this study was 255 registered construction firms in Abuja according to (Abuja Business Directory, 2021).

3.3 Sampling Frame

This is the process of defining the population, a selection of a representative of the population. This is an accessible section of the target population (usually a list with information) from where a sample can be drawn (Loke, 2013). For the purpose of this

study, the sample frame for this study is a list containing information about the 255 registered construction firms for which the sample were drawn.

3.4 Sampling Size

Sample Size is defined by Krejcie and Morgan (1970), as the number of source of data that are selected from the total number of population. The sample size for this study was Ninety (90) registered construction firms which were selected by the use of purposive sampling technique, a subtype of non-probability sampling technique in accordance with some set criteria.

3.5 Sampling Technique

Sampling technique as defined by Shanti and Shasi (2017), is the process of selecting a group of people or products that is used as a representative or random sample. The aim of sampling is to provide a realistic means of enabling the data collection and processing component of research to be carried out (Shanti and Shasi, 2017). For the purpose of this study, purposive/ judgemental sampling technique was adopted based on the following criteria for the construction firms' assortment:

i. The firms must be building construction with experience in building works only.
ii. The year of existence must not be less than ten (10) years in building construction work.
iii. The firms' project sum that are handled or are being handled must not be less than One hundred (100) million Naira.
iv. The construction firm must have at least one safety supervisor, or safety and health officer (safety manager).
v. The working experience of the safety officer or supervisor in the industry must not be less than ten (10) years.

Purposive/ Judgemental sampling as defined by Nikolopoulou (2022), is a non-probability sampling technique that used in selecting units based on characteristics needed in a sample. It relies on the researcher's judgement when identifying and selecting individuals, events that can provide the best information in order to achieve the study's objectives. Purposive/judgmental sampling is used for selecting some cases of a particular type in the population (Blaikie, 2010).

3.6 Data Collection Instrument

This study used questionnaire for collection of data. The questionnaire was designed in the close-ended response format. In order to achieve the objectives of the study, the questionnaire was structured in a way that information can easily be gotten from respondent. The questionnaire was divided into five (5) sections. Section A contained the background of the respondents, section B requested the respondents' opinions on the factors influencing accident reporting, Section C requested the respondent's opinions on the factors influencing accident recording, section D requested the respondent's opinions on the roles of government in regulating workplace occupational accidents, accident reporting and accident record keeping and the last section which is the Section E requested the possible strategies that will enhance accident reporting and recording. The questions' responses were designed on a 5-point Likert scale.

3.7 Method of Data Analysis

In order to achieve the aim of this research, descriptive method of analysis was applied. As such the Relative Importance Index (RII) was applied. The decision rule used for the interpretation of the RII values obtained is summarized in Table 3.1.

3.7.1 Decision Rule for RII

The formula for calculating RII analyses is expressed in Equations 3.1

i. Relative -Importance -Index

Relative Importance Index is being ranked from 0.00 to 1.00 and they all have their decision rule as shown in Table 3.1. The Relative Importance Index (RII) according to Megha and Rajivis (2013) is written as:

$$RII = \sum W/A * N$$

(3.1)

Where, W is the weighting given to each factor by the respondents (ranging from 1 to 5), A is the highest weight, and N is the total number of respondents

Table 3.1: Decision Rule for RII Analysis

Scale	**Cut-Off Point**	***Interpretation***	
5	0.81 - 1.00	Very High	Very Effective
4	0.61 - 0.80	High	Effective
3	0.41 - 0.60	Moderate	Fairly Effective
2	0.21 - 0.40	Low	Less Effective
1	0.00 - 0.20	Very Low	Not Effective

Source: Adapted and Modified from Shittu *et al*. (2016)

CHAPTER FOUR

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Chapter Synopsis

This chapter presents the data used for analysis and discussion of the results obtained from the analysis. The analysis of the data and the result discussions were based on the data obtained from the questionnaire survey.

4.2 Response Rate

This section presents the response rate of the administered questionnaire to the respondents. The table below shows the response rate in Table 4.1.

Table 4.1: Response Rate of Questionnaires

Questionnaires Sent	Questionnaires Received	Response Percentage
90	71	78.89%

Source: Researcher's Field Survey (2021)

From Table 4.1, ninety (90) questionnaires were administered and returned with an actual response rate of 100%. However, Seventy-one (71) questionnaires were returned with an effective response rate of 78.89%, the remaining nineteen (19) with a percentage of 21.11% were not filled properly and lack vital information. The response rate for the questionnaire is considered suitable for this study as stated by Akintoye (2000), submission of questionnaire should be above 20-30% response rate for questionnaire surveys in construction management studies. Results of a study can be considered as biased and less important if the response rate is below 20-30%.

