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Examining the Relationship between Poor Health and Safety Management Practices and Building Construction Project Delivery: A Study of Ebonyi State.

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Abstract

This study aims to examine the relationship between poor health and safety management practices and building construction project delivery in Ebonyi State, Nigeria. Specifically, it evaluates the impact of these practices on project timelines, costs, and quality. The objectives are to assess how health and safety management practices influence construction project timelines, determine the financial implications of inadequate safety management and investigate their effects on project quality. The study adopted a descriptive survey research design. Convenience sampling technique was used to select a total of 120 respondents from the various projects identified in the study area. A close-ended google form questionnaire were used to collect data. Quantitative data were analyzed using descriptive and inferential statistical tools in SPSS version 22. The study revealed that poor health and safety management in construction leads to significant project delays, increased costs from medical expenses and compensation claims and reduced project quality. For every one unit increase in health and safety issues, there is a predicted increase of 10.807 in cost of the project. For every one unit increase in health and safety issues, there is a predicted increase of 6.665 in project duration. For every one unit increase in health and safety issues, there is a predicted decrease of 5.386 in quality of the project delivered. A strong correlation

(0.833) was found between poor health and safety management and project quality, with a statistically significant probability value of 0.000. The study concludes that inadequate health and safety management significantly impacts construction project delivery by increasing costs, extending project duration, and lowering project quality. This study contributes to the body of knowledge by highlighting the critical role of health and safety management in construction project delivery. It echoes the need for improved safety training, stronger regulatory frameworks, and better investment in safety equipment to mitigate these issues. Recommendations include implementing comprehensive safety training programs and enhancing regulatory enforcement. By addressing these factors, construction projects in Ebonyi State can achieve more timely, cost-effective, and high-quality project delivery, ultimately improve the overall efficiency and safety of the construction industry in the State.

Keywords: Building Construction Project, Delivery, Ebonyi State, Health and Safety.

Introduction

The construction industry, despite its notable contributions to global economic development, is often characterized by high levels of risk and safety challenges. According to the International Labour Organization (ILO), the construction sector accounts for a considerable proportion of work-related injuries and fatalities worldwide (ILO, 2020). The complexity and variety of construction activities, coupled with the transient nature of the workforce, contribute to a heightened risk environment. Measures to improve health and safety in construction have been a focus of international organizations and regulatory bodies, which advocate for stringent safety regulations, comprehensive risk assessments, and effective management practices to mitigate hazards (Lardner & Turnbull, 2021).

In the last few years, there has been a global push towards enhancing safety culture and practices within the industry. The implementation of safety management systems, such as those advocated by the Occupational Safety and Health Administration (OSHA) and the European Agency for Safety and Health at Work (EU-OSHA), has been critical in setting standards and providing frameworks for safe construction practices. These systems emphasize the importance of hazard identification, risk management, and continuous safety training (Cameron *et al*., 2019). Despite these efforts, challenges persist, particularly in areas where resources and regulatory enforcement are limited.

In Nigeria, the construction industry plays a pivotal role in national development but faces significant health and safety challenges. The sector is marked by high accident rates and a concerning frequency of work-related injuries and fatalities. According to a study by Fadeyibi *et al.* (2021), Nigeria's construction industry is plagued by inadequate safety regulations, poor enforcement, and insufficient safety training, leading to frequent accidents and health issues among workers. The Nigerian Building and Road Research Institute (NBRRI) and other regulatory bodies have made strides in promoting safety standards. However, the implementation and compliance with these standards remain inconsistent across the industry (Oluwole *et al*., 2020). The absence of a robust safety culture, combined with a lack of comprehensive safety management systems, exacerbates the problem. Recent reports highlight that many construction firms in Nigeria do not adhere to internationally accepted safety practices, which impacts both worker safety and project outcomes (Ogunbiyi *et al*., 2022).

