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Safety Planning Techniques and Employee Performance of Quoted Manufacturing Firms in Lagos State

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Abstract

The study examined safety planning techniques and employee performance of quoted manufacturing firms in Lagos State Nigeria. Specifically, the study sought to: Examine the impact of safety training on employee job punctuality and evaluate the impact of personal protective safety equipment on employee job commitment. Research design of the study was questionnaire survey research. The sample size of 353 respondents was taken from population of 3,052 staffs of the selected quoted manufacturing firms in Lagos State namely: Dangote Cement PLC, Nigeria Breweries PLC, Nestle Nigeria PLC and Cadbury Nigeria PLC. The research question were answered with simple percentage, mean and deviation while method of data presentation was table. The hypotheses were tested with single regression. The empirical results show that safety

training has significant impact on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria (t-statistic; 6.445; P-value; 0.000 < Sig-value; 0.05) and personal protective safety equipment has significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria (t-statistic; 11.826; P-value; 0.000 < Sig-value; 0.05). The study recommended that management of manufacturing firms should implement safety measures that will motivate employees in the execution of their daily activities. Organizations are advised to guard against endangering the lives of employees through the provision of substandard safety equipment in the quest for increasing competitive advantage and more profit to the detriment of employees.

Keywords: Safety Planning Techniques, Safety Training, Personal Protective Safety Equipment

Background of the Study

Occupational injury is a global problem that leads to irreversible impairments and death among employees in the manufacturing industry (Segbenya & Yeboah, 2022) ^[18]. Up to 40–50% of the industrial workforce is exposed to several occupational hazards worldwide (Vigneshkumar, Urmi & Roode, 2019) ^[20]. Although substantial efforts have been made to limit the impact of workplace hazards, occupation-related injury remain a health and safety problem for many industrial workers worldwide. Moreover, occupational health and safety measures are strategies or standards for protecting against occupational hazards. These include the use of proper personal protective equipment (PPE), adherence to safety protocols and other dimensions of safety measures (Natalie & Mbohwa, 2015) ^[12].

Occupational health and safety (OHS) relate to how the facility and human resources are being protected and preserved in the workplace. OHS ensures that people are not injured or become ill due to workplace hazards. Occupational safety and health is also a field wherein professionals attempt to prevent catastrophic losses. In practice, occupational safety and health include moral and economic issues. OHS is a science focused on ensuring safety in the workplace (Anjay, 2019) ^[3]. Manufacturing firms like other forms of businesses contribute greatly to the development of any country as they aid towards the economic growth of emerging economies, developing economies as well as developed economies.

In another development, employees have a legal right to expect a safe and healthy work environment. The consequences of workplace incidents (accidents, ill-health, and environmental pollution) on productivity and growth of the organization are so grave that manufacturing firms should be legally, morally, and socially compelled to inculcate safety measures in their workforce as a form of commitment to the safety and general welfare of its workers (Kharroub & Mansour, 2019; Rainn, 2021) ^[11, 16]. Workplace incidents especially those involving lost-time injuries and lost workdays usually lead to a halt in the manufacturing process for incident investigation and reporting (Janalta, 2021; Kabiru, Theuri & Misiko, 2018) ^[7, 9]. Firms face

more challenging changes and competition more than ever in the way they compete in what is now a global and technology flooded economy, rapid technological changes such as methods, components, and techniques with processes to create a product or service. These factors have prompted management to search for means to ensure organizational growth. This situation results in loss of man-hours, output, reputation, and low workers morale. It is on this backdrop that this study was carried to investigate safety practices and organizational growth of manufacturing firms.

Statement of the Problem

The environment of manufacturing firm these days are becoming more hazardous to health due to both the chemical substances, machine and equipment, plant layout, work process, constant exposure to light and other harmful substances and improper use of safety protection equipment and misuse of working tools. Many manufacturing firms in Nigeria that failed to adopt health and safety have witnessed unexpected risks and hard which has led to the death of most good employees (Umugwaneza, Irechukwu & Mugabe, 2019)^[19]. Safety is a very critical concern, especially in the manufacturing industry. However, many manufacturing firms pay no attention to and do not take serious action on the safety issues. As noted by Katunge and Mbogo, (2016), the Manufacturing industry has one of the highest accident occurrences in the manufacturing industry, which makes the industry believed to be unsafe.

