HEALTH AND SAFETY PROGRAMS: A TOOL TO CURB OCCUPATIONAL ACCIDENTS AT THE TIN CAN PORT, Apapa, LAGOS

Supported by tetfund TERTIARY EDUCATION TRUST FUND

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Received: September 14, 2024, Accepted: November 28, 2024

Abstract: Many workplaces still face the challenge of inadequate or ineffective health and safety programs. Without robust health and safety programs, workplaces become more susceptible to accidents, injuries, and occupational illnesses. The study examined health and safety programs as a tool to curb occupational accidents in Tin Can Port, Apapa, Lagos. Proportionate random sampling technique was used to select two hundred (200) employees. The instrument for data collection was a Researcher-designed questionnaire. The data analysis was subjected to multiple regression analysis. The findings show that stress management programs significantly curb occupational accidents (R=.950, $R^2_{(adjusted)}$=.901, P<0.05); safety training programs significantly curb occupational accidents (R=.992, $R^2_{(adjusted)}$=.983, P<0.05); emergency preparedness and response significantly curb occupational accidents (R=.863, $R^2_{(adjusted)}$=.774, P<0.05); compliance with regulations and standards significantly curb occupational accidents (R=.282, $R^2_{(adjusted)}$=.079, P<0.05) at the Tin Can Port, Lagos. Based on the findings, it was therefore recommended that organizations should prioritize the implementation of stress management programs that address the unique stressors faced by employees; invest in all-encompassing safety training programs that cuts across every segment of workplace safety, frequently evaluate and bring up to date their emergency procedures and carry out frequent drills to make sure that employees are pro-actively prepared to attend to any potential crisis; pay serious attention to safety regulations and standards at all levels; carry out regular safety inspections, audits, and evaluations to identify areas of improvement and ensure ongoing compliance.

Keywords: Health and safety programmes, occupational accidents, Tin Can Port. Lagos.

Introduction

In today's fast-paced world, where performance and efficiency often take center stage, the significance of health and safety in various settings cannot be overstated. Whether it's in the workplace, schools, or public spaces, implementing comprehensive health and safety programs is crucial to safeguarding the well-being of individuals and communities. These programs provide a structured framework for identifying, addressing, and minimizing risks, ultimately fostering a culture of care and responsibility. According to Allard (2001), occupational accidents pose a significant risk to the well-being of workers and can have far-reaching consequences for organizations. In industries where safety hazards are prevalent, implementing effective health and safety programs becomes imperative. These programs serve as powerful tools for identifying, preventing, and mitigating occupational accidents. By prioritizing the well-being of employees and creating a culture of safety, organizations can curtail accidents, minimize injuries, and ensure a healthier and more productive work environment. This article explores how health and safety programs serve as a crucial tool in curbing occupational accidents.

Occupational health encompasses the optimal physical, mental, and social well-being of individuals in all professions. It pertains to the comprehensive management of health and safety within the workplace and places significant emphasis on preventing hazards at their root level (Jaiswal, 2016). Essentially, occupational health can be viewed as a form of preventive medicine that addresses the health, safety, and welfare concerns of employees. The collective framework of laws, standards, and programs pertaining to occupational health and safety (OHS) aims to create a favorable working environment for workers, colleagues, family members, customers, and other stakeholders. Adhering to high occupational safety standards not only promotes responsible business practices and enhances brand reputation, but also boosts morale and provides employees with peace of mind (Jaiswal, 2015). Occupational health and safety focus on addressing various types of workplace hazards, such as those of a chemical, physical, biological, psychosocial, or ergonomic nature, as well as accidents. These standards are designed to mandate the elimination, reduction, or replacement of hazards present in the workplace. Additionally, safety programs involving occupational health, should incorporate materials and measures aimed at minimizing the impact of these hazards. The ultimate goal of such programs is to cultivate a safe and healthy occupational environment (Suparna and Ajeet, 2021).

According to Mohd, Abdul, Wan, syamsul and Mat (2008), health and safety programs play a vital role in cultivating a culture of safety within organizations. By establishing clear guidelines, policies, and procedures, these programs encourage individuals at all levels to prioritize safety in their daily activities. Effective communication and training initiatives are critical components of these programs, ensuring that everyone understands their roles and responsibilities in maintaining a safe environment. A fundamental aspect of health and safety programs is the identification and assessment of potential risks. Organizations must conduct regular inspections and risk assessments to identify hazards, assess their severity, and determine appropriate control measures. By proactively

identifying risks, organizations can implement preventive measures and mitigate potential accidents or incidents, minimizing harm to individuals and property (Misnan and Mohammed, 2007).

