

Innovations

Safety Management Practices and Employee Performance in Manufacturing Firms in Southeast, Nigeria

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Abstract: *The study investigated Safety Management Practices and Employee Performance in Manufacturing Firms in Southeast, Nigeria. The specific objectives were: to analyse the effect of Safety policies on employee engagement in the Manufacturing Firms in Southeast Nigeria; and to assess the effect of Safety Training Programmes on Employee Compliance in the Manufacturing Firms in Southeast Nigeria. The study adopted survey research design. The target population of the study was members of staff of ten selected manufacturing firms in the Southeast Nigeria, which was 3371 and sample size of 626 was determined from that population using Krejcie and Morgan Sample formula. Cronbach's alpha reliability test was conducted to ascertain the reliability (internal consistency) of the research instrument of which the coefficient was 81.7%. Regression analysis was used for data analysis with the aid of SPSS. The study found that: Safety policies have a significant effect on employee engagement in the Manufacturing Firms in Southeast Nigeria; Safety Training Programmes have a significant effect on Employee Compliance in the Manufacturing Firms in Southeast Nigeria. In line with the findings, the study therefore concluded that Safety Management Practices have significant positive effect on Employee Performance in Manufacturing Firms in Southeast, Nigeria.*

Keywords: *Safety Management Practices, Employee Performance, Manufacturing Firms.*

1. Introduction

The genesis of safety management practices in Nigeria can be traced back to its colonial epoch under the British colonialism. During this colonial era, the British

administration, cognizant of burgeoning concerns regarding worker safety, implemented regulations to address safety issues in key sectors such as mining and agriculture (Nigeria Ministry of Mines and Steel Development, 2007). Noteworthy among these regulations was the Mines Regulations of 1906, which laid the groundwork for safety management practices by delineating standards for equipment, ventilation, and accident prevention within mines.

Following Nigeria's attainment of independence in 1960, the nation embarked on formulating its regulatory framework to tackle workplace safety concerns. The enactment of the Factories Act of 1958, later revised as the Factory Act of 1978, marked a significant milestone in this trajectory, furnishing guidelines for safety measures in factories including the appointment of safety officers, inspection protocols, and accident reporting procedures (Nigeria Ministry of Labour, Employment and Productivity, 2005). This legislative stride heralded a formalized approach towards safety management practices, underpinning the advocacy for safer working environments.

The burgeoning oil and gas industry in the 1970s precipitated heightened safety apprehensions, prompting the establishment of the Department of Petroleum Resources (DPR) in 1977 to oversee safety and environmental standards in the sector (Nigeria Department of Petroleum Resources, 2019). Concurrently, the inception of the Nigerian Institute for Safety Professionals (NISIP) in 1980 bolstered the promotion of safety management practices through professional training and certification initiatives (NISIP, n.d.).

In contemporary times, the Nigerian government has intensified efforts to fortify safety management practices via regulatory development and enforcement. Notable among these efforts was the promulgation of the Factories Act of 1987, with subsequent amendments in 1990 and 1992, indicative of a steadfast commitment to augmenting safety standards in industrial settings (Nigeria Ministry of Labour, Employment and Productivity, 2005). Furthermore, the establishment of the Federal Road Safety Corps (FRSC) in 1988 aimed at bolstering road safety and curbing accidents on Nigerian thoroughfares (Federal Road Safety Corps, 2021).

The historical trajectory of employee productivity in Nigeria has been molded by multifarious factors including socio-economic vicissitudes, labor dynamics, and management paradigms. The nation's evolution towards comprehending and optimizing employee productivity has been concomitant with global trends. From its agrarian economy during the colonial era, Nigeria transitioned to rapid industrialization post-independence, with the oil and gas sector assuming primacy in economic ascendancy. Nonetheless, challenges such as infrastructural inadequacies,

power deficits, corruption, and inefficiencies have impeded productivity across both public and private sectors (Achumba, Ogwo, &Abarshi, 2015).

The 1980s and 1990s witnessed a paradigm shift spurred by economic reforms typified by the Structural Adjustment Program (SAP) of 1986, aimed at redressing macroeconomic imbalances and fostering efficiency (Ozurumba, 2006). Concurrently, management frameworks embraced concepts like Total Quality Management (TQM), emphasizing continuous improvement, customer satisfaction, and employee engagement (Achumba, Ogwo, &Abarshi, 2015).

The transition to civilian rule in the late 1990s engendered renewed focus on labor rights, employee welfare, and conducive work environments conducive to heightened productivity (Nigeria Ministry of Labour, Employment and Productivity, 2005). Simultaneously, technological advancements and globalization catalyzed productivity enhancements, facilitated by the proliferation of Information and Communication Technologies (ICT) fostering efficient communication, collaboration, and knowledge dissemination in workplaces (Achumba et al., 2015).

