

**OCCUPATIONAL HEALTH, SAFETY TRAINING PROGRAMMES AND EMPLOYEES' PERFORMANCE: A STUDY OF DANGOTE CEMENT, IBESE, OGUN STATE, NIGERIA.**

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**ABSTRACT**

*Preventing occupational hazards is seen to improve organizational outcomes, and health and safety are highly valued components of integrated operations management. Promoting employee safety standards through the implementation of safety practices and policies within a company is part of occupational health and safety. It has been noted over time that Nigerian employers frequently neglect to implement safety precautions for their workers' wellbeing. Businesses struggle with how to allocate resources most effectively in order to retain the highest level of staff productivity and create the safest possible workplace. Hence, the need for this study which is to evaluate the effect of occupational health, safety training programmes on organizational performance, using Dangote Cement, Ibeshe, Ogun State as a reference point. The study adopted descriptive research design, with population of study being the entire staff (both permanent and temporary) which is 2,650 elements from which a sample size of 338 elements was drawn. Questionnaire was developed and administered, out of which 243 copies were returned and used for analysis in line with the hypotheses formulated. The result shows that there was a positive significant effect of occupational health and safety practices on organizational performance, as all of the indices returned a significant T-values, F-values and p-values, which was enough to reject the null hypotheses formulated. The findings led to the conclusion that that when occupational health and safety training programmes are embraced, employee are fit and as such increase their productivity and efficiency. In-line with the conclusion, it was therefore recommended that organizations should continue to ensure an policies and practices that support occupational health while putting in place safety training programmes to intimate the employees on the need to embrace safety at all times.*

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## 1.0 Introduction

Preventing occupational hazards is seen to improve organizational outcomes, and health and safety are highly valued components of integrated operations management. Promoting employee safety standards through the implementation of safety practices and policies within a company is part of occupational health and safety. Workplace deaths, illnesses, and injuries will continue to be a burden for the firm with little to no health and health controls in place. High organizational safety cultures are shown in companies that are renowned for safeguarding the health and safety of their workers (Adim & Mezeh, 2020). Organizational safety culture, according to the International Labour Organization (n.d.), is based on workable strategies and regulations that lower occurrences, illnesses, work-related injuries, and fatalities. Personal protective equipment (PPE), safety and health management systems (SHMS), safety information and training, and supervision all contribute to the improvement of the safety culture. Most businesses have a specialized department that makes sure workers follow the health and safety guidelines that upper management has implied. Global organizations, particularly those from developed countries, have a strong occupational health and safety (OHS) infrastructure, according to (Alase, et al., 2021). Government legislation on organizational safety and health, pertinent education and training, and a deeper comprehension of OHS standards serve as the foundation for this. Although OHS expenditures have a high upfront cost to the company, they lower conventional turnover, workmanship compensation, and absenteeism (Amirah, 2024; Darshana, 2017). Additionally, it improves organizational stability because, after a given amount of time, personnel numbers seldom ever fluctuate.

In the meanwhile, underemployment and unemployment are high in developing nations with low to medium incomes. As a result, people who are employed are less likely to voice concerns about dangerous working circumstances. According to Mbaye and Gueye (2018), the majority of their firms are more inclined to hire new employees than to spend more money on employees who are already unwell or injured. However, these short-term HR practices raise wage expectations and damage the company's reputation. Because the administrative expense of replacing wounded personnel has an impact on an organization's performance, costs resulting from employee damage typically hinder the organization's ability to operate normally. Over two million workers worldwide suffer from work-related injuries each year, which is a concerning statistic regarding occupational dangers (ILO, 2017).

Over 300,000 of the reported injuries are fatal, underscoring the urgent need to protect workers from workplace dangers. Work-related mortality accounts for at least 5% of all fatalities worldwide, according to a 2015 Global Burden of Disease assessment (Global Burden of Disease, 2015; Huang et al., 2022). These startling statistics have made extensive research on employee health and safety at work necessary. The institution of health and safety requirements must be psychologically fulfilling for the majority of employees in order to provide favorable work outcomes. As a result, it will improve task continuity within the company and guarantee a positive work environment and high levels of job satisfaction. Ensuring the health and safety of employees is the focus of occupational safety in the workplace. If there are no possible risks that could result in accidents or diseases brought on by the work environment, the workplace is deemed risk-free (Idris, et al., 2021). Creating and following a set of regulations is one way to increase workplace safety. Continuous monitoring of occupational hazards, identification of

hazards, information sharing about risks, and cooperation between employers and employees are just a few of the many elements that make up the process of improving occupational safety (Hofmann, Burke & Zohar, 2017).

Occupational health is still neglected in Africa, as it is in many other developing nations. Competing political, social, and economic issues are the cause of this neglect. According to Iskamto, et al. (2021), many organizations on the continent continue to lack efficient methods for converting scientific discoveries into useful policies. However, contrasted to the previous emphasis on the workplace, scholars are hopeful that businesses in emerging economies are already paying the much-needed attention to the social context of workers (Jitcha & Kitaw, 2017). Social justice, organizational development, and occupational health continue to be at odds. Poor policy creation and execution at the governmental level are blamed for the unhappiness. Additionally, occupational health is viewed as a luxury and emphasizes its significance, but there are still insufficient preventative treatments.

### **1.2 Statement of the Problem**

It has been noted over time that Nigerian employers frequently neglect to implement safety precautions for their workers' wellbeing. Businesses struggle with how to allocate resources most effectively in order to retain the highest level of staff productivity and create the safest possible workplace (Okonkwo, Okoro & Nwandu, 2015; Huang, et al., 2022). Therefore, companies looking to maximize profit margins at the lowest possible cost would neglect to implement appropriate measures and considerations for the safety and well-being of their employees, such as personal protective equipment, safety training programs, and education for injured workers. Employees would not put forth their best effort at work if they felt that their bosses did not prioritize their life and well-being.