4.2.1 Respondents' profile

This section shows the characteristics of the respondents of this research. The characteristics are presented in Table 4.2

Table 4.2: Respondents's Profile

Category	Classification	Percentage
Gender	Male	77.00%
	Female	23.00%
	TOTAL	**100.00%**
Highest Academic Qualification	OND	-
	HND	4.23%
	Bachelor Degree	46.48%
	Master Degree	45.07%
	PhD	4.23%
	TOTAL	**100.00%**
Professional Affiliation	Architect	9.86%
	Builder	12.68%
	Civil Engineer	11.27%
	Quantity Surveyor	60.56%
	Structural Engineer	5.63%
	TOTAL	**100.00%**
Professional Qualification	NIA	11.27%
	NIOB	12.68%
	NSE	15.49
	NIQS	56.34
	ISPON	2.82
	OTHERS	1.41
	TOTAL	**100.00%**

Years of Experience	10-15 years	81.69
	16-20 years	12.68
	21-25 years	1.41
	Above 25 years	4.23
	TOTAL	**100.00%**
Range of Contract Sum of Executed Project	100-200 Million	25.90%
	201-300 Million	12.70%
	301-400 Million	5.68%
	401-500 Million	13.20%
	501-1 Billion	8.50%
	Above 1 Billion	34.15%
	TOTAL	**100.00%**
Level of Familiarity with Construction H&S	Not aware of it at all	-
	Just aware of it	19.72%
	Have been involved in its application	78.87%
	Others	1.41%
	TOTAL	**100.00%**
Level of Familiarity with concept of Site Accident Reporting & Recording	Not aware of it at all	2.82%
	Just aware of it	26.76%
	Have been involved in its application	70.42%
	Others	-
	TOTAL	**100.00%**

Source: Researcher's Field Survey (2021)

Table 4.2 shows that 77% of the respondents were male while the remaining 23% are females, this implies that majority of the construction professionals are male with few numbers of female professionals in the Nigerian construction industry. It was also

revealed in the table that 46.48% of the respondents have Bachelor of Science/Technology degree holders, 45.07% have degree in Masters of Science/Technology, 4.23% of the respondents have degree in PhD and 4.23% of the respondents are also HND degree holders which also implies that the respondents are academically qualified to give responses to the questions of this research. According to the table in terms of the respondents' Professional Affiliation, Quantity Surveyors have the highest percentage of 60.56%, followed by the Builders with a percentage of 12.68%. The civil Engineers have a percentage of 11.27% while the Architect have a percentage of 9.86%. The Structural Engineers have the least percentage of 5.63%. This signifies that the respondents are also professionally qualified to give responses to the questions of this research.

Most of the respondents are registered with NIQS (56.34%) followed by NSE (15.49%). 12.68% are registered with NIOB, while 11.27% are registered with NIA. ISPON has a percentage of its members with 2.82% and 1.41% are registered with other professional bodies. The respondents' years of experience ranging between 10yrs to 15yrs have the highest percentage of 81.69%, followed by the range of 16yrs to 20yrs with a percentage of 12.68%. Other respondents' years of experience ranges from 21yrs to 25yrs and above 25yrs with a percentage of 1.41% and 4.23% respectively which indicates that the respondents have adequate years of experience in the construction industry with expertise and practice and were appropriate to give responses to the questions in the questionnaire of this research? The highest range of the contract sum handled by most of the respondents exceeded 1b (34.15%). Some of the respondent's contract sum executed ranges from 100m-200m (24.90%) and 401m-500m (13.20%).

The least contract sum executed by the respondents is, 201m-300m, 501m-1b and 301-400m with 13.2%, 8.5% and 5.68% respectively. This shows the respondents have

handled construction projects involving significant sums, hence their response to the research questions are considered to be appropriate and can be relied upon. The respondents level of familiarity with H&S is high due to the involvement of its application with a percentage of 78.87%, Some respondents are just aware of it (19.72%) while 1.41% have other opinions regarding the level of familiarity. All the respondents are aware of H&S in the construction industry which shows that the level of significance of H&S in the industry. In regards to the level of familiarity with the concept of site accident reporting and recording in Construction,70.42% of the respondents have been involved in the application of site accident reporting and recording, while 26.72% of the respondents are just aware of site accident reporting and recording. Furthermore, only 2.82% of the respondents are not aware of site accident reporting and recording at all. This shows that the respondents have knowledge and experience and are qualified to give responses to the questions in this research.

4.3 Results and Discussion on Factors Influencing the Practice towards Reporting of Site Accidents in Abuja

From the literature review of this study, twenty-five (25) factors influencing the practice towards reporting of site accident were identified and ranked by the respondents based on their level of influence with the use of Relative Important Index (RII).