The construction industry plays a vital role in the economic development of any nation, contributing to infrastructure, housing, and other essential facilities. However, the industry is also known for its high-risk nature, with construction workers facing various health and safety hazards on the job (Giri, 2020). In Ebonyi State, Nigeria, the relationship between poor health and safety management practices and the delivery of building construction projects is a critical issue that warrants further investigation. Mansir (2014) reveal that even though most firms he studied have been in business for over a decade, one quarter of them hardly comply with any Health and Safety Plan during construction. He further reveals that some firms fully in construction business neither have Health and Safety insurance for their employees nor do some facilitate payment of Health and Safety insurance for their staff. He further stated that effective Health and Safety practices for employees in Nigeria are yet to be fully appreciated and implemented among construction firms.

Mansir (2014) highlighted the need for relevant authorities to checkmate Health and Safety practices in the Nigerian construction industry. The construction industry in Ebonyi State, like many other developing regions, has faced significant challenges in ensuring the health and safety of its workforce. Researchers have identified several key factors contributing to the high incidence of accidents and injuries on construction sites, including a lack of awareness among workers about site safety protocols, a widespread negligence in the use of personal protective equipment (PPE), an absence of comprehensive safety programs, and poor safety management practices by construction companies. (Asokan *et al*., 2019) (Giri, 2020)

In spite of being among the countries that signed the occupational health and safety law in the Geneva Convention of 1981, the pathetic health and safety situation in Nigeria construction industry made Idoro (2008; 2011), to assert that the contractors' management efforts on occupational health and safety do not reflect in their scope of

operations and the accident and injury rates of the Nigerian construction industry still remain high. Health and safety performance of contractors affects the success of building projects in terms of delivery time, quality, cost and productive, while non-performance induces litigations/legal costs which inadvertently increase the overall building project cost (Okoye, 2014).

The impact of these issues on the delivery of building construction projects cannot be overstated. Poor health and safety practices can lead to project delays, increased costs, and even the potential for legal liabilities. (Abdalfatah *et al*., 2023). The physical and emotional toll on workers can have negative impact on their productivity and morale, further hindering project outcomes (Rahman, 2015). Continual improvement and alignment towards standard health and safety practice are essential to the sustainability and overall success of a construction project, especially in a competitive environment despite the complexity and dangers involved in construction activities.

Several studies have emphasised the need for properly managed health and safety system in order to enhance the performance of the building construction industry (Aaron, Madume & Ijah, 2022) (Ezeokoli, Ukochi, Bert-Okonkwo & Ezennia, 2024) (Kaplan & Norton, 2014; Attia, 2015; Mokadem, 2016). These studies, however, have focused on different contexts, and their findings may not be generalized to construction sector in Ebony State. While some studies have highlighted poor safety practices, there is insufficient research on the direct and indirect impacts of these practices on worker safety, project outcomes, and economic costs in Ebonyi State. This includes a lack of empirical data linking specific safety practices (or the lack thereof) to accident rates, project delays, and financial losses (Fadeyibi, Ojo, & Oluwole, 2021).

Addressing these gaps in the literature will not only enhance the academic understanding of health and safety management in the construction industry but also contribute to practical improvements in safety practices, regulatory frameworks, and worker protection in Ebonyi State and similar contexts. This research therefore sought to assess the Relationship between Poor Health and Safety Management Practices and Building Construction Project Delivery in Ebony State. Specifically, the objectives are to explores how inadequate health and safety management practices impacts building construction project delivery in terms of time, cost, and overall quality in the construction industry in Ebonyi state.

Literature Review

The relationship between health and safety management practices and building construction project delivery is a crucial aspect of the construction industry, particularly in Ebonyi State. This literature review aims to examine the existing research on the impact of health and safety management practices on building

construction project delivery in Ebonyi State, focusing on time, cost, and quality. Ebonyi State, located in the southeastern region of Nigeria, mirrors the broader challenges faced by the Nigerian construction industry but with its unique regional dynamics. The state's construction sector has been growing, driven by infrastructural development projects aimed at enhancing regional connectivity and economic growth. Despite these positive developments, health and safety management practices in construction projects within Ebonyi State are reportedly inadequate (Chukwu & Okoro, 2022).