Additionally, intrinsic elements in the workplace account for the compromise of employees' health, safety, and fitness. A worker's fitness and health are compromised by the amount of time they spend in unpleasant and dangerous conditions, such as dark, dusty, hot, slippery, or noisy ones, which lowers commitment. Additional variables that might lead to stress include overwork, long hours, hazards and dangers, manual jobs that should ideally be done mechanically, and a loss of job satisfaction among employees, which can result in low commitment and productivity (Alase, et al., 2021). The consequences of work-related injuries extend well beyond financial losses to the company; they may result in reduced dedication, inefficiency, and employee disengagement.

In addition to physical injuries sustained on the job, safety concerns also include occupational diseases. For instance, excessive and continuous noise, which has long been disregarded as a cause of problems, can result in serious health issues like neurological, cardiovascular, and endocrinological disorders (Mbaye & Guiye, 2018). Additionally, occupational hazards and stress can cause cancer and hypertension. Moreover, the proliferation of chemicals in the living and working environment, especially synthetic organic and chlorinated chemicals, can cause serious long-term problems. Through support programs, many organizations are trying to address a range of health issues that affect their employees, including drug and alcohol misuse, the cumulative effects of exposure to harmful substances, and psychological stressors. Furthermore, companies now support employee wellness initiatives, which promotes healthier lives (Kundu, 2016). Increased injuries brought on by insufficient or non-existent workplace safety will result in both monetary losses and the loss of important organizational human

resources. As a result, safety and occupational health must receive far more attention than previously (Liu, et al., 2020).

According to Okonkwo, et al. (2015), numerous research indicate that workplace diseases, accidents, and injuries continue to be major issues for businesses. According to Adim and Mezeh (2020), an organization's efficiency and effectiveness, job satisfaction, flexibility, and employees' participation in the workplace will all improve if it can lower the rate of occupational accidents, illnesses, and unwelcome stress. Medical leaves, job abandonment, and absenteeism will also naturally decrease. Conversely, there has been an increase in the number of adverse event investigations conducted by health care regulators due to global concerns about health care safety and quality (Passmore, Krauesslar, & Avery, 2015).

### **1.3 Objectives of the Study**

The main objective of this study is to examine the effect of occupational health and safety training programmes on employees' performance, using Dangote Cement Plc, Ibese, Ogun State as a study of reference. The specific objectives are to:

- i. examine the effect of occupational health on employees' productivity at Dangote Cement Plc, Ibese, Ogun State.
- ii. evaluate the effect of safety training programmes on employees' efficiency in Dangote Cement Plc, Ibese, Ogun State.

### **1.4 Research Questions**

The following research questions were drawn in line with the specific objectives of the study listed above.

- i. Is there a significant effect of occupational health on employees' productivity in Dangote Cement Plc, Ibese, Ogun State?
- ii. Is there a significant effect of safety training programmes on employees' efficiency in Dangote Cement Plc, Ibese, Ogun State?

### **1.5 Research Hypotheses**

The research hypotheses formulated in its null form for this study is rooted in the specific objectives of the study listed in section 1.3 above, and are as follows:

- i.  $H_{01}$ : There is no significant effect of occupational health on employees' productivity in Dangote Cement Plc, Ibese, Ogun State.
- ii.  $H_{02}$ : There is no significant effect of safety training programmes on employees' efficiency in Dangote Cement Plc, Ibese, Ogun State.

### **1.6 Scope of the Study**

The scope of this study is limited to occupational health and safety training programmes on organizational performance, with emphasis on Dangote Cement Plc, Ibese, Ogun State. The entire staff members, both permanent and temporary, of Dangote Cement Plc, Ibese, Ogun State will be used as elements from which data will be sourced. The study will focus on such variables as developed in the specific objectives of the study in section 1.3 above.

## **2.0 Literature Review**

The literature review for this study is done under the following headings: conceptual review; theoretical review and/or framework; empirical review; and the gap in literature.

### **2.1 Conceptual Review**

The conceptual review for this study is done looking at the variables of interest, viz, occupational health and safety training programmes, which are the independent variables, and

organizational performance, which is the dependent variable, and its measurement criteria, which are (i) employees' efficiency and (ii) employees' productivity.

### **2.1.1 Occupational Health and Safety Training Programmes**

#### **Occupational Health**

Occupational safety and health (OSH), also commonly referred to as occupational health and safety (OHS), occupational health, or workplace health and safety (WHS), is a multidisciplinary field concerned with the safety, health, and welfare of people at work. These terms of course also refer to the goals of this field, so their use in the sense of this article was originally an abbreviation of occupational safety and health program/department etc. The goals of occupational safety and health programs include fostering a safe and healthy work environment. OSH may also protect co-workers, family members, employers, customers, and many others who might be affected by the workplace environment, Rosa (2019). Occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities; and, to summarize, the adaptation of work to man and of each man to his job.

The main focus in occupational health is on three different objectives: the maintenance and promotion of workers' health and working capacity; the improvement of working environment and work to become conducive to safety and health and development of work organizations and working cultures in a direction which supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the undertaking, (Santiana, et al., 2018).

Occupational health is a protection for employees and where employees get the best possible health and are free from disturbances both physically, spiritually and socially, with treatment and prevention efforts against various diseases or health problems that occur due to work stress or the work environment as well as general illnesses other. Health is an important thing that needs to be considered by the company so that with occupational health employees will benefit materially because they are less likely to be absent due to illness and reduce the risk of contracting diseases from fellow co-workers. That way the work environment will still feel comfortable so that employees can work with better productivity.

According to Sarmuji and Aryani (2019), occupational health is a part of health science which aims to make the workforce obtain a perfect state of health both physically, mentally, socially, so that they can work optimally. Meanwhile, according to Beth (2018) the occupational health program shows a condition that is free from physical, mental, emotional or pain disorders caused by the work environment. Occupational health is the avoidance of diseases that may arise after starting work.