Recent years have seen a growing emphasis on employee well-being and work-life balance as critical enablers of productivity. Employers are increasingly adopting measures such as flexible work arrangements, wellness programs, and employee engagement initiatives to cultivate a conducive work milieu (Ajayi &Arogundade, 2017). Concurrently, governmental initiatives such as the establishment of the Nigerian Institute for Occupational Safety and Health (NIOSH) in 2018 underscore the imperative of safety awareness, training, and certification (NIOSH, n.d.).

Moreover, international organizations like the International Labour Organization (ILO) have actively supported Nigeria in fortifying safety management practices and productivity through technical assistance and policy guidance (ILO, n.d.). The adoption of globally recognized standards such as OHSAS 18001 and ISO 45001 underscores the nation's commitment to enhancing safety management systems (Ezejiofor& Okeke, 1998). Thus, while it appears Nigeria has made significant strides in recognizing the symbiotic relationship between safety management practices and employee productivity, challenges endure, particularly among firms that have not embraced safety protocols comprehensively. These challenges imperil workplace well-being, organizational efficacy, and long-term viability. Therefore, this study endeavors to interrogate the nexus between safety management practices and employee productivity within manufacturing firms in South-East Nigeria, proffering actionable insights to ameliorate extant challenges and foster a safer, more productive work milieu.

2. Literature Review

2.1 Safety Policies in the Manufacturing Firms in Southeast Nigeria :

Safety policies in manufacturing firms in Southeast Nigeria play a vital role in fostering employee engagement. By prioritizing the well-being of workers through comprehensive safety measures, firms demonstrate their commitment to employee welfare. Engaging employees in the development and implementation of safety policies creates a sense of ownership and responsibility among the workforce. Regular communication channels, such as safety meetings and suggestion boxes, allow employees to voice concerns and contribute to improving safety standards. As a result, a culture of safety awareness and active participation is cultivated, leading to higher morale, reduced absenteeism, and increased productivity within the organization. Thus, the effect of safety policies on employee engagement within manufacturing firms has been a subject of increasing interest in recent research. Quansah, Zhu, and Guo (2023) conducted a study focusing on safety leadership, employee engagement, and psychological safety, finding significant positive influences of safety leadership on safety performance and employee engagement dimensions. Their work underscores the importance of psychological safety and enhanced employee engagement in fostering safety compliance and participation. Gyensare et al. (2019) explored the nexus between occupational health and safety management and employee engagement in Ghana's SME sector, revealing a positive impact on various dimensions of engagement, particularly intellectual engagement. Juba (2024) delved into workplace safety, health, and wellness programs, highlighting their role in enhancing employee effectiveness through fostering a culture of well-being and participation. Similarly, MGMD and HMRD (2023) examined the effect of occupational health and safety on employee engagement, emphasizing the measurable improvements in workplace engagement resulting from robust safety measures. Rasool, Hussaini, and Saeed (2020) investigated the influence of occupational health and safety on employee performance, identifying key factors such as employee assistance programs, wellness initiatives, and safety policies. Together, these studies provide valuable insights into the intricate relationship between safety policies, employee engagement, and organizational performance, shedding light on strategies to promote a safe and engaged workforce within manufacturing contexts. Flowing from the review, we therefore hypothesized that:

H₁: Safety policies have a significant effect on employee engagement in the Manufacturing Firms in Southeast Nigeria

2.2 Safety Training Programmes in the Manufacturing Firms in Southeast Nigeria:

Safety training programmes in manufacturing firms in Southeast Nigeria are pivotal for ensuring employee compliance with safety regulations and protocols. These programs typically cover a range of topics including hazard identification, proper equipment usage, and emergency procedures. Through interactive training sessions, employees are equipped with the knowledge and skills necessary to mitigate risks and respond effectively to potential dangers in the workplace. Regular reinforcement of safety training through refresher courses and evaluations helps to reinforce compliance and accountability among workers. Ultimately, a well-trained and compliant workforce not only reduces accidents and injuries but also contributes to the overall success and sustainability of the manufacturing firm. Extant literature on safety training programs and their impact on employee compliance in manufacturing firms provides valuable insights into the dynamics of workplace safety. Santi, Purbudi, and Dyah (2020) examined the relationship between safety training, worker involvement, safety knowledge, and safety compliance, revealing positive associations between training, involvement, and compliance, mediated by safety knowledge. Segbenya and Yeboah (2022) explored the effect of occupational health and safety policies on employee performance in the Ghanaian construction sector, emphasizing the importance of robust safety measures in enhancing performance despite challenges such as inadequate training and orientation. Isa et al. (2021) investigated factors influencing workplace safety culture in government-linked companies, underscoring the significance of management commitment, safety communication, and training in fostering compliance and a safe working environment. Omidi, Jafari, and Omidi (2020) focused on safety training's impact on the safety climate of employees in an Iranian oil refining company, highlighting the role of training interventions in improving safety perceptions and behaviors. Lastly, Obong et al. (2021) delved into the influence of health and safety training, monitoring, and enforcement on employee efficiency in manufacturing firms, affirming the positive effects of training, monitoring, and enforcement on enhancing safety standards and overall employee efficiency. Together, these studies underscore the crucial role of comprehensive safety training programs in promoting employee compliance and fostering a culture of safety within manufacturing environments. Thus, we therefore hypothesized that:

Ha2: Safety Training Programmes have a significant effect on Employee Compliance in the Manufacturing Firms in Southeast Nigeria

3.0 Methodology:

The survey design was adopted for this study. The justification for using this design is to better define an opinion, attitude, or behaviour held by a group of people on a given subject. The study employed the quantitative approach. Conventionally, the quantitative approach is based on the positivist reasoning in a scientific investigation of a phenomenon. It also inspires the deductive method which expresses hypothesized relationships. This research method systematically offers a tangible solution to the research questions and measures using statistical tools and techniques. The target population of the study was members of staff of ten selected manufacturing firms in the Southeast Nigeria, which was 3371. Using Krejcie and Morgan Sample formula, the sample size of 626 was determined. Face and content validity tests were carried out to validate the research instrument. Cronbach's alpha reliability test was conducted to ascertain the reliability (internal consistency) of the research instrument of which the coefficient was 81.7%. Regression analysis was used for data analysis with the aid of SPSS.

4.0 Data Analyses, Results Implications and Discussion of Findings

4.1 Data Analyses

Hal: Safety policies have a significant effect on employee engagement in the Manufacturing Firms in Southeast Nigeria

Coefficients ^a for Safety Policies and Employee Engagement						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.808	.495		11.738	.000
	Safety Policies	.609	.036	.637	17.008	.000

a. Dependent Variable: Employee Engagemen

In the Coefficient Table above, the beta weight quantifies the extent to which the outcome variable increases (in standard deviations) when the predictor variable is increased by one standard deviation, assuming other variables in the model remain constant. Hence, in this instance, Safety Policies contribute 0.637 towards explaining the variability in Employee Engagement. Within the T and Sig. Columns, the analysis furnishes the t-value and p-value utilised in testing the hypothesis that the coefficient/parameter equals 0 (i.e., the significance test). Coefficients with p-values

below alpha denote statistical significance. In this context, the alpha stands at 0.05 (5%). Consequently, $p(.000) < 0.05$ is deemed statistically significant.

Ha2: Safety Training Programmes have a significant effect on Employee Compliance in the Manufacturing Firms in Southeast Nigeria

Coefficients ^a for Safety Training Programmes and Employee Compliance						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.229	.826		12.721	.000
	Safety Training Programmes	.487	.018	.417	11.725	.000

a. Dependent Variable: Employee Compliance

In the Coefficient Table above, the beta weight quantifies the extent by which the outcome variable increases (measured in standard deviations) when the predictor variable is increased by one standard deviation, under the condition that other variables in the model remain constant. Thus, in this instance case, Safety Training Programmes contribute 0.417 to explaining the variability in Employee Compliance. Under the T and Sig. Columns, the analysis furnishes the t-value and p-value employed in testing the hypothesis that the coefficient/parameter equals 0, hence conducting a significance test. Coefficients with p-values below alpha signify statistical significance. In this scenario, the alpha threshold stands at 0.05 (5%). Consequently, $p(.000) < 0.05$ is deemed statistically significant.

4.2 Results and Implication:

- i. Safety policies have a significant effect on employee engagement in the Manufacturing Firms in Southeast Nigeria ($\beta = 0.637$); ($p < 0.05$). This implied that prioritising safety policies in manufacturing firms in Southeast Nigeria can positively impact employee engagement.
- ii. Safety Training Programmes have a significant effect on Employee Compliance in the Manufacturing Firms in Southeast Nigeria ($\beta = 0.417$); ($p < 0.05$). This implied that implementing safety training programs can effectively improve employee compliance within manufacturing firms in Southeast Nigeria.