Education and training form the cornerstone of any successful health and safety program. Employees and individuals need to be equipped with the knowledge and skills necessary to recognize and respond to potential hazards (Peter-Kio and Iloma, 2021). Training programs should cover a wide range of topics, such as emergency response procedures, proper handling of equipment and chemicals, ergonomics, and mental health awareness. Regular refresher training ensures that individuals stay updated on the latest safety practices and protocols. To maximize the effectiveness of health and safety programs, it is crucial to involve employees in the process. Employees often have appreciable and hands-on experience regarding potential hazards in their work environment. Encouraging their keen involvement in safety committees, reporting near misses, and providing feedback on safety procedures not only empowers employees but also strengthens the overall safety culture (Benjamin, 2008).

Moreover, health and safety programs should be dynamic and adaptable, continuously evolving to address emerging risks and challenges. Regular evaluation and feedback mechanisms help identify gaps in existing programs and facilitate ongoing improvement. Collecting and analyzing incident data, conducting audits, and soliciting input from employees enable organizations to refine their safety strategies, making them more effective and responsive over time (Brocal, Gonzalez-Gaya, Sebastian, Reniers and Paltrinieri, 2019). Similarly, Haslinda *et al*. (2015) further noted that health and safety programs are not only driven by ethical considerations but are also mandated by legal and regulatory requirements. Also, Umeokafor and Umeadi (2012) stated that organizations must make sure adherence to relevant laws, regulations, and industry standards. Failure to meet these requirements can lead to legal liabilities, reputational damage, and potential harm to individuals. Investing in comprehensive health and safety programs yields numerous benefits for organizations and individuals alike. These include Reduced accidents, injuries, and illnesses; enhanced employee morale, job satisfaction, and retention; increased productivity and efficiency due to reduced downtime; enhanced reputation and stakeholder confidence; cost savings from lower insurance premiums and workers' compensation claims; compliance with legal and regulatory requirements; prevention of environmental damage and community impact.

According to Moses (2016), health and safety programs are essential for protecting individuals, promoting well-being, and ensuring the sustainability of organizations and communities. By establishing a robust framework encompassing risk identification, education and training, employee involvement, and continuous improvement, organizations can foster a culture of safety that transcends individual actions and becomes an integral part of their operations. A strong safety culture, fostered by health and safety programs, is instrumental in curbing occupational accidents. Organizations that prioritize safety create an environment where employees feel empowered and encouraged to actively participate in safety initiatives (Asogwa, 2015). Employee engagement is crucial in identifying and reporting potential hazards, near misses, and safety concerns. Encouraging open communication, implementing reporting mechanisms, and involving employees in safety committees cultivates a sense of ownership and shared responsibility for workplace safety. Health and safety programs provide guidelines for implementing control measures and safe work practices that reduce the risk of accidents. These perspectives can involve engineering controls, administrative controls, and PPEs. Engineering controls require adjusting equipment, machinery, or work processes to minimize hazards. Administrative controls focus on establishing safety policies, procedures, and guidelines to ensure safe work practices (Anuradha *et al*., 2014).

Furthermore, Personal protective equipment (PPE) involves and adopted as last line of defense when hazards cannot be completely eliminated. Implementing these control measures, coupled with ongoing monitoring and enforcement, significantly reduces the occurrence of accidents (Ofonime and Oluseyi, 2016). Health and safety programs should not be static; they require continuous improvement and analysis. Regular evaluation of safety practices, incident analysis, and feedback from employees enable organizations to identify gaps and areas for improvement in their programs. By analyzing near misses and accidents, organizations can understand the root causes and implement corrective measures to prevent same incidents from happening in the future. A culture of continuous improvement ensures that health and safety programs evolve alongside changing work environments and emerging risks (Tanko and Anigbogu, 2012). In light of the above background, this study therefore tends to examine health and safety programs as a tool to curb occupational accidents at the Tin Can Port, Apapa, Lagos.