In the context of Nigeria, concerning the policies in place regarding occupational health and safety measures, the Nigeria Labour Congress enforces that the employer has a legal obligation to protect workers from injuries and illnesses, including the provision of occupational health services (Odogwu, 2022)^[13]. Next, studies have documented the heavy burden of occupation-related injuries in various industries, including the manufacturing industry in Nigeria (Rantsatsi, Musonda, Agumba, 2023)^[17]. Moreover, Nigeria manufacturing sector are growing to help the country's economy prosper. In this industry, many thousands of workers have varying educational, professional and socioeconomic backgrounds. However, information regarding workers' practices concerning safety measures in Nigeria manufacturing sector are inadequate. It is envisaged that Nigeria manufacturing sector would be a source of several physical hazards, such as heavy dust, intense heat and noise, which could harm the workers' health and affect employee performance. In these contexts, this study aimed to assess safety planning techniques and employee performance of quoted manufacturing firms in Lagos State Nigeria.

Objectives of the Study

The main objective of this study was to examine safety planning techniques and employee performance of quoted manufacturing firms in Lagos State Nigeria. The specific objectives of this study were to:

1. Examine the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria.
2. Evaluate the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria.

Research Questions

This study seeks to provide answers to the following research questions.

1. What is the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria?
2. What is the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria?

Significance of the Study

The outcome of this study is beneficial and relevant to the employees and scholar and researchers. This research is significant in that it may help the workers engaged in the manufacturing industry how they can reduce accidents in manufacturing factory and making the factory safe while they work at the site.

In addition, this study intends to provide some clue to government for control and follow up of the site condition and the development of policies rules and regulations in manufacturing safety in Lagos State Nigeria.

Finally, the outcome of this study will equally be useful to scholars and researchers, it would serve as reference materials that are reserve in libraries and shelves for further academic research. The study empirical findings are capable of adding new insights to present knowledge in the field.

Conceptual Literature

Safety Planning

Safety planning is a set of preparatory approaches and policies to meet safety and health challenges and needs. Safety planning entails thinking of ways to stay safe while also reducing the risk of future harm. It may entail preparing for a future crisis, weighing your options, and deciding on your next course of action (Segbenya & Yeboah, 2022)^[18]. Every employer must pay attention to their employees' health as well as the safety and security of the environment in which they work. It could be their home, workplace, or any other location where they live. For employees to live a happy life, their surroundings must be clean, hygienic, safe, and secure.

Abeje and Luo, (2023)^[1] sees safety practice to be the acknowledgment, assessment, and control of hazards emerging from the work environment that could impede the safety of operatives. Safety practices are a strategy and commitment together with the arrangements on the ground to create adequate safety education among workers on hazards related to their work and the role an individual/person needs to play at work settings in ensuring healthy working conditions.

Occupational Health and Safety

Occupational Health and Safety (OHS) relates to health, safety, and welfare issues in the workplace. OHS refers to the laws, regulations, and programs aimed at improving the working environment for employees, as well as coworkers, family members, customers, and other stakeholders (Rainn, 2021)^[16].

Employee Performance

The employee's performance is use of knowledge, skills, experiences and abilities, to perform the assigned mission

required by their managers efficiently and effectively. The importance of employee performance can be expressed in a variety of ways, including 1) assisting in the costing of resources used, 2) a measure of the quantity and quality of work completed, 3) assisting in the survival and excelling of firms, 4) assisting in the assessment and attainment of established performance goals, and finally, 5) increasing the efficiency of employee performance aids in making the best decisions. Kabiru, Theuri and Misiko, (2018) ^[9] explained how to evaluate employee performance using the following criteria: 1) employee attributes, which confirm important characteristics or qualities to the firm; 2) employee behaviors, which are widely used for evaluating or defining employee behaviors required to complete a job successfully; and 3) employee achievements, which demonstrate the extent to which specific objectives or aims have been met, exceeded, or not met.