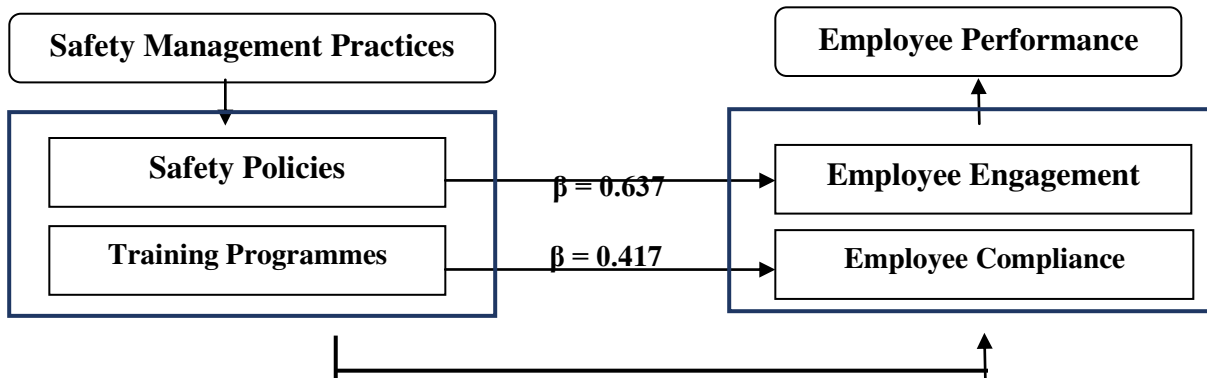


Figure 4.1: Conceptual Framework Showing the Results
Source: Researcher, 2024

4.3 Discussion of Findings

4.3.1 Safety Policies and Employee Engagement:

The current study adds to a growing body of research emphasizing the pivotal role of safety policies in fostering employee engagement within manufacturing firms in Southeast Nigeria. Building upon prior findings, it underscores that prioritizing employee well-being through comprehensive safety measures not only ensures physical safety but also cultivates a sense of ownership and responsibility among the workforce. This aligns with Quansah, Zhu, and Guo (2023) observations regarding the positive impact of safety leadership on employee engagement dimensions, highlighting the importance of psychological safety. Similarly, Gyensare et al. (2019) found a positive association between occupational health and safety management and various dimensions of engagement, mirroring the current study's emphasis on safety policies. Juba (2024) and MGMD and HMRD (2023) further accentuate the significance of workplace safety, health, and wellness programs in enhancing employee effectiveness and engagement. Rasool, Hussaini, and Saeed's (2020) exploration of safety policies' influence on employee performance echoes the current study's findings, emphasizing the multifaceted benefits of robust safety measures. Collectively, these studies provide compelling evidence of the intricate relationship between safety policies, employee engagement, and organizational performance, reinforcing the notion that fostering a culture of safety awareness and active participation is paramount for creating a thriving workforce in manufacturing settings. Thus, the current study's hypothesis, rooted in this comprehensive review, aptly predicts a significant effect of safety policies on employee engagement within the context of Southeast Nigerian manufacturing firms.

4.3.2 Safety Training Programmes and Employee Compliance:

The current study contributes to the understanding of safety training programs' critical role in ensuring employee compliance with safety regulations within manufacturing firms in Southeast Nigeria. Building upon previous research, it highlights the multifaceted benefits of such programs, which go beyond mere knowledge dissemination to actively shaping employee behavior and attitudes towards safety. This aligns with Santi, Purbudi, and Dyah (2020) findings regarding the positive associations between safety training, worker involvement, and compliance, mediated by enhanced safety knowledge. Despite potential challenges like inadequate training, Segbenya and Yeboah (2022) emphasize the overarching importance of robust safety measures, which likely include effective training, in enhancing overall performance. Isa et al. (2021) and Omid, Jafari, and Omid (2020) further reinforce the significance of management commitment and communication in conjunction with training efforts for fostering a culture of compliance and safety. Additionally, Obong et al. (2021) highlight the tangible benefits of health and safety training, monitoring, and enforcement in improving not only safety standards but also overall employee efficiency within manufacturing firms. Collectively, these studies provide compelling evidence of the indispensable role of comprehensive safety training programs in promoting employee compliance and cultivating a culture of safety within manufacturing contexts. Thus, the current study's hypothesis, informed by this body of research, aptly predicts a significant effect of safety training programs on employee compliance in Southeast Nigerian manufacturing firms.

5.0 Conclusion and Recommendation

5.1 Conclusion:

In line with the findings, the study therefore concluded that Safety Management Practices have significant positive effect on Employee Performance in Manufacturing Firms in Southeast, Nigeria.

5.2 Recommendation:

- i. Based on the finding that safety policies have a significant effect on employee engagement in manufacturing firms in Southeast Nigeria, it is recommended that management of manufacturing firms should establish regular safety meetings, suggestion boxes, and open-door policies to encourage employees to voice concerns and contribute to improving safety standards. This fosters a

culture of active participation and ownership among the workforce, leading to higher morale and increased productivity.

- ii. In line with the finding that safety training programs have a significant effect on employee compliance, it is recommended that management of manufacturing firms should offer periodic refresher courses and evaluations in their respective organisations to reinforce safety knowledge and skills among employees. By ensuring ongoing training and assessment, firms can enhance compliance and accountability, ultimately reducing accidents and injuries in the workplace.

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