ACCIDENT ON BUILDING CONSTRUCTION SITE: ITS LONG-TERM CONSEQUENCE

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Abstract

Failure to effectively manage accidents on building construction sites can result in fatalities, sectors, and disabilities. It is crucial to implement proper safety measures to prevent such incidents and safeguard the well-being of workers. This study examined the long-term consequence of accidents on Building construction sites to prevent injuries, disabilities, and fatalities. Data was collected through structured questionnaires administered to registered professionals (Quantity Surveyors, Architects, Builders, and Structural Engineers) in Ondo State. Out of the Eighty-three (83) questionnaires distributed, Sixty-nine (69) were retrieved and analyzed using descriptive statistics, mean score response analysis, frequency, and percentages. The findings of the study highlighted the major long-term consequences of accident on Building construction site which includes demonization of workers, possible loss of earning ability, negative impact on the reputation of the firm, affection overall project cost and productivity, time spent in training a temporary or permanent replacement, some of the top are human fatalities. The study recommended an implementation of comprehensive safety training, continuous monitoring, support for employees, safety gear, emergency response plans, incident investigations, and lessons learned to address these issues. These actions will moderate the results and guarantee workers well-being, safeguard notoriety, and keep up with project effectiveness.

Keywords: Accidents, Consequences, Construction site management, Safety measures, Workers' well-being

I. Introduction

Inability to distinguish an unsafe condition that exists before or after the beginning of an action, lifting on a work in a perilous condition, and figuring out how to work regardless of dangerous site conditions are the three essential drivers of mishaps. Accidents in the development business happen because of risky activities and conditions. Because of the board's inability to expect issues like preparation, upkeep, and guidance, risky circumstances and perilous ways of behaving are the essential drivers of accident. According to Priyadarshani and Karunasena (2013), the earnestness of accidents have been perceived with components which incorporate age, Public Grouping of Financial Exercises code, aspect of the association, length of organization, district of accidents, day of the week, extended times pans, deviation, harm, and climatic Zones (Dėjus 2008).

The effects of accidents on building construction sites are widespread in many literatures, for instance Udo (2016) investigated the results of development mishaps in the Nigerian structure industry; a few absolute best positioned results in this findings are about demotivation of laborers, unfortunate impact on the prominence of firms, further developing the task cost, harms to plant/gear and expense for settlement of injury/demise claims.

Kadiri, Nden, Avre, Oladipo, Edom, Samuel and Ananso (2014) determined a portion of the end results on building development because of the outcomes of accident at improvement destinations. The most significant impacts are time loss of timetable, acknowledgment loss of firm, the brain science of laborers adversely impacted and cost of clinical cost.

Ahmed (2019) expressed many impacts that make the task more mind boggling and broken. A portion of the zenith outcomes are human fatalities, de-inspiration of laborers, interruption of building site exercises, drag out task development and fondness standard test worth and efficiency. (Mthalane, Ayman and Pearl, 2008) recognized a monster number of consequences of development mishaps on building project. The high positioned results are

loss of efficiency, disturbance of present day work, training cost for substitution, harms to plant/hardware/finished work, expenses of laborer's remuneration, installments for settlements of injury or demise claims, and lawful charges safeguard contrary to claims.

In Ireland, Hrymak and Perezgonzalez (2007) showed a wide shift of horrible outcomes because of the mishaps concerning financial and non-money related misfortune to business. A portion of the perceived outcomes in this learn about are pay costs for substitute group of laborers or extra time installments, assembling and efficiency misfortunes, keeping costs, individual harm guarantee remuneration, fix cost, charming disappointment and debate and suit.

Abdullah and Shari (2019) described the results as stressed labourer on the site and these incorporate; enduring to individual, Difficulty to the individual, Casualty, Minor injury, Debilitating injury, conceivable loss of procuring capacity. Sharma (2010) characterized that the worth of management is the benefit of halting accident which is answerable for effectiveness and security on location.