A local study conducted by Onuoha *et al*. (2023) reveals that health and safety management practices in Ebonyi State are often marked by limited adherence to safety protocols, lack of regular safety training, and inadequate safety equipment. The regulatory oversight is also perceived as weak, with enforcement of safety standards being sporadic and often influenced by local conditions. These factors contribute to an elevated risk of accidents and health issues among construction workers in the state.

Health and Safety Management Practices and Project Timelines

Research has shown that health and safety management practices significantly influence project delivery time. Poor health and safety practices often result in accidents and injuries, leading to work stoppages and delays. For instance, a study by Okoye and Ezeokonkwo (2016) found that construction projects in Ebonyi State frequently experience significant delays due to on-site accidents. These delays not only extend project timelines but also disrupt the sequencing of tasks, causing further inefficiencies. Chijindu (2018), investigated the causes and effects of delay on building construction project delivery time and found that poor health and safety management practices are a major contributor to project delays.

Umeokafor *et al*. (2014) posited that construction projects in Nigeria often face delays due to on-site accidents, which halt work and disrupt the project schedule. Similarly, Boadu (2019) argues that the implementation of robust safety practices can mitigate delays by preventing accidents and ensuring a smoother workflow. Another study Sanni, Saidu, Mohammed & Alumbugu (2018) assessed the cost influence of health and safety practices on construction projects and revealed that effective health and safety management practices can reduce project duration.

Financial Implications of Poor Health and Safety Management Practices

The occurrence of incidents or accidents at construction sites have caused numerous drawbacks of project performance, such as increase in project cost, delay in completion of project, and reduce productivity and creating negative impressions about the business (Aba *et al*., 2020). The cost of construction projects is also affected by health and safety management practices. This was also affirmed by a study Sanni

et al (2018), which revealed that health and safety practices have a significant impact on construction project costs. Effective health and safety management practices can reduce costs associated with accidents, injuries, and illnesses, leading to cost savings (Oladinrin, Patrick & Makanjuola, 2019).

Furthermore, allocating health and safety responsibilities, as recommended by Oladinrin *et al*, (2019) can ensure compliance with local laws and regulations, reducing the risk of fines and penalties. Olutuase (2014) notes that unforeseen costs due to health and safety incidents place a significant financial burden on construction companies in Nigeria, including those in Ebonyi State. Additionally, these incidents often lead to project delays, which increase labor and equipment costs, further straining project budgets. Manu et al. (2018) support this, indicating that investing in effective safety management systems can lead to cost savings by reducing the frequency and severity of accidents. Consequently, addressing health and safety issues is not only a matter of compliance but also a strategic financial decision for construction companies.

Influence of Poor Health and Safety Management on Quality of Building Project

Health and safety management practices also impact the quality of construction projects. A study by Eze, Sofolahan and Siunoje (2020) highlighted the importance of construction tradespeople in delivering high-quality construction projects. Effective health and safety management practices can ensure that construction workers are trained and equipped to perform their tasks safely, leading to improved quality of work (Abdullahi & Makinde, 2023). Moreover, a study Manoharan *et al*. (2024) investigated the crucial construction site supervisory competencies influencing the effectiveness of building construction projects and found that health and safety management practices are essential for ensuring project quality.

Windapo and Jegede (2013) emphasize that poor health and safety management negatively affects construction quality, with completed projects often failing to meet required standards. This view is supported by Ismail *et al*. (2019), who found that construction sites with stringent safety practices tend to produce higher quality work due to improved worker morale and efficiency. Ensuring robust health and safety measures is thus crucial for maintaining high quality standards in construction projects.

Conceptual Framework

The conceptual framework presented in the image visually illustrates the relationship between health and safety management practices and the delivery outcomes of building construction projects. This framework is pivotal in understanding how the independent variable (IV), which is "Health & Safety Management Practices," directly

influences the dependent variable (DV), "Building Construction Project Delivery," in three key areas: cost, time, and quality. This conceptual framework serves as a guide for analyzing the impact of health and safety practices on construction projects in Ebonyi State, Nigeria. The IV component represents the strategies, protocols, and practices implemented on construction sites while the Cost, which refers to the financial implications of project delivery, including direct costs and any additional expenses incurred due to poor health and safety practices. Time aspect focuses on the project timeline, where delays can occur due to accidents. Quality dimension considers the standard of work completed. By examining the relationships depicted in the framework, the study aims to identify the extent to which safety management practices affect project delivery outcomes, providing insights that can help construction firms and policymakers improve safety standards and project performance in the region.