The result analysis in Table 4.3 shows that lack of safety commitment by management with a RII value of 0.79, no feedback, lack of any health and safety regulatory body, lack of time with RII value of 0.78, lack of experience with RII value of 0.77 are the major factors that have high influence on the practice of site accident reporting. Furthermore, it was discovered that lack of management knowledge on accident reporting with RII value of 0.59 has moderate influence on the practice of site accident reporting. The least factors with low influence on the practice of site accident reporting

are: fear of reprisal, fatalistic attitude i.e. having the mindset that injuries are fact of life in construction site with RII value of 0.27 and 0.00 respectively. The findings indicate that about twenty-one (21) factors among the twenty-five factors (25) considered were having high influence because they fall between the RII value of 0.61-0.80 being the cut-off point for the high influence on construction firms practice. With an average RII value of 0.65. The results of Table 4.3 shows that all identified factors have a high influence on the practice of site accident reporting by Construction firms.

Table 4.3: Results of Factors Influencing the Practice towards Reporting of Site Accidents in Abuja

S/No.	Code No.	Factors Influencing the Practice towards Reporting of Site Accidents	RII	Rank	Decision
1	B1	Lack of safety commit-met by management	0.79	1st	High
2	B14	No feedback	0.78	2nd	High
3	B4	Lack of any health and safety regulatory body	0.78	2nd	High
4	B9	Lack of time	0.78	2nd	High
5	B3	Lack of experience	0.77	5th	High
6	B2	Lack of Budget	0.76	6th	High
7	B13	Loss of Benefits	0.75	7th	High
8	B19	Complicated reporting system	0.75	7th	High
9	B6	Lack of available safety managers in the project	0.74	9th	High
10	B8	Lack of employee knowledge on accident reporting	0.74	9th	High
11	B10	Lack of management response on report	0.74	9th	High
12	B21	Concern over job security for reporting	0.73	12th	High
13	B5	Lack of management knowledge on health and safety	0.71	13th	High

14	B12	Lack of access to usable accident reporting method	0.71	13th	High
15	B18	Time pressure of reporting	0.71	13th	High
16	B22	Availability of materials	0.69	16th	High
17	B11	Lack of training	0.68	17th	High
18	B15	No incentives scheme	0.68	17th	High
19	B20	Inadequate procedures of reporting	0.67	19th	High
20	B16	No regular enforcement	0.66	20th	High
21	B17	Having difficulty in reporting	0.65	21st	High
22	B7	Lack of management knowledge on accident reporting	0.59	22nd	Moderate
23	B23	Fear of reprisal	0.27	23rd	Low
24	B24	Fatalistic attitude i.e. having the mindset that injuries are fact of life in construction site	0.00	24th	Very Low
25	B25	Others	0.00	24th	Very Low
		Average RII	***0.65***		***High***

4.4 Results and Discussion on Factors Influencing the Practice towards Recording of Site Accidents in Abuja

In order to examine the identified factors influencing the practice towards recording of site accident in Abuja, the respondents ranked the factors based on their level of influence using Relative Important Index. Table 4.4 indicates that low priority with RII value of 0.82 and poor management commitments to accident recording (RII value of 0.81) are the key factors that have very high influence on the practice towards site recording by construction firms. Absence of accident record planning, poor site supervision, lack of training, lack of communication of investigation result, and absence of construction firm's safety prequalification having the same RII value of 0.79 ranked as the 3rd factors that have high influence on the practice of site accident recording by Construction firms. Poor awareness of accident recording by management and poor time

frame were ranked as the 16th factors followed by culture of blame ranked as the 18th factor, lack of teamwork ranked as the 19th factor and lastly other factors identified by the respondents ranked as the 20th with RII value of 0.71, 0.70, 0.65 and 0.32 respectively. The results revealed that the other factors identified by the respondents are indicated to have low influence on the practice of site accident recording by construction firms.

This implies that the identified factors with an average RII value of 0.74 as revealed in this study are considered to have high influence on the practice of site accident recording by construction firms because the RII average value falls between the RII value of 0.61-0.80 being the cut-off point for the high influence on construction firms practice.