Contextual Literature

Safety Training / Awareness

Safety training programs are developed to enable workers to acquire attitudes, knowledge, and skills that help them reduce the perceived risk of their jobs. Most workplace hazards are caused by incomplete or absent training and if an employee is not trained to do their job properly to avoid falling victim to hazards, they are likely to become frustrated. When trained correctly on health and safety measures, an employee is likely to feel much less stressed and more satisfied with their job (Kharroub & Mansour, 2019) ^[11].

A good workers' health and safety program fosters a sense of security and comfort and increases job satisfaction (Wegen, 2017; Amah & Onuoha, 2022) ^[22, 2]. Kabiru, Theuri and Misiko, (2018) ^[9] argue that a comprehensive health program reduces absenteeism and health insurance costs resulting thus leading to improved productivity and improved morale. For instance, a wellness program boosts employee morale and increases job satisfaction since it promotes employee health by providing education on health issues and healthy lifestyles.

Personal Protective Safety Equipment

There are two categories of PPE. The first must be used safety helmet; safety shoes; and appropriate clothing. The second category depending kind of work, like eye protection, protective gloves, ear protectors, and the safety harness (Abeje & Luo, 2023) ^[11]. It was found that (25%) of construction companies in Nigeria were not provide PPE to their workers because either it is expensive or it usually reduce the worker's productivity. Further, (75%) of companies who provide PPE to their workers had to make an effort to enforce the workers to use PPE, as some workers refused to use the PPE due to religious values or cultural issues (Vigneshkumar, Urmi & Roode, 2019) ^[20].

Personal protective equipment are the compact and safety devices which are given and used by the individuals for their own protection in construction works. These PPE are very useful to prevent small and even sometime large injuries to the workers. It is also a part of safety management and criteria. The PPE includes: Helmets, Goggles, Masks, Overcoats, Gloves, Boots, Ropes, belts etc

Theoretical Literature

Heinrich Domino's theory of accident causation was used in

this study to explain the causes and behaviour perspective of accidents or health and safety issues at the workplace. Heinrich Domino's theory of accident causation, propounded by Heinrich in 1978, explains what factors and stages lead to industrial accidents. Factors identified were how workers relate to machines, the relationship between severity and frequency, risky acts, costs associated with accidents, and how efficiency is impacted by safety. About 88% of the fatalities are caused by risky acts of work and 10% by risky conditions and 2% by natural disasters or acts of God. The theory revealed the 5 stages of an accident at the workplace: Ancestry and social environment (knowledge and skills), physical condition or unsafe act, personal fault of carelessness, mechanical and accident or injury. According to Heinrich, breaking the chain of the sequence is the solution to the prevention of accidents. Thus, the elimination of unsafe acts/conditions can lead to the prevention of accidents and associated injuries. The 2 main axioms of the Heinrich Domino theory of accident causation are, first, workers (humans), are the main reasons for accidents. Secondly, management is responsible for preventing accidents. Thus, positive behaviour of workers by adherence based on awareness or knowledge is key for ensuring that accidents are prevented in the workplace.

Empirical Literature

Debela, Deyessa, Begosew and Muluken, (2023) ^[5] examined occupational health and safety practices and associated factors among workers in Ethiopia's Metehara and Wonji sugar Industries. The specific objectives of the study were to assess occupational health and safety practices and associated factors among workers in Ethiopia's Metehara and Wonji sugar industries. The method of data analysis was convergent parallel mixed design. The study used a stratified random sampling method to select 1648 participants for the collection of quantitative data. Finally, results were graded as 'good' if $\geq 60\%$ of them were answered correctly and 'poor' if $< 60\%$ were correctly answered. We created a qualitative data interpretation from the subject's perspective. The study concluded that occupational health and safety measures were not used effectively. The qualitative component of this study confirmed that most participants expressed undesirable practices in occupational health and safety measures. The study recommended that inappropriate protective device provisions, a lack of strict safety regulation, the absence of incentives and inadequate management support were found to be linked with the use of occupational health and safety measures.