Occupational health is an effort and condition that allows a person to maintain his health condition at work. According to the International Labor Organization and the World Health Organization, occupational health is the implementation and maintenance of the highest degree

of physical, mental and social health of workers in all occupations, prevention of health problems of workers caused by working conditions, protection of workers against risk factors that interferes with the health, placement and maintenance of workers in the work environment according to their physical and psychological abilities, and in conclusion is the adjustment of work for humans to their work

### **Safety Training Programmes**

According to Friend and Kohn (2018), safety programs are documented action plans for identifying and addressing risks, outlining safety responsibilities, and handling emergencies, all with the aim of lowering workplace accidents and incidents. Workplace safety must be considered in all aspects of a business's operations. Employers, employees, and their families all gain when safety precautions are taken since fewer people are hurt, injured, and killed at work (Jilcha & Kitaw, 2017). Proactive and conventional methods are used to manage the safety programs by encouraging everyone in the organization to respond safely. Keeping the workplace safe is a crucial component of being proactive.

According to Darshana (2017), every employee must support safety programs because their objectives are to keep workers safe, reduce risks, and maintain a safe and healthy workplace. Every company operating at a location is required to have a safety program in place. The type of program needed should be determined by the number of employees and the degree of risk they face (Beth, 2018). All parties involved in the workplace must prioritize prevention in order to have a safe working environment. By following safe working practices, a corporation can save lives and save money, emphasize safety procedures that will enhance employees' health, well-being, and behaviors, with a particular emphasis on safety rules, concepts, and practices that are based on management's commitment to safety and leadership (Adim & Mezeh, 2020). Employee satisfaction with safety programs and policies, management's dedication to safety, workers' perceptions of work safety, the availability and use of personal protective equipment (PPEs) and plant, handling organizational hazards, and organization-initiated health and safety training programs are some examples.

### **2.1.2 Employees' Performance**

Performance can be defined as the achieved desired results. It is the ability of an organization to fulfill its mission, vision and corporate objectives through sound management, strong governance and a relentless re-dedication to achieving results (Mahapatro, 2010). Organizational performance is used to measure the effectiveness and efficiency of an organization, it involves the recurring activities to establish organizational goals, monitor progress towards these goals, and make adjustments to achieve these goals more effectively and efficiently (Ratna, et al., 2014). Employee performance is determined by the caliber of work they produce and the accomplishment of goals in line with their given responsibilities. According to another study by Genzorová (2017), a successful employee performance is defined as meeting work standards, predefined criteria, targets, and objectives within a given time frame and achieving the intended outcomes both individually and collectively. According to Satyvendra (2019), an employee's performance level is simply defined as their actions while carrying out their designated duties. An action or acts taken by workers in the course of their work to accomplish the organization's goals.

Employees' performance is a collection of their qualities, aptitudes, and talents that they may

use when and when necessary to accomplish tasks on schedule and produce the intended results (Mathew, 2015). Employee performance is defined as the actions and/or behaviors carried out to achieve an organization's goals and objectives (Yingjun, 2019). Job performance is the amount of work that individuals and/or groups do each time to complete tasks that show the caliber of work done to achieve goals (Satyvendra, 2019). This is a crucial element of every organization that has a significant impact on both its long-term viability and success. The physical working environment, standardized operating procedures and policies, the significance of the work completed, the equipment used, the system's reward system (good or bad), performance expectations, performance feedback, skills, knowledge, attitudes, and behaviors are some of the factors that affect an employee's level of performance at work (Okasheh, 2017). Because it can intervene, impede, and/or set limits of the series of work behaviors displayed by employees that may have an impact on the task being performed, the physical working environment is a vast and prominent aspect of the work environment that greatly influences the performance and productivity of the employees.

#### **2.1.2.1 Employees' Productivity**

Productivity, according to Sutrisno (2017), is the relationship between inputs (money, labor, and materials) and output (goods or services). The two components of employee productivity are (a) the output dimension, which includes management effectiveness and the quantity of goods or services produced per unit, and (b) the input dimension, which includes labor, consumable materials, costs, non-consumable equipment, and time spent producing goods and services. In terms of productive attitudes and mentalities including motivation, discipline, creativity, invention, dynamism, professionalism, and financial mindset, productivity is defined as the ratio of results obtained (output) to total resources used (input) (Sedarmayanti, 2011).

Productivity, according to Mathis & Jackson (2012), is the measurement of the amount and caliber of work done while taking resource costs into account. Productivity, according to Phusavat (2013), is the numerical ratio of output generated to input used. While Robbins and Timothy (2012) define productivity as the conversion of inputs into outputs at the lowest cost, Samuelson and Nordhaus (2009) define productivity as output per unit input. According to these beliefs, the ratio of output (goods or services) to input (different resources) can be used to summarize staff productivity. The output dimension, which includes (1) the effectiveness of work results, (2) the added value generated, (3) the quality of work, and (4) the quantity produced, is one of the dimensions of employee productivity. The input dimension, which includes (1) labor, (2) costs, (3) materials and equipment, and (4) organizational factors like management support and programs that support product outcomes, is the other dimension.

#### **2.1.2.2 Employees' Efficiency**

Khademfar and Amiri (2013) define efficiency as the capacity to do activities as efficiently as possible. There are two types of efficiency that are commonly discussed: static efficiency and dynamic efficiency. Static efficiency includes things like improving current conditions and refining current items, processes, or possibilities. Efficiency gauges how well inputs are converted into outputs or the relationship between inputs and outputs. Allocating resources among several purposes is the key to efficiency (Kumar & Gulati, 2010). Efficiency is really important when it comes to employee behavior. Only when something is successful can it be

considered efficient. To put it another way, something is efficient if it improves the circumstances of the user. It must have the capacity to operate (Noordzij, 2013). Because of this, efficiency can only be discussed after effectiveness has been attained. The ability to act or create successfully while consuming the least amount of waste, money, or needless effort is known as efficiency. "There is, without a doubt, nothing more pointless than putting up considerable effort into something that should not be done at all." One characteristic of an employee is their efficiency, which is linked to how quickly and accurately they finish a given task. It is impossible to ignore the importance of skill management in a business, particularly when it comes to guaranteeing employee efficiency and production. In order to guarantee that their work is finished promptly and effectively, employees must possess the necessary abilities. Having certain skills is necessary to be effective at work; these skills might be managerial, strategic, technical, or conceptual.