Table 4.4: Results of Factors Influencing the Practice towards Recording of Site Accidents in Abuja

S/No.	Code No.	Factors Influencing the Practice towards Recording of Site Accidents	RII	Rank	Decision
1	C4	Low priority safety	0.82	1st	Very High
2	C14	Poor management commitment to accident recording	0.81	2nd	Very High
3	C6	Absence of accident record planning	0.79	3rd	High
4	C15	Poor site supervision and	0.79	3rd	High
5	C3	Lack of Training	0.79	3rd	High
6	C8	Lack of communication of investigation results	0.79	3rd	High
7	C7	Absence of construction firm's safety prequalification	0.79	3rd	High
8	C13	Poor concern toward accident recording	0.78	8th	High
9	C2	Lack of safety regulations	0.77	9th	High
10	C5	Low of concern of safety training	0.77	9th	High

11		Unwillingness to record and improper		11th	High
	C11	operations	0.75		
12	C12	Lack of resource allocation	0.75	11th	High
13	C1	Lack of relevant accident data	0.74	13th	High
14	C10	Lack of incentives	0.74	13th	High
15		Poor personal awareness and		13th	High
	C16	communication of accident recording	0.74		
16		Poor awareness of accident recording		16th	High
	C9	by management	0.71		
17	C17	Poor time frame	0.71	16th	High
18	C18	Culture of blame	0.70	18th	High
19	C19	Lack of teamwork	0.65	19th	High
20	C20	Others	0.32	20th	Low
		Average RII	***0.74***		***High***

4.5 Results and Discussion on Roles of Government in Regulating Workplace Occupational Accidents, Accident Reporting and Record Keeping

Results from Table 4.5 revealed that Establishment and Coordination of National Incident Management System (NIMS) on Occupational accidents, injuries, diseases and death in order to provide a data bank that will provide information concerning the occupational health and safety to the construction firms, ensuring that the construction firms report all injuries and deaths to the occupational health and safety office were ranked first with the same RII value of 0.39 were considered to be roles that government lacked majorly in regulating workplace occupational accident, accident reporting and record keeping and the roles played were considered to be low in terms of regulation. Ensuring that any construction firm which commits an offence against the provision of the regulation shall be liable to pay a fine or have its principals imprisoned for a term, also ensuring that the construction firms make compensation for work related

disabilities or death of workers, ensuring that the construction firms establish and apply the procedures for the notification of occupational accidents with RII value of 0.35, 0.35 and 0.34 respectively were discovered in this study to be the least roles government lack in regulating workplace occupational accident, accident reporting and record keeping which were considered to be low. The roles of government as identified in this research has an average RII value of 0.37 which falls within the RII value of 0.21-0.40 being the cut-off point for low level of action of government in terms of the roles the government play in regulating workplace occupational accident, accident reporting and record keeping.

Table 4.5: Results of Roles of Government in Regulating Workplace Occupational Accidents, Accident Reporting and Record Keeping

S/No.	Code No.	Roles of Government in Regulating Workplace Occupational Accidents	RII	Rank	Decision
1	D2	Establishment and Coordination of National Incident Management System (NIMS) on Occupational accidents, injuries, diseases and death in order to provide a data bank that will provide information concerning the occupation safety and health to the construction firms.	0.39	1st	Low
2	D4	Ensuring that the construction firms report all injuries and deaths to the occupation health and safety office.	0.39	1st	Low
3	D7	Ensuring that the construction firm provide the information related to the accident during investigation.	0.39	1st	Low
4	D3	Ensuring that the construction firms keep record of all notifiable occupational accidents, injuries and occupational disease.	0.37	4th	Low
5	D5	Setting up a safety and health committee to inspect workplace after the occurrence of an accident.	0.36	5th	Low
6	D6	Holding of meeting to investigate the cause of accident occurrence.	0.36	5th	Low
7	D8	Providing recommendation to construction firms of the measures to be taken to prevent reoccurrence of accident.	0.36	5th	Low

8	D10	Ensuring that any construction firm who commits an offence against the provision of the regulation shall be liable to pay a fine or be imprisoned for a term.	0.35	8th	Low
9	D9	Ensuring that the construction firms make compensation for work related disabilities or death of workers.	0.35	8th	Low
10	D1	Ensuring that the construction firms establish and apply the procedures for the notification of occupational accidents.	0.34	10th	Low
		Average RII	***0.37***		***Low***

4.6 Results and Discussion on Strategies for Enhancing the Practice of Construction Firms towards Accidents Reporting and Record Keeping

Table 4.6 indicates that increase in health and safety awareness with RII value of 0.93, continuous education and training, institute safety awards to motivate workers, holding daily and weekly H&S briefing session on site, good communication of defined safety goals to workers having the same RII value of 0.86 were the major strategies for enhancing the practice of construction firms towards accident reporting and record keeping and were considered to be very effective. It was revealed from Table 4.6 that the least very effective strategies for enhancing the practice of construction firms towards accident reporting and record keeping are; increasing illness and accident surveillance, making reporting easier, definition of safety and security goals, encourage submission of self-assessment report to health and safety department having the same RII value of 0.82. These were followed by trade union participation with RII value of 0.73 considered to be the only effective strategy for enhancing the practice of construction firms towards accident reporting and record keeping.