Amah and Onuoha, (2022) ^[2] examined the relationship between safety practices and organizational growth of manufacturing firms in Rivers State. Specifically, the study sought to ascertain the relationship between safety training/awareness and market share, productivity. The study adopted the cross-sectional form of the quasi-experimental research design. The sample size of 291 respondents were drawn from 1074 population of the study. The questionnaire was the main instrument for data collection as primary data was mainly collected for this study. The instrument was subjected to face and content validity, the reliability was also checked using the Cronbach Alpha test at a significance of 0.7. The study adopted Spearman's Rank Order Correlation Coefficient to test the hypotheses. The findings revealed a moderate positive

relationship exists between the dimensions of safety practices and the measures of organizational growth. The study concluded that ensuring workplace safety would improve employee's performance vis-à-vis organizational growth. Thus, it was recommended that manufacturing firms should adopt safety practices that ensure safe work procedures and establish a safety committee that ensures that employees overcome resistance to safe work procedures.

Dwomoh, Owusu and Addo, (2021)^[6] conducted a study to examine the impact of occupational health and safety policies on employees' performance in the Ghana's timber industry. Specifically, the study sought to investigate occupational health policies and occupational safety programme on employees' performance in the Ghana's timber industry. The method of data analysis was correlation analysis. The main data collection instruments used were interviews and questionnaires as well as statistical tools such as Pearson correlation was adopted to assess the relationship between investment in health and safety and employees performance. The data collected with these instruments as well as the calculated $r = 0.42$ showed that health and safety measures put up by the company positively correlates with employees' performance despite that the correlation is weak. There is also inverse relationship between reducing the number of accidents and injuries through health and safety promotions and employees performance. The study recommended that organizations need to pay much attention to their health and safety measures since apart from the fact that in other jurisdictions it is backed by law and is mandatory, it is classified as an existence need for which other motivational factors meant to improve employees' performance revolves.

Anjay, (2020) examine safety management practice impact on project performance in Nepal. The aim of the study is to analyze the impact of occupational safety and health management practice on concerned construction project performance. The data required for this study was collected from the ongoing road construction projects of Eastern, Nepal using Questionnaire, Key-informant interview, Literature review and analyzed using Qualitative and Quantitative Analysis, Hypothesis testing using regression followed by ANOVA Test. There is impact of hazard identification on project performance followed by the impact of health facilities on project performance and there is impact of safety provisions on project performance. The safety and health also decide the duration of project and planning and scheduling. Reducing safety accidents save time and helps in successful project performance. The main goal of safety and health programs is to prevent workplace injuries, illnesses, and deaths, as well as the suffering and financial hardship these events can cause for workers, their families, and employers.

Ogundipe, Owolabi, Olanipekun, Olaniran, Eseohe, Ayoola, (2018)^[14] assessed factors affecting effective use of safety wears on construction sites in Indigenous Firms in South Western Nigeria.

The specific objectives of the study were to examine current state of safety practices on construction sites by the indigenous firms' workers and identified factors preventing effective use of safety wears on construction sites. Based on snowball and random sampling technique, 128 copies of questionnaire were administered to participants with years of experience on construction management. The data

analysis was Independent Samples T-test. The outcome of the study revealed that the top aspect of safety practices currently explored by the indigenous construction firms on sites include: Provision of temporary fence, provision of accidents prevention procedure and development and frequently review of Safety Policy for building projects. The empirical result showed the top three factors preventing effective use of safety wears on construction sites are: Inadequate engagement of Safety Managers on sites, lack of proper training on effective use of safety wears and workers failure to adapt with safety practices as it was against their traditional training. The study recommended that effective use of audio and visual displaying gadgets on site, conducting in-house safety training for the workers and ensure one Safety Manager is employ on every construction sites will go a long way in improving workers safety practices on sites.

Jimoh, Abimbola and Omotayo, (2016)^[8] investigated health and safety planning process on construction sites in Kaduna metropolis, Nigeria. The specific objectives of the study paper assessed health and safety planning process on active construction sites in Kaduna Metropolis, Nigeria. The methods of data analysis were descriptive analysis and analytical tools. Questionnaire survey method was adopted. Forty-two active construction sites were visited for both the self-administration of structured questionnaires and personal observations. The study showed that during health and safety planning at pre-tendering stage, factors such as the positioning of the access roads, the type of the project, the location of the project were ranked 1st, 2nd and 3rd respectively with corresponding mean scores of 4.11, 3.93 and 3.91. Also, it was discovered that out of the 11 parameters measured to know the extent of health and safety planning put in place before construction stage, 8 of them can be deemed to support health and safety representative at management level. The study recommended that management of Construction Company should position of access roads, the type of project and the location of the project were the factors mostly considered by the firms studied. To the construction firms, planning for health and safety issues will reduce likelihood of accidents and to the clients, value for money will be achieved.