Likewise, cost of protection plan contain a monstrous amount of money and does now not even stopped there anyway includes extra costs that piece into the pay edge of the undertaking. Financial impacts of mishaps in development endeavor incorporate; Creation delay, Augmentation in insurance plan payment, Lawful costs, Time misfortune by the representative, decreased quality, Time spent in training a brief or never-ending substitution, Time spent through administration and oversight in exploring and detailing the accident. It is perceive that accidents which show up on building sites lead to wounds and unmistakable sorts of dangers to the representatives or properties.

Ameachi (1990) recorded results of improvement mishaps on the advancement destinations comprising of harm to substances or gear, Loss of client's speculations, fractional or complete stop to the work underway, Loss of wages for the workers however long hospitalization, Injury or death toll of laborer might last.

2. Methodology

The distinctive verification of sensible and potential respondents, the decision of the reasonable inspecting frame, how hands on work is finished, and, finally, how the data accumulated were gotten, encoded, dealt with, and taken apart were two or three of the numerous factors that choose the cooperation's success (Creswell, 2009; Yin, 2009). Data were collected through structured questionnaires administered to registered professionals (Quantity Surveyors, Architects, Builders, and Structural Engineers) in Ondo State. Out of the Eighty-three (83) questionnaires distributed, Sixty-nine (69) were retrieved and analyzed using descriptive statistics, mean score response analysis, frequency, and percentages.

The questionnaire was aimed to collect background information about the respondents and examined the long-term consequence of accidents on building construction sites.

3. Results and Discussion

Background information

Table 1 displays the distribution of the questionnaire, revealing that a total of Eighty-three (83) questionnaires were distributed, representing 100% of the sample size. Out of these, Sixty-nine (69) questionnaires were completed and returned, constituting the dataset used for subsequent analysis and computation.

Table 2 presents the distribution of respondents' years of experience. Notably, 9% of the respondents have 6 years of experience, 4% have 7 years, 5% have 8 years, 3% have 9 years, 9% have 10 years, 1% has 11 years, 6% have 12 years, 4% have 13 years, and 3% have 14 years of experience. The significance of this data lies in the fact that the respondents' working experience is crucial for the research's credibility. Their accumulated knowledge and expertise enable them to provide the much-needed professional judgment required to ensure the validity of the data collected.

Table 1: Distribution of questionnaires

Questionnaires	Frequency	Percentage
Number distributed	83	100.00
Completed and number of returned	69	83.14
Number not returned	14	16.86

Table 2: Years of experience in the construction industry

Classification	Frequency	Percentage
1-5yrs	4	2.9
6-10yrs	13	21.7
11-15yrs	19	27.5
16-20yrs	27	39.1
Above 20yrs	6	8.7
TOTAL	69	100.0

According to Table 4.3, the distribution of educational qualifications among the respondents is as follows: national diploma holders constitute 6%, higher national diploma holders represent 32%, bachelor in science holders represents 19%, post-graduates represent 19%, master in science holders represent 15%, and professional doctorate degree holders represent 10%.Notably, the highest percentage of respondents falls under the category of higher national diploma holders, making up 32% of the total. Following closely behind are the post-graduate degree holders, accounting for 19% of the respondents.

Table 3: Academic qualification of respondents

Education background	Frequency	Percentage
ND	4	6
HND	22	32
BSC	13	19
PGD	13	18
MSC	10	15
PhD	7	10
Total	69	100

Based on Table 4, the respondents' occupations can be categorized as follows: skilled laborers account for 27.5% of the respondents, unskilled laborers comprise 2.9%, professionals represent 43.5%, visitors make up 4.3%, and contractors constitute 21.8%. The analysis reveals that the largest group among the respondents is the professionals, encompassing 43.5% of the total number.

Table 4: Category of workers

Category of workers	Frequency	Percentage
Professionals	30	43.5
Unskilled labour	2	2.9
Skilled labour	19	27.5
Visitors	3	4.3
Contractor	15	21.8
Total	69	100.0

Based on the data presented in Table 5, the distribution of respondents across different types of projects is as follows: residential building has 36.2% of respondents, commercial building has 42.1%, educational building has 8.7%, and institutional building has 13%. It is evident from the table that the two major projects with the highest number of professional participants are commercial building (42.1%)

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and residential building (36.2%). These two types of projects attract the most involvement from professionals.