However, a very close look at the result in Table 4.6 shows that all identified very effective strategies for enhancing the practice of construction firms towards accident reporting and record keeping have a RII value of above average of 0.80. This signifies

that the strategies have the tendency of enhancing the practice of construction firms towards accident reporting and record keeping.

Table 4.6: Results of Strategies for Enhancing the Practice of Construction Firms towards Accidents Reporting and Record Keeping

S/No.	Code No.	Strategies for Enhancing the Practice of Construction Firms Towards Accidents Reporting and Record Keeping	RII	Rank	Decision
1	E1	Increase in health and safety awareness	0.93	1st	Very Effective
2	E2	Continuous education and training	0.86	2nd	Very Effective
3	E18	Institute safety awards to motivate workers	0.86	2nd	Very Effective
4	E10	Holding daily and weekly H&S Briefing session on site	0.86	2nd	Very Effective
5	E16	Good communication of defined safety goals to workers	0.86	2nd	Very Effective
6	E3	Occupational health and safety auditing for both employers and employees	0.85	6th	Very Effective
7	E5	Health and Safety policy approval as a prerequisite for bidding contract	0.85	6th	Very Effective
8	E13	Gathering of feedback from work force and continuous review of process	0.85	6th	Very Effective
9	E11	Provide platform for employees to access H&S resources	0.84	9th	Very Effective
10	E9	Appointment of dedicated health and safety individual per work site	0.83	10th	Very Effective
11	E17	Assigning safety responsibility to all levels	0.83	10th	Very Effective
12	E19	Allocation of budget for safety management	0.83	10th	Very Effective
13	E12	Acknowledgement of H&S successes such as good reporting of accident	0.83	10th	Very Effective
14	E14	Raising safety standard od the construction industry	0.83	10th	Very Effective
15	E8	Increasing illness and accident surveillance	0.83	10th	Very Effective
16	E4	Making reporting easier	0.82	16th	Very Effective
17	E15	Definition of safety and security goals	0.82	16th	Very Effective
18	E6	Encourage submission of self-assessment report to health and safety department	0.82	16th	Very Effective
19	E7	Trade union participation	0.73	19th	Effective
20	E20	Others	0.00	20th	Not Effective
		Average RII	***0.80***		***Effective***

4.7 Discussion of Findings

Findings of this research shows that the major factors that influences the practice of site accident reporting by construction firms are; lack of safety commitment by management, no feedback, lack of any health and safety regulatory body, lack of time and lack of experience. This finding is in line with the research result of Rana (2021), which states that factors that present barriers to reporting workplace occupational accident and contribution to non-report include; undue reporting policies, processes and procedures and lack of supervisory/ safety management personnel, lack of experience. Furthermore, the result of this research reveals that lack of employee knowledge on accident reporting, lack of management knowledge on accident reporting, lack of time, lack of experience, complicated reporting system, lack of training, concern over job security for reporting, time pressure of reporting, inadequate procedures for reporting and lack of management response on report have high influence on the practice of site accident reporting, this confirms the result of research studies carried out by Andy (2007); Muawiyah *et al*. (2018) and Nayanthara and Uthpala (2018), which revealed that lack of knowledge by both management and employees, lack of skill, lack of time, lack of adequate safety training program, lack of recognition of reporting system, lack of management response toward reporting, the likelihood of job insecurity and lack of access to usable reporting system. This shows that the identified factors have a high influence on the practice of site accident reporting by construction firms. Therefore, to improve the practice of site accident reporting by construction firms, the above listed factors are to be addressed by providing the necessary solutions.

In terms of site accident recording practice by construction firms, findings from this study reveals that, Poor management commitment to accident recording, lack of safety regulation, poor awareness of accident recording by management, poor awareness and

communication of accident recording, unwillingness to record and improper operations and lack of incentives are among the key factors that have high influence towards the practice of site accident recording by construction firms, this results confirms the findings of Muawiyah *et al*. (2018) and Ngobi *et al.* (2021), that lack of any health and safety regulating body, lack of experience, lack of management knowledge on accident recording and unavailability of centralized recording systems. Hence both findings have shown that the identified factors have influence on the practice of site accident recording, therefore adequate measures should be put in place in order to improve the practice of site accident recording by construction firms. Measures such as; establishment of regulatory bodies, provision of incentives to encourage the recording of site accident, awareness on accident recording and provision of necessary skills and training.

As regards to the roles government play in regulating workplace occupational accident, accident reporting and record keeping, this study reveal that the roles government play in terms of regulation is low on an average level, this shows that roles government play in regulating accident reporting and record keeping have influence on the lack of accident reporting and record keeping by construction firms. This conform with the findings of Kemei *et al.* (2015) which indicates that lack of enforcement of rules and regulation by government regarding accidents leads to the reoccurrence of the same incidence. There should be enforcement of rules and regulation governing the H&S which will in turn improve the H&S of construction workers relating to site accident reporting and record keeping.