Problem Statement

Ensuring the safety of employees in the workplace is of utmost importance, as it directly impacts their well-being, productivity, and overall organizational success. However, many workplaces still face the challenge of inadequate or ineffective health and safety programs. Without robust health and safety programs, workplaces become more susceptible to accidents, injuries, and occupational illnesses (Peter-Kio and Iloma, 2021). The lack of preventive measures, risk assessments, and proper safety training increases the likelihood of workplace incidents, resulting in physical harm to employees, production disruptions, and financial losses for organizations. In the absence of effective health and safety programs, employees may lack awareness of potential hazards and the necessary knowledge to mitigate risks. This can lead to a disengaged workforce that fails to recognize and report unsafe conditions or behaviors; a lack of employee involvement and engagement hampers the overall effectiveness of safety initiatives and prevents the development of a strong safety culture.

Organizations without comprehensive health and safety programs often struggle to meet legal and regulatory requisites. Non-compliance with necessary laws and regulations can lead to legal repercussions, financial penalties, and harm to the reputation of the organization. Inadequate programs also expose organizations to potential lawsuits and liabilities, further exacerbating the

consequences of non-compliance (Turner, Tucker and Kelloway, 2015). Organizations that neglect health and safety often suffer from a tarnished reputation. Word spreads quickly about workplaces with a high frequency of accidents or disregard for employee well-being. This negatively influence the ability of the organization to attract and retain top talent, build strong partnerships, and gain the trust of customers and stakeholders. Neglecting health and safety can lead to unnecessary expenditures and inefficient resource allocation (Olufemi *et al*., 2016). Occupational accidents give rise to increased medical costs, workers' compensation claims, insurance premiums, and potential legal fees. These financial burdens could be minimized with proper investment in health and safety programs that proactively identify and mitigate risks. Inadequate health and safety programs hinder productivity and efficiency.

Moreover, workplace accidents and injuries lead to absenteeism, decreased morale, and lower employee engagement (Umeokafor and Umeadi, 2012). Additionally, time spent on incident investigations, remediation, and training replacement workers further hampers productivity. A lack of focus on safety prevents organizations from capitalizing on the full potential of their workforce. Guided by this, this study therefore tends to examine health and safety programs as a tool to curb occupational accidents at the Tin Can Port, Apapa, Lagos. Specifically, the objectives are to examine health and safety programs (stress management programs; safety training programs; emergency preparedness and response; compliance with regulations and standards) as tools to curb occupational accidents at the Tin Can Port, Apapa, Lagos.

Research questions

The following questions will be answered.

1. Will stress management programs significantly curb occupational accidents at the Tin Can Port, Lagos?
2. Will safety training programs significantly curb occupational accidents at the Tin Can Port, Lagos?
3. Will emergency preparedness and response significantly curb occupational accidents at the Tin Can Port, Lagos?
4. Will compliance with regulations and standards significantly curb occupational accidents at the Tin Can Port, Lagos?

Literature Review

Theoretical Review

This study is subjected to two (2) theories, which are Behaviour-based and safety climate theory,

Behaviour-based theory

Behavior-Based Theory, also known as Behavior-Based Safety (BBS), is a theory that focuses on knowing and influencing employee behavior to improve safety performance and prevent accidents in the workplace. BBS recognizes that human behavior plays a significant role in occupational safety and emphasizes the importance of proactive observation, feedback systems, employee involvement, and positive reinforcement of safe behaviors (Davis *et al*., 2014). Let's delve into the key aspects of Behavior-Based Theory, including its major proponent and underlying assumptions. Behavior-Based Theory was initially developed by Herbert William Heinrich, an American safety engineer and pioneer in industrial accident prevention. Heinrich's groundbreaking work on accident causation and prevention, particularly his book "Industrial Accident Prevention: A Scientific Approach," published in 1931, laid the foundation for the behavior-based approach to safety.

Assumptions

Behavior-based theory assumes that individual behavior plays a crucial role in safety performance. It suggests that safe behaviors can be learned, reinforced, and become a habitual part of an individual's routine. By focusing on behavior, the theory recognizes that preventing accidents involves addressing human actions and decision-making. The theory emphasizes the significance of observable behavior. It asserts that behaviors related to safety can be observed, measured, and influenced. By focusing on observable behaviors, organizations can identify specific actions that contribute to safe practices or increase the risk of accidents (Bonell *et al*., 2013). Behavior-Based Theory assumes that positive reinforcement is an effective method for promoting safe behaviors. It posits that recognizing and reinforcing safe behaviors increase the likelihood of their repetition. Positive reinforcement can take various forms, such as verbal recognition, rewards, incentives, or public acknowledgment. By emphasizing positive reinforcement, the theory aims to create a safety-conscious culture that encourages employees to engage in safe practices consistently (Bhattarai *et al*., 2013).