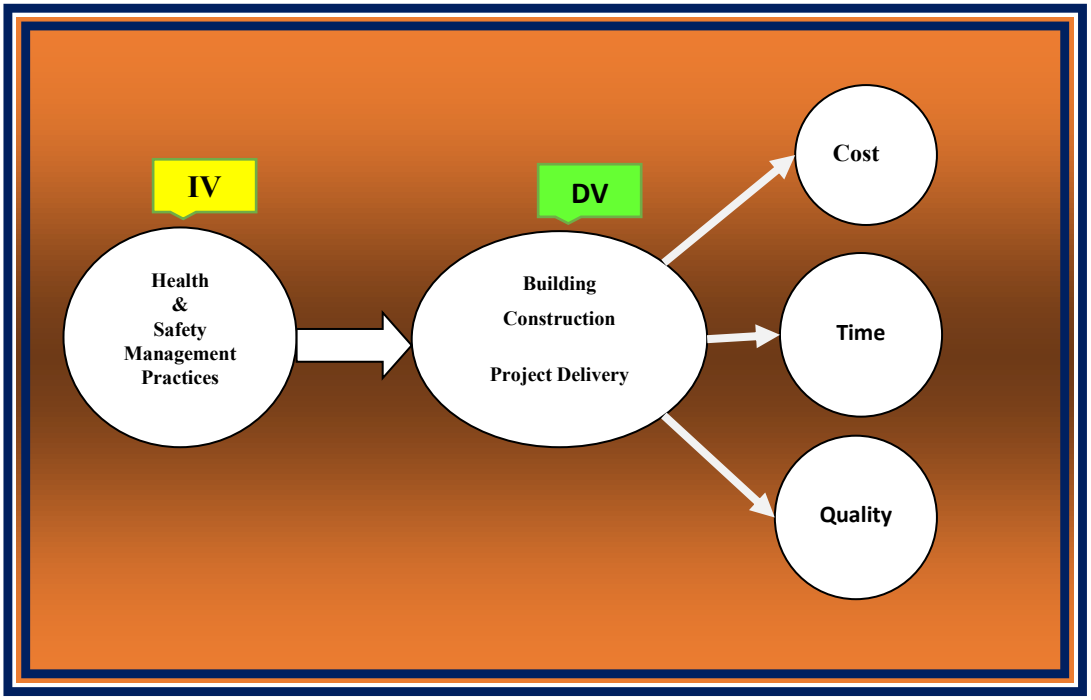


Figure 1: Conceptual Framework Illustrating the Relationship Between Health & Safety Management Practices and Building Construction Project Delivery. (Source: Adapted from Research Objective, 2024.)

Methodology

This study utilized the survey research design to explore the relationship between poor health and safety management practices and building construction project delivery in construction sites in Ebonyi State, Nigeria. This design allows respondents to freely express their views, as supported by Check and Schutt (2017), who emphasized the effectiveness of surveys in collecting individual responses. The study population

comprised of contractors registered with the Federation of Construction Industry (FOCI), operating in Ebonyi South's six local government areas. Participants included professionals such as Architects, Quantity Surveyors, Engineers and Builders. A convenience sampling technique was used to reach 130 respondents available from active construction sites, ensuring a representation of different roles within the construction industry. Data were collected via close-ended Google Form questionnaire. The questions were designed based on the research objectives and sent to the professionals' email and WhatsApp contacts. This method ensured wide reach and convenience, with a 92% response rate (120 completed questionnaires).