## **2.2 Theoretical Framework**

The theoretical framework for this study is anchored on the Goal-Freedom Theory developed by Kerr in 1950 and the Distraction Theory propounded by Hinze in 1997.

### **2.2.1 Goal-Freedom Alertness Theory**

The Goal-Freedom Alertness Theory was developed by Kerr (1950) and it states that safe work performance is the result of psychologically rewarding work environment. Under this theory, accidents are viewed as low-quality work behaviour occurring in an unrewarding psychological climate. This contributes to a lower level of alertness. According to the theory, a rewarding psychological climate is one where workers are encouraged to participate, set sustainable goals and choose methods or safety programmes to attain those safety and health goals. They must be allowed to participate in raising and solving problems. Goal-Freedom Alertness Theory essentially states that management should let workers have well defined goals and freedom to pursue those goals. The result is a higher level of alertness and a focus on the tasks at hand. The theory suggests that managers and supervisors should try and make work more rewarding for workers. They may use a variety of managerial techniques including positive reinforcements, goal setting participative management and clear work assignments. Heinrich et.al (1980) supports the theory by stating workers will be safe in a positive work environment. They argue that safe performance is compromised by a climate that diverts the attention of workers. They confirm that hazards divert the workers attention during work hours and thus the diversion increases susceptibility to injury. Heinrich et. al (1980) suggests that managers and supervisors can actively work to alleviate hazards in the work environment. Reaction of workers to unsafe conditions depends on the fact that whether the worker identifies the unsafe condition.

### **2.2.2 Distractions Theory**

The proponent of the theory is Hinze (1997) and states that safety is situational. Because mental distractions vary, the responses to them may have to differ to maintain safe performance. Additionally, hazards or physical conditions with inherent qualities that can cause harm to a person, may or may not be recognized by the worker and influence safety of the task. The theory applies to a situation in which recognized safety hazard or mental distractions exist and there is a well-defined work task to perform. In the absence of hazards there is little to prevent workers from completing their tasks. However in the presence of hazards, work is greatly complicated. The theory has two components, first dealing with hazards posed by unsafe

physical conditions and the other dealing with a worker preoccupation with issues not directly related/ to the task being performed. The theory basically states that when a worker has lower probability of injury/ and higher level of task achievement. When a worker has a higher focus on a mental distraction, the worker has a higher probability of injury and a lower level of task achievement. To avoid injury and achieve high levels of productivity, workers must avoid mental distractions. Petersen (1996) states that managers must consider human capabilities from health and safety viewpoint when assigning tasks to their employees. He argues that accidents have identifiable socio-technical cause resulting in human performance. Employers should take account of their capabilities and the level of training, knowledge and experience on health and safety in the workplaces. Petersen (1996) confirms that organizations should design human error oriented accidents prevention programmes without slowing productivity or compromise performance since accidents and incidents in workplaces are unplanned and unwanted occurrences involving movement of persons, objects or materials which may result in injury, damage or loss to property or people.

### **2.3 Empirical Review**

Kao (2019) investigated the link between safety knowledge, safety attitudes and safety behaviour. The study collected data from supervisors and workers in construction firms in the United States of America. The study did not show how it conceptualised its constructs. The study found that safety knowledge mediated the relationship between safety attitudes and safety behaviours. The study failed to link workplace safety in terms of safety ergonomics, emergency management, safety training and safety transfer to workplace safety attitudes and employee productivity outcomes as conceptualised in the current study.

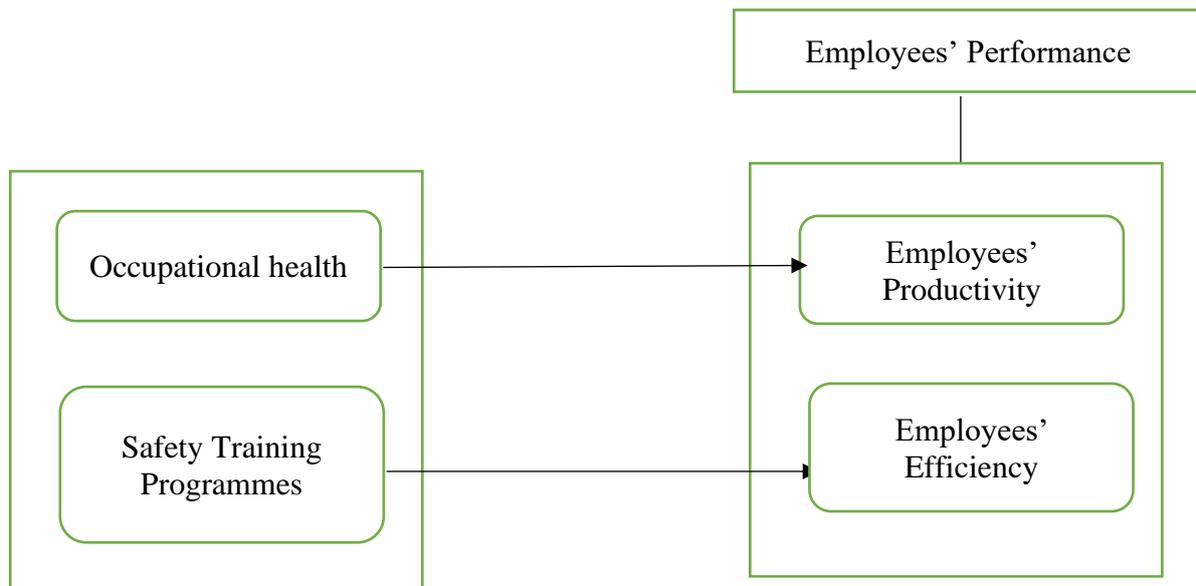
Laura (2019) studied the mediation effect of safety climate and safety motivation on the relationship between organisational climate and safety performance. The study used questionnaires to collect data from nurses in two hospitals in Italy. The study conceptualised safety in terms of managerial values and participation in safety training which are partial measures of workplace safety, while the current study measured workplace safety in terms of programmes put in place for safety. The study hypothesis which was evaluated using regression models found that safety climate (attitudes) did not mediate the relationship between organisational climate (work performance) and safety participation (training attendance). The study was conceptualised in a sector different from the current study.