Table 5: Types of project involved

Type of project	Frequency	Percentage
Residential building	25	36.2
Commercial building	29	42.1
Educational building	6	8.7
Institutional building	9	13.00
Total	69	100.00

Effects of accident on building construction site

The table presents the responses of the respondents, indicating different mean scores and rankings for various factors. These factors are associated with the consequences of workplace accidents and safety incidents. The rankings are as follows: 1st Rank: Demotivation of workers - Mean Score: 4.63, 2nd Rank: Possible loss of earning ability - Mean Score: 4.55, 3rd Rank: Negative impact on the reputation of the firm - Mean Score: 4.48, 4th Rank: Affection of overall project cost and productivity - Mean Score: 4.48, 5th Rank: Time spent in training a temporary or permanent replacement - Mean Score: 4.36, 6th Rank: Human fatalities - Mean Score: 4.34, 7thRank: Enhancing the project cost - Mean Score: 4.31, 8th Rank: Suffering and hardship to individuals - Mean Score: 4.30, 8th Rank: Variation in project and client dissatisfaction - Mean Score: 4.30, 10th Rank: Delay project progress - Mean Score: 4.23, 11th Rank: Legal expenses - Mean Score: 4.18 12th Rank: Damage to materials or equipment - Mean Score: 4.18, 13th Rank: Damage to plant/equipment - Mean Score: 4.10, 13th Rank: Increment of insurance premium - Mean Score: 4.07, 13th Rank: Time loss schedule, conflicts, and legal issues - Mean Score: 4.07, 15th Rank: Workers' physiology - Mean Score: 4.03, 17th Rank: Damage to plant/equipment - Mean Score: 4.03 18th Rank: Payment for settlement of injury/death claims - Mean Score: 4.02, 19th Rank: Reduce quality - Mean Score: 3.97 19th Rank: Salary cost for replacement staff or overtime payment - Mean Score: 3.97, 20th Rank: Disruption of site activities - Mean Score: 3.92, 21st Rank: Personal injury claim compensation, repair cost, quality failure, disputes, and litigation - Mean Score: 3.90, 22nd Rank: Loss of productivity - Mean Score: 3.83 and 23rd Rank: Disruption of current work - Mean Score: 3.67.

These rankings highlight the severity and potential impact of each factor on workplace safety and project success. It is evident that addressing and mitigating these factors is crucial to maintaining a safe and productive work environment.

Table 6: Effects of accident on building construction site

Option	Mean score	Rank
Demotivation of workers	4.63	1st
Possible loss of earning ability	4.55	2nd
Negative impacts on the reputation of firms	4.48	3rd
Affection overall project cost and productivity	4.38	4th
Times spent in training a temporary or permanent replacement	4.36	5th
Some of the top effects are human fatalities	4.34	6th
Enhancing the projects' costs	4.31	7th
Suffering and hardship to individuals	4.30	8th
The accident also bring out the variation in project and dissatisfaction of client 4.30	8th	
Delay project progress	4.23	10th
Legal expenses 4.18	11th	
Damage to materials or equipment	4.10	12th
Increment of in-insurance premium	4.07	13th
Time loss of schedule, conflict and legal issue, Worker physiology	4.07	14th

Damage to plant/equipment	4.03	15th
Payment for settlement of Injuries/death claims	4.02	16th
Reduce quality	3.97	17th
Salary cost for replacement staff or overtime payment	3.97	18th
Disruption of site activities	3.92	19th
Personal injury claim compensation, repair cost, quality failure, dispute and litigation	3.90	20th
Loss of productivity	3.83	21st
Disruption of current works	3.67	22nd

4. Conclusion

The findings of the study highlighted the major long-term consequences of accident on Building construction site which includes demonization of workers, possible loss of earning ability, negative impact on the reputation of the firm affection overall project cost and productivity, time spent in training a temporary or permanent replacement, some of the top are human fatalities.

5. Recommendation

The study recommended implementing comprehensive safety training, continuous monitoring, support for employees, safety gear, emergency response plans, incident investigations, and lessons learned to address these issues. These actions will moderate the results and guarantee workers well-being, safeguard notoriety, and keep up with project effectiveness.

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