Literature Gaps

The most recent study by Debela, Deyessa, Begosew and Muluken, (2023)^[5] examined occupational health and safety practices and associated factors among workers in Ethiopia's Metehara and Wonji sugar Industries. The study failed to carry out pre-estimation test before the estimation of parameters and was not Nigeria based study. This study thus fills this gap by examining the effect of safety planning techniques and employee performance in the Nigeria manufacturing sector. Thus, this study contributes to the literature on covering the following proxies of safety planning techniques namely safety training and personal protective safety equipment while the study covered the following proxies of employee job performance namely employee job punctuality and employee job commitment.

Methodology

The study adopted descriptive research design. The study area was Lagos State. Lagos, state, southwestern Nigeria, Research design of the study was questionnaire survey research. The sample size of 353 respondents was taken

from population of 3,052 staffs of the selected quoted manufacturing firms in Lagos State namely: Dangote Cement PLC, Nigeria Breweries PLC, Nestle Nigeria PLC and Cadbury Nigeria PLC. The research question were answered with simple percentage, mean and deviation while

methods of data presentation were table and percentage frequency. The hypotheses were tested with single regression.

Data Presentation

Table 1: Comprehensive Demographic distribution of the Respondents

Title	Frequency	Percentage
Questionnaire Distribution		
Questionnaires Distributed	353	100%
Returned Questionnaires	290	82%
Not Returned Questionnaires	63	18%
Gender		
Female	164	56.6%
Male	126	43.4%
Age Bracket		
20-30 Years	90	31.0%
31-40 Years	126	43.4%
41-50 Years	71	24.5%
51 Years – above	3	1.0%
Marital Status		
Married	205	70.7%
Single	58	20.0%
Widow/widower	24	8.3%
Divorce	3	1.0%
Educational Qualification		
OND/NCE/HND	54	18.6%
B.sc/B.Ed	236	81.4%

Sources: Field Survey, 2023

Three hundred and fifty-three (353) copies of questionnaire were designed and distributed to the respondents. Out of the 353 Questionnaires distributed, 290 (82%) were completed and returned while 63 (18%) were not returned. Therefore, 76 percent respondents were a good representation. The table showed the respondents profile in frequency and percentage distribution of gender, age bracket, marital

status, and educational qualification.

Data Analysis

Question (1) What is the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria?

Table 2: Mean rating of responses from respondents on what is the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria

S. No	Question Items	SA 4 (%)	A 3 (%)	DA 2 (%)	SD 1 (%)	Total	Mean	SD
1	Safety training promote good workers' health and fosters a sense of security and comfort and increases job satisfaction	99	119	42	30	290	2.99	0.0287
		396	357	84	30	867		
		(34)	(41)	(14)	(10)	100%		
2	Safety training programs are developed to enable workers to acquire attitudes, knowledge, and skills that help them reduce the perceived risk of their jobs	120	78	62	30	290	2.99	0.0917
		480	234	124	30	868		
		(41)	(27)	(21)	(10)	100%		
3	Safety training programs provide effective services and to justify their existence in the organization	123	101	56	10	290	2.91	0.0389
		419	303	112	10	844		
		(42)	(26)	(35)	(3)	100%		
4	Safety training makes provision to certify the persons who are responsible for erecting or supervising the scaffolding,	190	50	26	24	290	3.40	0.0528
		760	150	52	24	986		
		(66)	(17)	(8)	(8)	100%		
5	Safety training helps workers to perform various activities efficiently and promote quality goals.	100	140	26	24	290	3.09	0.0109
		400	420	52	24	896		
		(34)	(48)	(8)	(8)	100%		
Grand Mean							3.08	0.0446

This table shows that the respondents indicated their option on what is the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria. The respondents are in agreement with all the items. The study revealed safety training has significant impact on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria since safety

training makes provision to certify the persons who are responsible for erecting or supervising the scaffolding, (grand mean (3.08) is greater than cut-off mean (2.5).