Lastly, this study outlines possible strategies for enhancing the practice of construction firms towards site accident reporting and record keeping such as; Increase in health and safety awareness, continuous education and training which is similar to the findings of

Adentunji *et al*. (2021) and Nawarathna and Nayanthara (2014) that increasing the awareness of health and safety plays a vital role in reporting and recording of workplace occupational accident. This awareness will lead to the reduction of non-reporting and non-recording of accident on site and it will also improve the safety performance of workers on site. Other strategies as outlined in this study includes continuous education and training, making reporting easier, appointment of dedicated health and safety individual per work site will contribute greatly to the enhancement of construction firms practice towards adequate site reporting and recording of accident which conform with the research findings of Nayanthara and Uthpala (2018), appointing safety officers for each construction site, conducting training and awareness programs on the importance of accident reporting and recording.

4.8 Summary of Findings

The major findings of this research are summarized as follows:

i. The major factors that influence the practice of site accident reporting by construction firms are; lack of safety commitment by management (RII=0.79), no feedback, lack of any health and safety regulatory body and lack of time (RII=0.78) and lastly lack of experience (RII=0.77). Fear of reprisal (RII= 0.27) and fatalistic attitude i.e. having the mindset that injuries are fact of life in construction site (RII= 0.00) were the least factors with low influence on the practice of site accident reporting. On the average, all the identified factors influencing the practice of site accident reporting by construction firms are high (average RII=0.65).

ii. Low priority, poor management commitment to accident recording, absence of accident planning, poor awareness of accident recording by management, poor site supervision, lack of training, lack of communication of investigation result,

and absence of construction firm's safety prequalification with RII values 0.82, 0.81 and 0.79 respectively are among the key factors that have high influence towards the practice of site accident recording by construction firms. On the average, all identified factors influencing the practice of site accident recording by construction firms are high (average RII=0.74).

iii. Establishment and coordination of NIMS for the purpose of providing information relating to Occupational accidents, injuries, diseases and death to the construction firms and ensuring that the construction firms report all injuries and deaths to the occupation health and safety office (RII value= 0.39) were the top most roles considered to be low. On the average, all identified roles of government in regulating workplace occupational accident, accident reporting and record keeping are low (RII=0.37).

iv. The very effective strategy for enhancing the practice of construction firms towards accident reporting and record keeping was discovered to be increasing in awareness of health and safety (RII=0.93). On the average, all identified strategies for enhancing the practice of construction firms towards accident reporting and record keeping were effective (RII=0.80)

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study reveals that the major factors influencing the practice of construction firms towards site accident reporting are: lack of safety commitment by management, lack of health and safety regulatory body, no feedback, lack of experience and lack of time which have high influence. Although, other considered factors in this study have high influence also. It was also shown that Poor management commitment to accident recording, absence of accident planning, poor awareness of accident recording by management, poor site supervision, lack of training, lack of communication of investigation result, and absence of construction firm's safety prequalification are the key factors that have high influence on the practice towards site accident recording by construction firms. However, other listed factors regarding site accident recording in this study also have high influence.

In addition, it was found that the roles of government in regulating workplace occupation accident, accident reporting and record keeping were considered to be low in terms of ensuring that provision of a data bank to provide information regarding occupational health and safety to the construction firms in relation to accidents, injuries and death. The study also reveals that most effective strategies for enhancing the practice of accident reporting and recording by construction firms is increasing awareness of health and safety which will lead to reduction of non-reporting and non-recording of accidents. It can therefore be concluded that construction firms practice towards site accident reporting in Abuja is not effective as a result low regulation of workplace occupational accident reporting and record keeping by government.

However, the implementation of the strategies for enhancing the practice towards accidents reporting and record keeping by construction firms and the responsible Ministry/Agencies will improve the level of implementation of construction firms practice towards site accident reporting in Abuja.

5.2 Recommendations

Based on the findings of this study, the following recommendations are made:

i. In order to improve the practice of accident reporting by construction firms, establishment of health and safety regulatory body, enforcement of health and safety regulations relating to accident reporting, provision of knowledge and skills in relation to accident reporting, provision of incentives to encourage accident reporting are to be provided.

ii. Adequate measures such as; establishment of regulatory bodies, provision of incentives to encourage the recording of site accident, awareness on accident recording and provision of necessary skills and training are to be put in place to encourage the construction firms to have record keeping of accident.

iii. Setting-up of safety and health committee by the responsible Ministry/Agencies to inspect workplace after the occurrence of an accident and ensure that regulations regarding such should be enforced, ensuring that construction firms report to the set committee and have an internal record of reported accident as well as imposing heavy fines on the construction firms that fails to comply with the set regulations.