Research on the effectiveness of occupational safety and health management on employee productivity has been reported by (Has & Susanty, 2016; Santiana et al., 2018), with findings indicating that the effectiveness of occupational safety and health management significantly affects employee productivity. Recent research on work productivity has been reported by (Jaafar & Rahim, 2022), who investigated the mediating effects of job autonomy and work-family conflict on the relationship between telecommuting and employee productivity, and by (Kurdy et al., 2023), who studied the mediating effects of job level on the relationship between remote work and employee productivity.

A study by Rosa (2019) investigated safety attitude and its relationship with safety training and generalised work efficacy. The study conceptualised work efficacy as the belief in one's ability to perform a given task, while the current study measures work productivity using three measures (value-added, degree of accomplishment of tasks and productive time). Safety

attitudes were conceptualised in terms of perceptions of safety climate, while the current study conceptualised safety attitudes in terms of response to safety programmes. The study failed to show how safety training was conceptualised. The sample was made up of 140 workers from three tile manufacturing firms and one in the public sector in Spain. The regression results found that safety training was positively associated with safety attitude and work efficacy. The study was faulted for collecting data from employees who might have been biased when asked to rank their work efficacy and attitude, while the current study collected data from supervisors and focused on the intervening effect of safety attitude on the relationship between workplace safety and employee productivity

## 2.4 Conceptual Framework



Source: *Researcher's Conceptual Model, 2025*

## 3.0 Methodology

The study deployed descriptive survey research design to examine the effect of occupational health and safety training programmes on organizational performance in Dangote Cement Plc in Ibese, Ogun State, with the primary aim of gaining an understanding of phenomenon under study, by collecting the needed data through surveys as appropriate for this study (Creswell, 2012).

The study population includes all permanent staff and temporary staff of Dangote Cement Plc situated at Ibese in Yewa North Local Government Area of Ogun State. Using Krejcie and Morgan (1970) sampling size determination table, a sample of three hundred and thirty-eight (338) were drawn from the population of two thousand, six hundred and fifty (2,650). Accidental sampling method was used to select the respondents.

The study utilized questionnaire developed in a 5-point Likert Scale rating, developed as primary source of obtaining data from the study selected respondents ranging from Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1). The question item was put through a face and content validity, to ensure that they were valid representation of what the study intended to capture by the supervisors and other professors in the department of Industrial Relations & Human Resource Management. Thereafter, the questionnaire was tested

using test-retest method and reliability conducted to obtain internal consistency through Cronbach-Alpha, with a coefficient of 0.75 and 0.84 was obtained for the independent variable, construct items respectively, while the dependent variable's construct items returned 0.86 and 0.79 reliability coefficient respectively.

The copies of the questionnaire were administered personally by the researcher with the help of four (4) experienced research assistants because the premises of the company is big and work schedule of the participants was too tight. A total of three hundred and thirty-eight (338) copies of questionnaire were administered, out of which 243 copies were retrieved representing 71.89% were certified valid for final analysis. Data were analyzed using simple regression on Statistical Package for Social Sciences (SPSS) version 27 at 0.05 level of significance.

#### 4.0 Data Presentation and Analysis

This section presents the data used for this study, analysis of the data, reports the findings and also discuss the findings from the empirical perspective of the study.

#### 4.1 Hypotheses Testing

##### 4.1.1 Hypothesis One Restated

H<sub>01</sub>: There is no significant effect of occupational health on employees' productivity in Dangote Cement Plc, Ibese, Ogun State.

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.337 <sup>a</sup>	.113	.110	.07408	2.729

a. Predictors: (Constant), Occupational Health

b. Dependent Variable: Employees' Productivity

#### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.169	1	.169	30.810	.000 <sup>b</sup>
	Residual	1.323	241	.005		
	Total	1.492	242			

a. Dependent Variable: Employees' Productivity

b. Predictors: (Constant), Occupational Health

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.076	.065		62.320	.000
	Occupational Health	.083	.015	.337	5.551	.000

a. Dependent Variable: Employees' Productivity

**Source:** Author's computation, (2025).

The model summary table in hypothesis one above revealed R value of 0.337 which is the association between the independent variable (occupational health) and the dependent variable (employees' productivity) as can be explained by the model. It also revealed an R<sup>2</sup> value of 0.113, which is the degree of variation resulting from the association of the IV and the DV. It implies that every unit of occupational health in Dangote Cement Plc, Ibese, Ogun State results in a concurrent variation of 11.3% in employees' productivity, with other variables outside the model accounting for the remaining 88.7%.

The ANOVA table reveals a F<sub>Stat</sub> value of 30.810 with a p-value of 0.000<0.05 indicating that the independent variable (occupational health) significantly predicts the outcome of the dependent variable (employees' productivity). The implication is that occupational health has a significant effect on the outcome of employees' productivity in Dangote Cement Plc, Ibese, Ogun State.

The Coefficient table above revealed the importance of the T-statistics of 5.551 which shows a significant deviation from the null hypothesis, with a p-value of 0.000<0.05, enough to reject the null hypothesis and assert that "occupational health has a significant effect on employees' productivity in Dangote Cement Plc, Ibese, Ogun State.