The theory stresses the importance of involving employees in safety programs and initiatives. It assumes that employees possess valuable knowledge and insights into the work processes and potential hazards. By actively involving employees in safety-related activities, such as hazard identification, safety committees, or safety suggestion programs, organizations can tap into their expertise and encourage a sense of ownership and responsibility for safety. Behavior-Based Theory assumes that safety is a continuous process that involves improvement. It recognizes that safety programs should evolve and adapt to changing conditions, new risks, and emerging technologies. By continuously monitoring and analyzing safety behaviors and outcomes, organizations can identify areas for upgrade and implement appropriate interventions to enhance safety performance (Bonell *et al*., 2013). The theory assumes that strong leadership commitment is essential for the successful implementation of behavior-based safety programs. It recognizes that leadership plays a vital role in setting safety expectations, modeling safe behaviors, allocating resources for safety initiatives, and fostering a positive safety culture throughout the organization. Leadership commitment creates the foundation for the adoption and sustainability of behavior-based safety practices (Bhattarai *et al*., 2013).

Behavior-Based Theory provides a framework for organizations to understand the relationship between behavior and safety, and it offers practical strategies for improving safety performance. By focusing on observable behaviors, promoting positive reinforcement, involving employees, and fostering leadership commitment, organizations can create a safer work environment and

prevent accidents by influencing and modifying employee behavior (Bonnell *et al*., 2013).

Relevance of the theory

Behavior-based theory is highly relevant and applicable to the study of health and safety programs as a tool to curb occupational accidents. Health and safety programs aim to promote safe behaviors and reduce the occurrence of accidents. It emphasizes the importance of observable behaviors in shaping safety outcomes. By focusing on identifying and observing specific behaviors related to safety, companies can get an idea into the actions that contribute to safe practices or increase the risk of accidents. This allows them to develop targeted interventions to modify and reinforce desired behaviors. It also asserts that positive reinforcement is a powerful tool for promoting safe behaviors. In the context of health and safety programs, organizations can use positive reinforcement techniques to recognize and reward employees for adhering to safety protocols, reporting near misses, and actively participating in safety initiatives. This creates a culture where employees are motivated to engage in safe practices, leading to a reduction in occupational accidents.

The theory identifies how important employee participation is in safety programs. In the context of health and safety initiatives, involving employees in the development, implementation, and evaluation of safety programs fosters a sense of ownership and responsibility for safety outcomes. Behavior-Based Theory suggests that empowering employees to actively participate in safety-related activities, such as hazard identification, safety committees, or safety suggestion programs, increases their engagement and commitment to maintaining a safe work environment. Behavior-Based Theory recognizes that safety is an ongoing process that requires continuous improvement. Health and safety programs should be dynamic and adaptive to changing conditions and emerging risks. By continuously monitoring safety behaviors, analyzing accident data, and soliciting feedback from employees, organizations can find out areas for correction and implement appropriate interventions to enhance safety performance. This iterative approach aligns with the continuous improvement aspect of Behavior-Based Theory.

By applying Behavior-Based Theory in the study of health and safety programs, organizations can leverage its principles to design interventions that effectively modify employee behavior, promote safe practices, and ultimately reduce the occurrence of occupational accidents. This theory provides a framework for understanding the behavioral aspects of safety and offers practical strategies to enhance safety performance within the context of health and safety programs.

Safety climate theory

Safety climate theory focuses on a similar mindset, attitudes, and beliefs regarding safety in an organization. It recognizes that the organizational climate, specifically the safety climate, significantly influences employees' behavior and decision-making regarding safety. The theory suggests that a positive safety climate, where employees consider safety as a priority and believe that their organization values and supports safety, leads to better safety outcomes and a reduction in occupational accidents (Huang, Chen and Grosch, 2010). Let's delve into the key aspects of Safety Climate Theory, including its major proponent and underlying assumptions. James L. Heskett, an American business professor, and organizational behavior researcher, is one of the major proponents of Safety Climate Theory. Heskett, along with other researchers, contributed significantly to the development and advancement of the theory through their studies on organizational culture, climate, and their impact on performance and safety.