The questionnaire was based on a five-point Likert scale aimed to capture insights on health and safety practices and their impact on project delivery. The reliability and Validity of the questionnaire were confirmed through pilot testing and expert review, which returned a Cronbach Alpha score of 0.92, indicating high internal consistency. This aligns with Trochim's (2016) recommendations for ensuring accurate measurement. Data from the study were analyzed using SPSS version 22 for both descriptive and inferential statistics. Statistical analysis performed includes Mean Score Index, Regression Analysis, and Spearman's Rank Correlation to test relationships between poor health and safety management practices and project delivery outcomes. The study's design and methodology provide a comprehensive approach to understanding the impact of health and safety practices on construction project delivery in Ebonyi State, offering valuable insights and recommendations for industry improvement.

Results and Discussions

Table 1: Background Information of Respondents

Characteristics	Frequency (n=120)	%
Organization		
A	16	13.3
B	24	20.0
C	12	10.0
D	16	13.3
E	20	16.7
F	32	26.7
Location		
Local	40	33.3
Town	80	66.7
Years of experience		
5-10years	16	13.3

10-15years	16	13.3	
15-20 years	28	23.3	
20-25 years	36	30.0	
Above 25 years	24	20.0	
Area of specialization			
Architectural	16	13.3	
Quantity surveying	16	13.3	
Building	64	53.3	
Civil engineering	24	20.0	
Academic Qualification			
Hnd	47	39.2	
Bsc	40	33.3	
Msc	28	23.3	
Phd	5		4.2
Type of construction			
Building construction	100	83.3	
Civil engineering construction	20	16.7	
TOTAL	**120**		**100%**

Source: Field Survey, 2024

From table 1 above, 6 construction companies were assessed, company A represent 13.3% of the respondents, company B represent 20%, company C 10%, company D 13.3%, company E 16.7% and lastly company F 26.7% of the respondents and also the largest. On the location of the construction sites assessed, 33.3% were located in rural area while 66.7% were located within the urban area. Concerning the years of experience of the respondents, from 5-10years and 10-15years represents 13.3% each. 23.3% of the them had 15-20 years of experience while 30% of them have 20-25 years of experience and 20% of the respondents have above 25years of experience in the industry. This indicates that generally the respondents have wealth of experience to answer the questions. Concerning the Area of specialization of the respondents, 13.3% and 13.3% were architects and quantity surveyors respectively, while the builders and civil engineers were 53.3% and 20% respectively. This indicates that there were more builders engaged in most of the site been handled by the companies under study. On the academic qualification of respondents, 39.2% hold HND, 33.3% Bsc, 23.3% Msc and 4.2% hold a Phd in their various fields. This indicates that the larger percentage of the professionals engaged are Hnd and Bsc holders. Moreover 83.3% of the respondents are into building construction while 16.7% are into civil engineering works.

Table 2: Relationship between poor health and safety management practice and construction project delivery.

S/N	Variables	Mean
	Project Cost	
1	Additional cost for treatment of the injured workman	3.9250
2	Increase in overhead cost as a result of extension of time	3.6083
3	Cost for replacement of damaged plant and equipment	3.7583
4	Costs of workman's compensation	3.8333
5	Legal fees for defense against claims	3.9667
6	Increased insurance costs	3.8333
7	Risk of fine or being banned from operation	3.6083
8	Project Cost overrun	3.5667
	Project Time/Duration	
9	Late project delivery	3.7167
10	Lesser workers will have to complete the work leading in delay	3.9750
11	Slowdown of work as a result of corrective actions to prevent reoccurrence of accident	3.5500
12	Additional time will be spent in training a temporary or permanent replacement	3.8417
13	Slowdown in operations while accident causes are determined	3.7500
	Project Quality	
14	Different workers (experts) on the same work might affect the quality	3.6333
15	Low quality job delivery	3.8167
16	Not minding engaging any other worker to complete the work	3.9000
17	Degradation of efficiency of operation due to loss co-worker	3.7667
	AVERAGE SCORE	**3.7676**

Source: Field Survey, 2024

From Table 2, the average means score value (3.77) showed that majority of the respondents agree that the above listed are the effects of poor health and safety management on building construction project delivery. However, Legal fees for defense against claims was observed as the highest with a mean score of (3.97) among the cost factors, while Lesser workers will have to complete the work leading in delay also have the highest mean score among the time factor with a mean score of (3.98), hence it is generally agreed that poor health and safety management affects project delivery in terms of cost, duration and quality of building construction project.