#### 4.2.2 Hypothesis 2 Restated

H<sub>02</sub>: There is no significant effect of safety training programmes on employees' efficiency in Dangote Cement Plc, Ibese, Ogun State.

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.918 <sup>a</sup>	.842	.839	.19535	2.375

a. Predictors: (Constant), Safety Training Programmes

b. Dependent Variable: Employees' Efficiency

#### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	49.123	1	49.123	1287.234	.000 <sup>b</sup>
	Residual	9.197	241	.038		
	Total	58.320	242			

a. Dependent Variable: Employees' Efficiency

b. Predictors: (Constant), Safety Training Programmes

## Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.468	.101		4.631	.000
	Safety Training Programmes	.868	.024	.918	35.878	.000

a. Dependent Variable: Employees' Efficiency

*Source: Author's computation, (2025)*

The model summary table in hypothesis one above revealed a R value of 0.918 which is the association between the independent variable (safety training programmes) and the dependent variable (employees' efficiency) as can be explained by the model. It also revealed an R<sup>2</sup> value of 0.842, which is the degree of variation resulting from the association of the IV and the DV. It implies that every unit of safety training programmes in Dangote Cement Plc, Ibese, Ogun State results in a concurrent variation of 84.2% in employees' efficiency, with other variables outside the model accounting for the remaining 15.8%.

The ANOVA table reveals a F<sub>Stat</sub> value of 1287.234 with a p-value of 0.000<0.05 indicating that the independent variable (safety training programmes) significantly predicts the outcome of the dependent variable (employees' efficiency). The implication is that safety training programmes has a significant effect on the outcome of employees' efficiency in Dangote Cement Plc, Ibese, Ogun State.

The Coefficient table above revealed the importance of the T-statistics of 35.878 which shows a significant deviation from the null hypothesis, with a p-value of 0.000<0.05, enough to reject the null hypothesis and assert that "safety training programmes has a significant effect on employees' efficiency in Dangote Cement Plc, Ibese, Ogun State.

### 4.3 Discussion of Findings

The result of hypothesis one revealed that occupational health has a significant effect of employees' productivity in Dangote Cement Plc, Ibese, Ogun State. This implies that there is a statistically significant effect of occupational health on employees' productivity with a R<sup>2</sup> value of 0.113 and a p-value of 0.000<0.05. Hence, every effort by the employers or management of Dangote Cement Plc, Ibese, Ogun State results in a 11.3% increase in employees' productivity. This finding is synonymous with the findings of Has and Susanty, (2016) and Santiana et al., (2018), who found that the effectiveness of occupational safety and health management significantly affects employee productivity.

Hypothesis two revealed that safety training programmes has a significant effect of employees' efficiency in Dangote Cement Plc, Ibese, Ogun State, with a R<sup>2</sup> value of 0.842 and a p-value of 0.000<0.05, implying that has Dangote Cement Plc continue to safety training programmes for their staff members, it will result in 84.2% of employees' efficiency for the organization. This finding is synonymous with the findings of by Rosa (2019) who investigated safety attitude and its relationship with safety training and generalised work efficacy. The results found that safety training was positively associated with safety attitude and work efficacy.

### 5.1 Conclusion

The study concluded based on the results obtained from the data analysed that occupational health and safety training programmes have a significant effect on organizational performance in Dangote Cement Plc. based on the outcome of the findings, which are that occupational health leads to improved employees' productivity, and that safety training programmes results in increased employees' efficiency in Dangote Cement Plc, Ibese, Ogun State. This is because all the indices used to analyse the data were enough to reject the null hypotheses formulated and allowed for the assertion above, hence the conclusion.

## 5.2 Recommendations

Based on the conclusion reached above, the following recommendations were made:

- i. Manufacturing companies should endeavour to improve on the enforcement of occupational health policies, as this will ultimately lead to improve employees' productivity as a result of less incidents and accidents
- ii. Manufacturing companies should ensure that they safety training programmes, as policies and practices, where they have none, or ensure that employees practice safety at all phases within the facility and layout. This is because when safety culture is embedded as practice and policy, efficiency in carrying out task increases.

## Suggestion for Further Studies

Further studies could be carried out on studying the effect of occupational health on employees' performance in other sectors such as the educational sector and tourism sector, as there are also incidents and accident-related issues prevalent in these sectors as well.

## References

- Adim, C. V., & Mezeh, A. A. (2020). Health and safety training and employee performance in oil and gas companies in Rivers State, Nigeria. *British International Journal of Education and Social Sciences*, 7(8), 41-50.
- Alase, P.O., Taiwo, S.F., Hassan, T.A. & Okusanya, A.O. (2021). Occupational health and safety practices and employees' performance in selected manufacturing companies in Nigeria. *International Journal of Economics, Business and Management Research*, 5(5), 54-65.
- Amirah, N.A., et al., (2024). Fostering a safety culture in manufacturing through safety behavior: A structural equation modelling approach. *Journal of Safety and Sustainability*, 1, 108–116
- Aswathappa, K. (2015). *Human resource management: Text and cases*. Tata McGraw- Hill Education.
- Beth, A. A. (2018). *Assessment of occupational safety compliance in small-scale gold mines in Siaya County, Kenya* (Doctoral dissertation, University of Nairobi).
- Darshana, W. D. (2017). Improvement of health and safety in construction sites in Sri Lanka. *Engineer: Journal of the Institution of Engineers, Sri Lanka*, 1(50), 53-70.
- Dessler, G., & Varrkey, B. (2015). *Human resource management* (15th edn.). Pearson Education Mumbai.
- Dinakaran, D., Balasubramanian, K.R., Sivapirakasam, S.P. & Gopanna, K. (2019). Behaviour-based safety approach to improving workplace safety in heavy equipment manufacturing industry. *Int. J. Hum. Factors Ergon.*, 6, 249–272.
- Elegunde, A. F., & Osagie, R. (2020). Artificial intelligence adoption and employee performance in the Nigerian banking industry. *International Journal of Management and*