Assumptions

Safety climate theory assumes that employees believe about the organization's safety climate significantly influence their behavior. It suggests that when employees perceive that safety is a priority and valued by their organization, they are more likely to engage in safe practices and adhere to safety protocols. Conversely, if employees perceive a weak safety climate or believe that safety is not a priority, they may be more prone to engaging in risky behaviors, leading to increased accidents. The theory emphasizes that safety climate is a shared perception among employees within an organization. It assumes that employees form their perceptions of the safety climate based on shared experiences, observations, and communication regarding safety-related matters. These shared perceptions contribute to the development of a collective safety mindset and influence the overall safety culture within the organization (Griffin and Neal, 2000).

Safety climate theory assumes that employees' perception of organizational support for safety is crucial in shaping their safety-related attitudes and behaviors. It suggests that when employees feel that the organization values and supports safety, they are more likely to prioritize safety in their work practices and decision-making. Conversely, if employees perceive a lack of support or indifference towards safety from the organization, they may be less motivated to engage in safe behaviors. The theory assumes that safety should be a priority within the organizational culture. It suggests that organizations that prioritize safety by allocating resources, providing necessary training and equipment, involving employees in safety-related decisions, and promoting open communication about safety issues foster a positive safety climate. This emphasis on safety as a priority influences employee behavior and contributes to accident prevention (Guldenmund, 2000).

The theory posits that a positive safety climate enhances a better safety-related behaviors and outcomes. It assumes that when employees perceive a positive safety climate, they are more likely to engage in safety-promoting behaviors, such as reporting near misses, adhering to safety procedures, and looking out for the safety of their colleagues. This, in turn, leads to a reduction in occupational accidents and improved safety performance. It also acknowledges that safety climate is not static and can be influenced and shaped over time. It assumes that organizations can continuously improve their safety climate by actively addressing safety concerns, involving employees in safety initiatives, providing feedback on safety performance, and fostering a culture of continuous learning and improvement (Flin *et al*., 2000). Safety Climate Theory provides valuable insights into the importance of shared perceptions and organizational support for safety in influencing employee behavior and safety outcomes. By understanding and addressing the factors that

contribute to a positive safety climate, organizations can create a safer work environment, reduce occupational accidents, and foster a culture where safety is a shared value (Griffin and Neal, 2000).

Relevance of the theory

Safety climate theory is highly relevant and applicable to the study of health and safety programs as a tool to curb occupational accidents. This theory provides insights into the importance of shared insights, attitudes, and assurance about safety in an organization, and how they affect employee behavior and safety outcomes. When applied to the context of health and safety programs, Safety climate theory helps organizations understand the role of safety climate in shaping employee attitudes and behaviors towards safety and offers guidance on creating a positive safety climate to support accident prevention. Health and safety programs aim to promote safe behaviors and prevent occupational accidents. Safety climate theory highlights the role of employees' perceptions in shaping their behavior. By understanding employees' perceptions of the safety climate within the organization, health and safety programs can be designed to address any gaps or misconceptions. When employees perceive that safety is a priority and valued by the organization, they are expected to engage in safe practices and keep to safety procedure promoted by the health and safety program.

Moreover, safety climate theory emphasizes the importance of organizational support for safety. Health and safety programs can leverage this aspect by ensuring that organizational support for safety is evident throughout the program implementation. When employees perceive that the organization values and supports safety initiatives, they are more likely to actively participate in the program, follow safety guidelines, and contribute to accident prevention efforts. Health and safety programs play a critical role in establishing safety as a priority within the organizational culture. Safety climate theory recognizes that a positive safety climate is fostered when safety is given importance at all levels of the organization. Health and safety programs should emphasize safety as a core value, aligning with the theory's assumption that safety should be a priority. This can be achieved by allocating resources, providing comprehensive training, involving employees in safety-related decisions, and promoting open communication about safety concerns and improvements. Safety climate theory suggests that a positive safety climate leads to improved safety outcomes. Health and safety programs, as tools to curb occupational accidents, should aim to create a positive safety climate by focusing on improving employee perceptions, attitudes, and behaviors related to safety.