5.3 Area for Further Studies

The study provides possible areas in which further studies can be carried out and are as follows:

i. Further studies should be carried out on assessment of clients (private and public) attitude towards construction site accident reporting and record keeping.
ii. The study was limited to construction firms in Abuja, further studies can be conducted in other states of the country.

5.4 Contribution to Knowledge

In view of the findings of this study, the following contributions to the body of knowledge are as follows;

i. The study has increased the understanding of the factors influencing site accident reporting practice by construction firms.
ii. The study revealed the factors that influence the practice of construction firms towards accident record keeping and has added to the understanding of such factors.
iii. The study has increased to the understanding of the deficiency in regulating workplace occupational accident, accident reporting and record keeping by government in Nigeria.
iv. The study has increased in the understanding of possible strategies that will help to improve and enhance the practice of accident reporting and record keeping by construction firms.

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APPENDIX

RESEARCH QUESTIONNAIRE COVER LETTER

Department of Quantity Surveying,
School of Environmental Technology,
Federal University of Technology Minna.
Niger State.
Date: 24 November, 2021.

Dear Sir/Madam,

RESEACH QUESTIONNAIRE: Assessment of Construction Firms' Accident Reporting Practices in Abuja, Nigeria

I am HASSAN Aisha Ndaisa, a postgraduate student of Quantity Surveying Department, at the Federal University of Technology, Minna. I am undertaking my final year research thesis in partial fulfilment of the requirement for the award of Master of Technology Degree in Quantity Surveying.

While appreciating your busy schedule, I humbly solicit that you spare time to help respond to the attached questionnaire which is crucial to the success of my on-going research with the above title.

Your response will be treated with strict confidentiality and used only for the purpose of this research work.

Thank you for your anticipated cooperation

Yours sincerely,

HASSAN Aisha Ndaisa
08064891270
(Researcher)

ASSESSMENT OF CONSTRUCTION FIRMS' ACCIDENT REPORTING PRACTICES IN ABUJA, NIGERIA

Section A: Background Information of Respondents

Please Kindly tick [ ] your response where appropriate

1. Name (optional)……..
2. Construction Firm Name…….
3. Gender: Male [ ] Female [ ]
4. Your highest academic qualification (a) OND [ ] (b) HND [ ] (d) Bachelor's Degree [ ] (e) Masters [ ] (f) PhD [ ]
5. What is your Professional Affiliation? (a) Quantity Surveyor [ ] (b) Architect [ ] (c) Builder [ ] (d) Civil Engineer [ ] (e) Structural Engineer [ ]
6. Professional Qualification of Respondent (a)NIA [ ] (b) NIOB [ ] (c) COREN [ ] (d) NIQS [ ] (e) ISPON [ ] (f) others [ ]
7. Years of experience in the construction industry: (a) 10-15years [ ], (b) 16-20years [ ] (c) 21-25years [ ], (d) above 25[ ]
8. What is the range of contract sums for the projects your firm had been involved in Naira? (a)100m – 200m [ ] (b) 201m – 300m [ ] (c) 301m – 400m [ ] (d) 401m – 500m [ ] (e) 501m – 1b [ ] (d)Above 1b [ ]
9. How familiar are you with the concept of Health and safety in construction?

(a) Not aware of it at all (b) Just aware of it (c) Have been involved in its application (d) other, please specify

10. How familiar are you with the concept of site Accident reporting and recording in construction?

(a) Not aware of it at all (b) Just aware of it (c) Have been involved in its application (d) Other, please specify

SECTION B: Factors Influencing the Practice towards Reporting of Site Accidents in Abuja

1. The following are factors influencing the practice towards reporting of site accidents as reviewed in literature. Please, kindly rank the factors by ticking appropriately to indicate the level of influence of the factors related to accident reporting on construction site, using the five point Linkert's scale provided below: 5-Very high, 4-High, 3-Moderate, 2- low, 1-Very low

Code No.	Factors	Very High 5	High 4	Moderate 3	Low 2	Very low 1
B1	Lack of safety commit- met by management					
B2	Lack of Budget					
B3	Lak of experience					
B4	Lack of any health and safety regulatory body					
B5	Lack of management knowledge on health and safety					
B6	Lack of available safety managers in the project					
B7	Lack of management knowledge on accident reporting					
B8	Lack of employee knowledge on accident reporting					
B9	Lack of time					
B10	Lack of management response on report					
B11	Lack of training					