Inferential Analysis

Table 3: Tests of Normality

Items	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
EHS	.108	120	.002
EHSC	.130	120	.000
EHST	.124	120	.000
EHSQ	.141	120	.000

Source: Field Survey, 2024

The data for this study were subjected to normality test using SPSS, as can be seen from the Table 3 above, going by the Kolmogorov-Smirnov results for sample above 100, the data were found to be not normally distributed because the Kolmogorov-Smirnov is supposed not to be statistically significant at 0.05, since all the result are less than ($\alpha = 0.05$) 5% significance level, hence the need for non-parametric method to be adopted. Therefore, ordinal regression method will be adopted to test the relationship between poor health and safety management and building construction project delivery.

Model

The linear regression model below was formulated to check the relationship between poor health and safety management practices and building construction projects delivery in the study area.

$$\mathbf{Y = \beta o + \beta_1 x + \mu} \quad \textbf{(1)}$$

$$\mathbf{BCPD = \beta o + \beta_1 PHSM + \mu} \quad \textbf{(2)}$$

Where **PHSM** = (independent variable, Poor Health & Safety Management)
BCPD = (dependent variable, Building Construction Project Delivery (cost, time and quality)
$\boldsymbol{\beta o}$ = Intercept
$\boldsymbol{\beta_1}$ = Slope
$\boldsymbol{\mu}$ = error term

Table 4: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	843.834			
Final	.000	843.834	3	.000

Source: Field Survey, 2024

The model fitting information on Table 4 tells us how well the model fits our data, as can be seen, the result is statistically significant at 0.000 which is less or equal to 0.05. Which means the model fits the data.

Table 5: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	242.051	3357	1.000
Deviance	228.877	3357	1.000

Source: Field Survey 2024

The Table above contains the Pearson and deviance chi-square. It is used to determine whether a model exhibit good fit to the data. Non significance result is an indication that the model fits the data well. From Table 5 above, it can be seen that the Pearson and deviance are not statistically significant both being 1.000 which is greater than 0.05, which shows that the model here clearly fits the data set.

Table 6: Pseudo R-Square

Cox and Snell	.999
Nagelkerke	1.000
McFadden	1.000

Source: Field Survey 2024

From Table 6, the Nagelkerke Pseudo R-Square result of 1.000 indicates a perfect fit. Therefore, the regression model fits the data.

Table 7: Parameter Estimates

Item	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Location EHSC	10.807	1.111	94.552	1	.000	8.628	12.985
EHST	6.665	.833	63.975	1	.000	5.032	8.298
EHSQ	-5.386	.548	96.553	1	.000	4.312	6.460

Source: Field Survey, 2024

Going by the result from the Table 7 above, EHSC was a significant positive predictor of building construction project delivery. For every one unit increase in health and management problem, there is a predicted increase of 10.807 in the log odds of being at a higher level on cost of the project. More so, from the Table above, EHST was a significant positive predictor of building construction project delivery. For every one

unit increase in health and safety management problem, there is a predicted increase of 6.665 in the log odds of being at a higher level on time/duration of the project.
Lastly, EHSQ was a significant predictor of building construction project delivery. For every one unit increase in health and safety management problem, there is a predicted decrease of 5.386 in the log odds of being at a lower level on quality of the project. The result reveals that poor health and safety management practice has negative and significant impact on project quality.

Table 8: Correlations Analysis

			EHS	EHSC	EHST	EHSQ
Spearman's rho	EHS	Correlation Coefficient	1.000	.962**	.935**	.833**
		Sig. (2-tailed)	.	.000	.000	.000
		N	120	120	120	120

Source: Field Survey, 2024

From Table 8, the nonparametric analysis shows that the relationship between poor health and safety management and project cost is 0.962, this indicate that there is a strong correlation and that the relationship is also statistically significant going by the probability value here 0.000 which is less than 0.05.
Furthermore, the result also shows that the relationship between poor health and safety management and project time/duration is 0.935, this indicate that there is a strong correlation and that the relationship is also statistically significant going by the probability value here 0.000 which is less than 0.05.
Lastly, the result also shows that the relationship between poor health and safety management and project quality is 0.833, this indicate that there is a strong correlation and that the relationship is also statistically significant going by the probability value here 0.000 which is less than 0.05.