By fostering a culture where employees feel safe, supported, and valued, health and safety programs can contribute to reducing occupational accidents and improving safety performance within the organization. The theory acknowledges the importance of continuous improvement in maintaining a positive safety climate. Health and safety programs should not be static but should evolve and adapt over time to address emerging risks, changing work conditions, and new safety challenges. By continuously monitoring the safety climate, gathering feedback from employees, and making necessary adjustments to the health and safety program, organizations can ensure that the program remains effective in curbing occupational accidents. By incorporating the principles of safety climate theory into the study of health and safety programs, organizations can enhance their understanding of how safety climate influences the success of these programs. It provides guidance on fostering a positive safety climate through organizational support, emphasizing safety as a priority, and promoting employee perceptions and behaviors that align with accident prevention goals. Applying safety climate theory helps ensure that health and safety programs are implemented in a manner that maximizes their impact on reducing occupational accidents and creating a safe work environment.

Empirical Review

Suparna and Ajeet (2021) studied the occupational health and safety. They found out that certain exposures can lead to occupational diseases including cancer, trauma, and hearing loss. To mitigate these effects and manage hazards, occupational health and safety programs are implemented. These programs benefit all workers across different organizations. The National Institute of Occupational Health (NIOH) and Regional Occupational Health Centres play a crucial role in promoting high-quality occupational health through research. Their efforts focus on accident prevention and minimizing risks in the workplace. Another study by Jonathan and Mbogo (2016) explored the continuance of health and safety in the workplace, specifically examining the roles of employees and employers in guanteering a safe working environment. The findings revealed that a significant number of teaching staff members were not participating in training programs aimed at equipping them with necessary safety skills. Additionally, many of them were not actively engaged in discussions about safety policies at their workplace. These factors greatly compromised the safety of teachers, impacting their preparedness regarding health hazards and consequently affecting their overall performance.

Yeimy and Gina (2021) assessed occupational safety and health states and informal work. The findings indicate that only 25% of workers contribute to the health system. Within this group, 20% contribute to health services, 3% to pensions, and 2% to occupational risk insurance (ARL). Furthermore, the understanding of hazards and risks associated with their workplaces is unclear, leading to confusion in terminologies. The concept of "risks" is unfamiliar, resulting in workers being unable to identify unsafe acts and conditions. To conduct this article, the researchers reviewed studies focusing on working situations in marketplaces in Colombia and informal work. The objective was to analyze and highlight the most significant characteristics within this population and determine strategies to improve their working conditions and implement necessary improvements.

Waqas, Talha and Anmol (2014) examined health and safety issues in industries, specifically focusing on risk assessment and the evaluation of work-related diseases that affect the health of laborers. The research was conducted in large-scale textile industries in Lahore. A survey was carried out among workers in both industries to assess health, safety, and risk factors. The questionnaire covered aspects such as working time, number and causes of accidents, affected body parts, nature of injuries, use of personal protective equipment

(PPE), health safety policies, first aid facilities, and risk analysis position on the severity and likelihood for workers. The results indicated that noise levels, illumination levels, humidity levels, and stack emission values mostly adhered to the National Environmental Quality Standards (NEQS) and Occupational Safety and Health Administration (OSHA) values. Pearson's chi-square test divulge a significant relationship (p = 0.05) between the affected body parts of respondents and their respective working sections, as well as the nature of injuries and working sections. However, the overall implementation of health safety policies was found to be inadequate, and a majority of workers were unaware of the proper use of PPE.

Fatini, Zulhafiza, and Siti (2016) conducted research to examine the correlation between safety practices and injury administration in the manufacturing industry. The findings indicated that all hypotheses were supported, affirming a positive association between safety and health practices and injury management. In a separate study, Ngwama (2016) investigated the effort of trade unions in addressing critical issues that endanger the lives of workers in Nigeria. The author suggests that trade unions and other worker organizations should exhibit bravery and unity in safeguarding workers' rights and well-being. It is crucial to mobilize all stakeholders and foster collaborative efforts against government policies that prioritize employers' interests over the safety and welfare of workers.