B12	Lack of access to usable accident reporting method					
B13	Loss of Benefits					
B14	No feedback					
B15	No incentives scheme					
B16	No regular enforcement					
B17	Having difficulty in reporting					
B18	Time pressure of reporting					
B19	Complicated reporting system					
B20	Inadequate procedures of reporting					
B21	Concern over job security for reporting					
B22	Availability of materials					
B23	Fear of reprisal					
B24	Fatalistic attitude i.e. having the mindset that injuries are fact of life in construction site					
B25	Others					

SECTION C: Factors Influencing the Practice towards Recording of Site Accidents in Abuja

1. The following are factors influencing the practice towards recording of site accidents as reviewed in literature. Please, kindly rank the factors by ticking appropriately to indicate the level of influence of the factors related to accident recording on construction site, using the five point Likert's scale provided below: 5-Very high, 4-High, 3-Moderate, 2- low, 1-Very low

Code No.	Factors	Very High 5	High 4	Moderate 3	Low 2	Very low 1
C1	Lack of relevant accident data					
C2	Lack of safety regulations					
C3	Lack of Training					
C4	Low priority safety					
C5	Low of concern of safety training					
C6	Absence of accident record planning					
C7	Absence of construction firm's safety prequalification					
C8	Lack of communication of investigation results					
C9	Poor awareness of accident recording by management					
C10	Lack of incentives					
C11	Unwillingness to record and improper operations					
C12	Lack of resource allocation					

C13	Poor concern toward accident recording					
C14	Poor management commitment to accident recording					
C15	Poor site supervision and					
C16	Poor personal awareness and communication of accident recording					
C17	Poor time frame					
C18	Culture of blame					
C19	Lack of teamwork					
C20	Others					

<u>SECTION D</u>: Roles of Government in Regulating Workplace Occupational Accidents, Accident Reporting and Record Keeping.

1. The following are the identified roles of the Government in Regulating regulating workplace occupational accidents, accident reporting and record Keeping.Please, kindly rank the roles by ticking appropriately to indicate the rate of influence of which the Government execute these roles on a five point Likert's scale provided below: 5-Very High, 4-High, 3-Moderate, 2- Low, 1-Very Low

Code No.	Roles	Very High 5	High 4	Moderate 3	Low 2	Very Low 1
D1	Ensuring that the construction firms establish and apply the procedures for the notification of occupational accidents.					
D2	Establishment and Coordination of National Incident Management System (NIMS) on Occupational accidents, injuries, diseases and death in order to provide a data bank that will provide information concerning the occupation safety and health to the construction firms.					
D3	Ensuring that the construction firms keep record of all					

	notifiable occupational accidents, injuries and occupational disease.					
D4	Ensuring that the construction firms report all injuries and deaths to the occupation health and safety office.					
D5	Setting up a safety and health committee to inspect workplace after the occurrence of an accident.					
D6	Holding of meeting to investigate the cause of accident occurrence.					
D7	Ensuring that the construction firm provide the the information related to the accident during investigation.					
D8	Providing recommendation to construction firms of the measures to be taken to prevent reoccurrence of accident.					
D9	Ensuring that the construction firms make compensation for work related disabilities or					

	death of workers.					
D10	Ensuring that any construction firm who commits an offence against the provision of the regulation shall be liable to pay a fine or be imprisoned for a term.					

SECTION E: Strategies for Enhancing the Practice of Construction Firms Towards Accidents Reporting and Record Keeping

1. The following are strategies influencing the practice towards reporting and record keeping of site accidents as reviewed in literature. Please, kindly rank the strategies by ticking appropriately to indicate the level of influence of the strategies related to accident reporting and recording on construction site, using the five point Likert's scale provided below: 5-Very Effective, 4-Effective, 3-Fairly Effective, 2- Less Effective, 1-Not Effective

Code No.	Strategies	Very Effective 5	Effective 4	Fairly Effective 3	Less Effective 2	Not Effective 1
E1	Increase in health and safety awareness					
E2	Continuous education and training					
E3	Occupational health and safety auditing for both employers and employees					
E4	Making reporting easier					
E5	Health and Safety policy approval as a prerequisite for bidding contract					
E6	Encourage submission of self-assessment report to health and safety department					
E7	Trade union participation					
E8	Increasing illness and accident surveillance					
E9	Appointment of dedicated health and safety individual per work site					

E10	Holding daily and weekly H&S Briefing session on site					
E11	Provide platform for employees to access H&S resources					
E12	Acknowledgement of H&S successes such as good reporting of accident					
E13	Gathering of feedback from work force and continuous review of process					
E14	Raising safety standard od the construction industry					
E15	Definition of safety and security goals					
E16	Good communication of defined safety goals to workers					
E17	Assigning safety responsibility to all levels					
E18	Institute safety awards to motivate workers					
E19	Allocation of budget for safety management					
E20	Others					

Thank you very much for your co-operation.

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