Summary of Findings

The study in Ebonyi State, Nigeria, demonstrated that poor health and safety management significantly impacts the cost, time, and quality of building construction projects. For instance, additional costs such as legal fees and medical expenses for injured workers were identified as significant financial burdens on construction firms. This aligns with recent research by Fang *et al*. (2021) and Mohammad *et al*. (2020), which highlight how inadequate safety practices contribute to cost overruns and financial instability in construction projects globally.
Project delays were also a critical issue linked to poor safety management. The study found that accidents often result in workforce reductions, requiring additional time for training replacements and slowing down project progress. These findings are

supported by Hallowell *et al*. (2022), who identified a direct relationship between safety performance and project timelines, stressing the importance of implementing stringent safety protocols to ensure timely project completion.

Furthermore, the study highlighted the adverse effects of poor safety practices on project quality. Disruptions caused by safety incidents can lead to inconsistencies in workmanship and a decline in overall construction quality. This finding is corroborated by Zhou *et al*. (2019), who emphasized the negative impact of safety failures on construction quality and the critical need for a strong safety culture to achieve high-quality project outcomes. Finally, strong correlations were found between poor health and safety management and negative project outcomes across cost, time, and quality dimensions. This suggests that effective safety management is crucial for successful project delivery. Recent studies, including Li *et al*. (2021), emphasize the necessity for construction firms to prioritize safety training, regulatory compliance, and the integration of technology to improve safety practices and enhance overall project performance.

Conclusion

The study has shown that improving Health and Safety management practice is a fundamental component of any construction business principles and corporate culture. The effective management of Health and Safety affairs not only protects staff, but also contributes to continued success in the construction industry. The study therefore places the highest priority on the health and safety of all employees, subcontractors and contractual partners, as well as the people and the environment that may be affected by the activity in the constructions. In the spirit of sustained improvement in Health and Safety performance, the study also indicates the resources necessary to promote increased Health and Safety management awareness, based on best practice standards, at all levels within the construction industry. The philosophy is to proactively remove and reduce potential hazards and therefore the risk. Residual hazards should be identified and mitigated through programs for incident prevention, assessment and analysis. Monitoring and control procedures including site inspections and audits, regular safety meetings, in addition to targeted educational campaigns, support the implementation of Health and Safety management policy and ensure compliance with set guidelines. Furthermore, essential programs including defensive driving courses for the construction site workers and supervisor training are key components in minimizing risk and promoting Health and Safety management targets.

Recommendations

Based on the findings from the study, the following are key recommendations that can help improve health and safety management practice for increased productivity and successful building construction project delivery.

i. Construction companies and government agencies should prioritize health and safety management practices to ensure successful project delivery. Effective health and safety management practices should be integrated into project planning and execution to reduce project duration, costs, and improve quality.

ii. It is imperative for construction firms to increase the quality and quantity of health and safety supervisors/officers. Each construction company should have their own health and safety policy and intensify commitment to comply with relevant safety and health legislation, Codes of Practice and guidelines for safe work place.

iii. Construction organizations should improve their attitude towards safety issues by promoting and enforcing safety policies that recognize the necessity of approaching injury, ill health and loss prevention by systematically identifying hazards, assessing and controlling risks. there is also need for regular employees' awareness and training on good safety conduct and continuous education on safety precautions should be conducted for employees periodically to minimize construction accidents.

iv. In addition, an adequate budget for safety and health provision should be stated in all construction contracts which should be approved by all parties. Safety as a pay item should be included in the contract document and provide a framework for measuring performance and ensuring continuous improvement by setting, auditing and reviewing health and safety objectives and targets.

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