- Administration*, 4(8), 189-205.
- Esterhuizen, W. & Martins, N. (2015). *A mixed method approach to evaluate the impact of coaching on safety leadership*. University of Malta, Malta. (*Proceedings of the 14th European Conference on Research Methodology for Business and Management Studies*, 11 – 12 June. 428 – 436.
- Friend, M. A., & Kohn, J. P. (2018). *Fundamentals of occupational safety and health*. Rowman & Littlefield.
- Genzorová, T. (2017). *Employee benefits as one of factors of work motivation*. CBU International Conference Proceedings.
- Hald, K. S. (2018). Social influence and safe behavior in manufacturing. *Safety Science*, 109, 1-11. <https://doi.org/10.1016/j.ssci.2018.05.008>
- Has, M. N., & Susanty, A. I. (2016). Health and safety management influence on employees' productivity. *Actual Problems of Economics*, 3, 300–307.
- Hassan, R., Ismail, A.R. & Makhtar, N.K. (2020). A study on the enforcement strategy for safety and health compliance in manufacturing sector in Malaysia. *IOP conference series: materials science and engineering; IOP Publishing*, 788(1):012032.
- Hedlund, A., Gummesson, K., Rydell, A. & Andersson, M. (2016). Safety motivation at work: Evaluation of changes from six interventions. *Safety science*, 82, 155-163.
- Hofmann, D. A., Burke, M. J., & Zohar, D. (2017). 100 years of occupational safety research: From basic protection and work analysis to a multilevel view of workplace safety and risk. *Journal of applied psychology*, 102(3), 375
- Huang, Y.H., Robertson, M.M., Lee, J., Rineer, J., Murphy, L.A., Garabet, A., & Dainoff, M.J. (2022). Supervisory interpretation of safety climate versus employee safety climate perception: Association with safety behavior and outcomes for lone workers. *Transportation research part F: traffic psychology and behaviour*, 26, 348–360.
- Idris, S.M.B.M., Ayob, M.B. & Shahren, N.B.M. (2021). Risk management: safe work culture in manufacturing industry. *Int J Account*, 6(34), 9–18.
- International Labour Organization (ILO). (2017). *Safety and health at work: A vision for sustainable prevention*. International Labour Office. <https://www.ilo.org/global/topics/safety-and-health-at-work/lang--en/index.htm>
- Iskamto, D., Ghazali, P. L., Afthanorhan, A., & Narti, S. (2021). Effect of occupational safety and health on performance: An empirical investigation. *International Journal of Islamic Studies and Social Sciences*, 3(2). <https://doi.org/10.56613/islam-universalia.v3i2.201>
- Ismail, K., & Ali, B. (2020). Understanding the nexus of job satisfaction, job-related stress, and employee performance: A study in the nursing sector of Lahore, Pakistan. *Journal of Policy Options*, 3(1).
- Jaafar, N. A., & Rahim, R. A. (2022). *Telecommuting and employee productivity: mediating role of work-family conflict and autonomy*. Proceedings, 82, 84. <https://doi.org/10.3390/proceedings2022082084>
- Jilcha, K., & Kitaw, D. (2017). Industrial occupational safety and health innovation for sustainable development. *Engineering Science and Technology, International Journal*, 20(1), 372-380.
- Kabir, M., & Rashid, A. (2019). Determinants of working capital management practices: Evidence from Pakistani banks. *Journal of Policy Options*, 2(4).
- Kao, K.Y. (2019). Linking safety knowledge to safety behaviours: A moderated mediation of

- supervisor and worker safety attitudes. *European Journal of Work and Organizational Psychology*, 28(2), 206–220. <https://doi.org/10.1080/1359432X.2019.1567492>
- Khademfar, M., & Amiri, S. A. (2013). The relationship between ethical leadership and organizational performance (Small Review on Malaysian Studies). *International Journal of Business and Social Science*, 4(1).
- Kumar S., Gulati R., (2010). Measuring efficiency, effectiveness and performance of Indian public sector banks. *International Journal of Productivity and Performance Management*, 59(1), 51–74 <http://dx.doi.org/10.1108/17410401011006112>
- Kundu, S.C. (2016). Effects of safety climate, safety attitude, and safety performance on firm performance: A study of an automobile firm. *International Journal of Business and Management*, 11(12), 135. <https://doi.org/10.5539/ijbm.v11n12p135>
- Kurdy, D. M., Al-Malkawi, H. N., & Rizwan, S. (2023). The impact of remote working on employee productivity during COVID-19 in the UAE: the moderating role of job level. *Journal of Business and Socio- economic Development*. <https://doi.org/10.1108/JBSED-09-2022-0104>
- Laura, D.C. (2019). Mediation effects of safety climate and safety motivation on the relation between organizational climate and safety performance in the workplace. *Testing, Psychometrics, Methodology in Applied Psychology*, 15(2), 77–90.
- Lencioni, P. (2019). *The five dysfunctions of a team*. John Wiley & Sons.
- Li, M., Zhai, H., Zhang, J., & Meng, X. (2020). Research on the relationship between safety leadership, safety attitude and safety citizenship behavior of railway employees. *International journal of environmental research and public health*, 17(6), 1864
- Liu X., Huang G., Huang H., Wang S., Xiao Y. & Chen W. (2015). *Safety climate, safety behavior, and worker injuries in the Chinese manufacturing industry*, *Safety Science*, 78, 173-178
- Mahapatro, B.B. (2010). *Human resource management*. New Age International (P) Limited, Publishers
- Mathew, C. (2015). Impact of work environment on performance of employees in manufacturing sector in India. *International Journal of Science and Research (IJSR)*.
- Mathis, R. L., & Jackson, J. (2012). *Human resource management*. Thomson Brooks/Cole Publishing Co. Increasing productivity through strengthening achievement motivation and effectiveness of occupational safety and health management. *IJSSHR*, 07(07), 49-60. [www.ijsshr.in](http://www.ijsshr.in)
- Mohammad, A. (2023). Investigating the impact of store attributes on customer loyalty in Bangladesh's retail sector. *Journal of Policy Options*, 6(4), 30-39.
- Muda, I., Rafiki, A., & Harahap, M. R. (2014). Factors influencing employee's performance: A study on the Islamic Banks in Indonesia. *International Journal of Business and Social Science*, 5(2), 73-79.
- Noordzij, L. (2013). *What is employee efficiency*. Effactory website. <https://www.effactory.com/knowledge/themes/what-is-employee-efficiency>.
- Okasheh, K. A-O. (2017). The influence of work environment on job performance: A case study of engineering company in Jordan. *International Journal of Applied Engineering Research I*, 12(24), 7. Retrieved from [https://www.ripublication.com/ijaer17/ijaerv12n24\\_223.pdf](https://www.ripublication.com/ijaer17/ijaerv12n24_223.pdf)
- Okonkwo, E.A., Okoro, C.M. & Nwandu, I.B. (2015), Compliance with safety behavior among industrial workers: Any effects of training and level of education? *J. of Sciences and Multidisciplinary Research*, 7(1), 96 – 105.