Question (2) What is the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria?

Table 3: Mean rating of responses from respondents on what is the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria?

S. No	Question Items	SA 4 (%)	A 3 (%)	DA 2 (%)	SD 1 (%)	Total	Mean	SD
1	Lack of Personal Protective Equipment (PPE) or unsuitable PPE were related to the incident that caused the injury.	101	144	30	15	290	3.14	0.250
		404	432	60	15	911		
		(35)	(49)	(10)	(5)	100%		
2	Personal protective safety equipment create the appropriate environment in the workplace	112	102	40	36	290	3.00	0.293
		448	306	80	36	870		
		(37)	(35)	(14)	(12)	100%		
3	Personal protective safety equipment provide useful measures to prevent small and even sometime large injuries to the workers.	109	98	45	38	290	2.96	0.2693
		436	294	90	38	858		
		(38)	(34)	(16)	(13)	100%		
4	Personal protective safety equipment reduces accidents, improves the health of your employees, and makes for a safer, secure work environment.	112	98	50	30	290	3.01	0.314
		448	294	100	30	872		
		(38)	(33)	(17)	(10)	100%		
5	Personal Protective Equipment, helps prevent staff emergencies on the job due to inhalation, absorption, irritants, or other prolonged contact with a cleaning chemical.	114	106	50	40	290	3.15	0.306
		456	318	100	40	914		
		(39)	(36)	(17)	(14)	100%		
Grand Mean							3.05	0.291

This table shows that the respondents indicated their option on what is the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria. The respondents are in agreement with all the items. The study revealed that personal protective safety equipment has significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria since Personal Protective Equipment, helps prevent staff emergencies on the job due to inhalation, absorption, irritants, or other prolonged contact with a cleaning chemical (grand mean (3.05) is greater than cut-off Mean (2.5).

Test of Hypotheses

The two hypotheses were formulated for this study and will be tested and a decision taken is based on the rule below.

Decision rule: Reject H₀ if P-value > 0.01

Hypothesis One

H₂ = Safety training has no significant impact on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.866	.865	.26055

a. Predictors: (Constant), Safety training

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	57.077	1	57.077	18.604	.000 ^b
	Residual	886.652	289	3.068		
	Total	943.729	290			

a. Dependent Variable: Employee job punctuality
b. Predictors: (Constant), Safety training

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	1.614	.089	18.111	.000
	Safety training	.529	.082	.931	.000

a. Dependent Variable: Employee job punctuality

In testing this hypothesis, safety training was regressed against employee job punctuality. The result of the single-regression analysis showed the model to examine the impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria.

Employee job punctuality = 1.614 + 0.529 Safety training

The empirical result showed that the coefficient of safety training has positive impact on employee job punctuality; it means that safety training has positive and direct impact on employee job punctuality. The results of the t – statistics denoted that the coefficient of safety training was statistically significance. This is because observed values of t – statistics (6.446) was greater than its P-values (0.000). The results of the F – statistical test showed that the overall regression of the hypothesis two was statistically significance. This was because observed value of the F – statistics (18.604) was great than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.931. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that safety training has positive and significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria.

Test of Hypothesis Two

H₂ = Personal protective safety equipment has no significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.866	.865	.26055

a. Predictors: (Constant), Personal protective safety equipment

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	43.789	1	43.789	9.184	.000 ^b
	Residual	1377.952	289	4.768		
	Total	1421.741	290			

a. Dependent Variable: Employee job commitment
b. Predictors: (Constant), Personal protective safety equipment

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.418	.075		5.568	.000
1 Personal protective safety equipment	.201	.017	.969	11.826	.000
a. Dependent Variable: Employee job commitment					

In testing this hypothesis, personal protective safety equipment was regressed against employee job commitment. The result of the single-regression analysis showed the model to evaluate the impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria.