- Osagie, R. O. & Olajide, O.T. (2019). Effect of organizational learning on competitive advantage of selected telecommunication firms in Nigeria. *Arabian Journal of Business and Management Review. An Open Access Journal*, 9(3)
- Osagie, R.O., Ojo, C.O. & Eftabore, M.O. (2019). Effect of casualization on workers performance in organizations. *International Journal of Innovation Education and Research*, 7(7), 28-38.
- Osei Boakye, A., Dei Mensah, R., Bartrop-Sackey, M., & Muah, P. (2021). Juggling between work, studies and motherhood: The role of social support systems for the attainment of work–life balance. *SA Journal of Human Resource Management*, 19(10). <https://doi.org/10.4102/sajhrm.v19i0.1546>
- Passmore, J., Krauesslar, V. & Avery, R. (2015). Safety coaching: A literature review of coaching in high hazard industries. *Ind. Commer. Train*, 47, 195–200.
- Phusavat, K. (2013). *Productivity Management in an organization measurement and analysis*. To Know Press.
- Ratna, R., Kriti, K., Nupur, J., Ridhima, K. & Ritika, A. (2014). Impact of learning organization on organizational performance in consulting industry. *International Journal on Global Business Management and Research*, 2(2).
- Robbins, P. S., & Timothy, A. J. (2012). *Organizational behavior*. Salemba Empat
- Rosa, G.R. (2019). Safety attitudes and their relationship to safety training and generalised self-efficacy. *International Journal of Occupational Safety and Ergonomics*, 8(1), 23–35. <https://doi.org/10.1080/10803548.2002.11076512>
- Samuelson, P. A., & Nordhaus, W. D. (2009). *Macroeconomics 19e*. McGraw-Hill Higher Education, Maidenhead.
- Santiana, I. M. A., Wibawa, I. G. S., Tapayasa, I. M., Suasira, I. W., & Sutapa, I. K. (2018). Analysis of the implementation of occupational health and safety management system on workers productivity on structural finishing works of reinforced concrete columns. *Jurnal Rancang Bangun dan Teknologi*, 18(3), 98–102. <http://ojs.pnb.ac.id/index.php/LOGIC>
- Sarmuji, A. L., & Aryani, D. N. (2019). Effect of occupational safety and health, and work environment on performance with job satisfaction as an intervening variable. *International Journal of Business and Management Invention*, 8(12), 48-53. [https://www.ijbmi.org/papers/Vol\(8\)12/Series-2/F0812024853.pdf](https://www.ijbmi.org/papers/Vol(8)12/Series-2/F0812024853.pdf)
- Satyvendra, (2019). *Impact of workplace environment on employee performance*. Sage
- Sedarmayanti. (2011). *Human resource management*. Refika Aditama.
- Skinner, B.F. (1938). *The behavior of organisms: An experimental analysis*; Copley Publishing Group: Acton, MA, USA, 1938
- Spigener, J., Lyon, G. & McSween, T. (2022). Behavior-based safety 2022: Today’s evidence. *J. Organ. Behav. Manag.*, 42, 336–359.
- Sutrisno, E. (2017). *Human resource management*. Kencana
- Tijani, A.A., Osagie, R.O. & Afolabi, B.K. (2021). Effect of strategic alliance and partnership on the survival of MSMEs post COVID-19 pandemic, *Ekonomicko-manazerske spektrum*, 15(2), 126-137.
- Voo, I. C., Soehod, K., & Long, C. S. (2018). *Applying social cognitive theory to HRM practices, HR roles, and firm performance*. Proceedings of the International Conference on Industrial Engineering and Operations Management, 2018-March.
- Wang, Z., Jiang, Z. & Blackman, A. (2021). Linking emotional intelligence to safety performance:

- the roles of situational awareness and safety training. *J Saf Res*, 78, 210–20.
- Watoni, M. H. (2019). The effect of occupational safety and health and work discipline on employee performance in the environmental services of Yogyakarta City. *International Journal of Economics, Business and Accounting Research*, 3(4), 320-329. <https://jurnal.stie-aas.ac.id/index.php/IJEBAR/article/download/703/384>
- Yingjun, Z. H. (2019). Impact of workplace environment on employee performance: Mediating role of employee health. *Pakistan: Business Management and Economics Engineering*. <https://doi.org/10.3846/bme.2019.10379>
- Zhang, Z., Guo, H., Gao, P., Wang, Y. & Fang, Y. (2023). Impact of owners' safety management behavior on construction workers' unsafe behavior. *Saf. Sci.*, 158, 105944.