Employee job commitment = 0.418 + 0.201 Personal protective safety equipment

The empirical result showed that the coefficient of personal protective safety equipment has positive impact on employee job commitment; it means that personal protective safety equipment has positive and direct impact on employee job commitment. The results of the t – statistics denoted that the coefficient of personal protective safety equipment was statistically significance. This was because observed values of t – statistics (11.826) was greater than its P-values (0.000). The results of the F – statistical test showed that the overall regression of the hypothesis three was statistically significance. This was because observed value of the F – statistics (9.184) was greater than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.931. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that personal protective safety equipment has significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria.

Discussion of Findings

Impact of safety training on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria

The findings of the study revealed that safety training has significant impact on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria since safety training makes provision to certify the persons who are responsible for erecting or supervising the scaffolding. The outcome of the study is in line with the study of Debela, Deyessa, Begosew and Muluken, (2023) ^[5] that examined occupational health and safety practices and associated factors among workers in Ethiopia's Metehara and Wonji sugar Industries. The specific objectives of the study were to assess occupational health and safety practices and associated factors among workers in Ethiopia's Metehara and Wonji sugar industries. The method of data analysis was convergent parallel mixed design. The study concluded that occupational health and safety measures were not used effectively. The qualitative component of this study confirmed that most participants expressed undesirable practices in occupational health and safety measures.

Impact of personal protective safety equipment on employee job commitment of quoted manufacturing firms in Lagos State Nigeria

The findings of the study revealed that personal protective safety equipment has significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria since Personal Protective Equipment, helps prevent staff emergencies on the job due to inhalation, absorption, irritants, or other prolonged contact with a cleaning chemical. The outcome of the study is not in line with the study of Amah and Onuoha, (2022) ^[2] that examined the relationship between safety practices and organizational growth of manufacturing firms in Rivers State. Specifically, the study sought to ascertain the relationship between safety training/awareness and market share, productivity. The study adopted the cross-sectional form of the quasi-experimental research design. The study adopted Spearman's Rank Order Correlation Coefficient to test the hypotheses. The findings revealed a moderate positive relationship exists between the dimensions of safety practices and the measures of organizational growth. The study concluded that ensuring workplace safety would improve employee's performance vis-à-vis organizational growth.

Summary of Findings

The following are the major findings of the study:

1. The study revealed safety training has significant impact on employee job punctuality of quoted manufacturing firms in Lagos State Nigeria since safety training makes provision to certify the persons who are responsible for erecting or supervising the scaffolding (t-statistic; 6.445; P-value; 0.000 < Sig-value; 0.05).
2. The study revealed that personal protective safety equipment has significant impact on employee job commitment of quoted manufacturing firms in Lagos State Nigeria since Personal Protective Equipment, helps prevent staff emergencies on the job due to inhalation, absorption, irritants, or other prolonged contact with a cleaning chemical (t-statistic; 11.826; P-value; 0.000 < Sig-value; 0.05).

Conclusion

The study concludes that safety planning techniques has positive and significant impact on employee performance of quoted manufacturing firms in Lagos State Nigeria. The manufacturing sector industry is considered as one of the very often hazardous industrial sectors that prone to accidents. However, occupational safety and health in manufacturing sector industry has improved in developing countries like Nigeria because safety regulations and standards, safety training, safety awareness and safety management systems which leads to promotion in project planning and scheduling process. The hazard identification, safety and health facilities are very important in manufacturing sector industry and it must be maintained in manufacturing sector industry to save risks and a healthy production environment. The safety and health also decide the duration of project and planning and scheduling. Reducing safety accidents save time and helps in successful

project performance. The main goal of safety and health programs is to prevent workplace injuries, illnesses, and deaths, as well as the suffering and financial hardship these events can cause for workers, their families, and employers.

Recommendations

Based on the findings of this study, the following recommendations were made.

Management of manufacturing firms should implement safety measures that will motivate employees in the execution of their daily activities. Organisations are advised to guard against endangering the lives of employees through the provision of substandard safety equipment in the quest for increasing competitive advantage and more profit to the detriment of employees.

Management of manufacturing firms should organize and deliver regular trainings, workshops, seminars and refresher trainings on health and safety at work, to keep records of safety and health concerns and to publish documents on safety and many other measure to instill safety awareness in the minds of workers. Regular site health and safety audits will facilitate the identification/elimination of potential workplace hazards and enable management to sense the safety climate of the worksite.

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