Usman (2015) conducted a review of Occupational Safety and Health (OSH) structure in Nigeria, the UK, the USA, Australia, and China, using Nigeria as a representative developing country. The research aimed to analyze and compare the OSH regulatory and enforcement models of these countries across various performance themes, in order to identify deliberate idea for Nigeria and other developing nations. The study identified several factors driving the development of different OSH management frameworks, including the strength of OSH laws, effectiveness of the judicial system, independence of the OSH implementation agency, adequacy of financial resources, favorable workforce-inspector ratio, historical accident records, and the activities of civil and human rights groups. While Nigeria serves as a case study, the observation and conclusions reached from the study are relevant to typical developing countries. Researchers seeking a broad overview of OSH management frameworks in Nigeria, the UK, the USA, Australia, and China may also find this paper useful. It is necessary to note that the study does not assess Nigeria's current OSH status in relation to the provisions of the yet-to-be-implemented Labour, Safety, Health, and Welfare (LSHW) Bill of 2012. The follow-up of this series will look into important structural and potential execution issues related to the LSHW Bill.

Methodology

This study employed a descriptive survey research design, which aims to gather factual information about an existing phenomenon. The sample size for the study was determined using proportionate random sampling technique. Initially, five out of the fifteen departments at the Tin Can Port, Apapa, Lagos state, were randomly selected, and a proportionate sample of 5% was drawn, resulting in a sample size of 200 employees. This approach aligns with Agbonmiewalent's (2007) recommendation, which suggests using a sample size of 2% or more for populations in the few hundred range, 5% for several hundred, 10% for a thousand, and 5% or less for several thousand. Questionnaire designed by the researcher was used as means of collecting data and is, divided into two sections (A and B). Section A gathered demographic information from the respondents, while Section B contained relevant questions pertaining to the study that were answered by the participants. The validity of the research instrument was determined by the researcher's supervisor, and the reliability was assessed using the test-retest method. The questionnaire was administered twice to 25 employees in Rite Foods Ltd., Ogun state, who did not participate in the study sample, with a five-day interval. The scores recorded from the instrument were correlated using Pearson Product Moment Correlation (PPMC), resulting in a reliability coefficient of 0.87. The collected data was subsequently analyzed using multiple regression in the Statistical Package for Social Science (SPSS) version 20.

Results

Research question one: Will stress management programs significantly curb occupational accidents at the Tin Can Port, Lagos?

Table 1: Regression analysis of research question one

R = .950 R^2 =.902 Multiple R^2(adjusted)=.901 Standard error of estimate= .452					
Analysis of variance					
Model	Sum of square (SS)	Df	Mean square	F	Sig.
Regression	65.319	1	82.660	95.584	.003[b]
Residual	39.771	198	.204		
Total	5.091	199			

The table shows that independent variable (stress management programs) will significantly curb occupational accidents, this is shown by the value of R =.950 and R^2 (adjusted) =.901, P = .003. Therefore, the result shows that stress management programmes significantly curb occupational accidents at the Tin Can Port, Lagos (P<0.05). Implementing stress management programs leads to a noticeable reduction in accidents, indicating that addressing and managing stress among employees is crucial for maintaining a safe work environment.

Research question two: Will safety training programs significantly curb occupational accidents at the Tin Can Port, Lagos?

Table 2: Regression analysis of research question two

R = .992 R^2 =.983 Multiple R^2(adjusted)=.983 Standard error of estimate= .169					
Analysis of variance					
Model	Sum of square (SS)	DF	Mean square	F	Sig.
Regression	29.734	1	64.867	4.697	.000[b]
Residual	5.538	198	.028		
Total	35.273	199			

The table shows that independent variable (safety training programs) will significantly curb occupational accidents, this is shown by the value of R =.992 and R^2 (adjusted) =.983, P = .000. However, the result shows that safety training programs significantly curb occupational accidents at the Tin Can Port, Lagos (P<0.05). This implies that safety training programs have a substantial impact in curbing occupational accidents. The implementation of these programs has resulted in a notable reduction in accidents, highlighting the effectiveness of providing comprehensive safety training to employees as a key preventive measure.

Research question three: Will emergency preparedness and response significantly curb occupational accidents at the Tin Can Port, Lagos?

Table 3: Regression analysis of research question three

R = .863 R^2 =.744 Multiple R^2(adjusted)=.742 Standard error of estimate= .686					
Analysis of variance					
Model	Sum of square (SS)	DF	Mean square	F	Sig.
Regression	67.377	1	33.689	83.683	.001[b]
Residual	91.896	198	.471		
Total	359.273	199			

The table shows that independent variable (emergency preparedness and response) will significantly curb occupational accidents, this is shown by the value of R =.863 and R^2 (adjusted) =.744, P = .001. However, the result shows that emergency preparedness and response significantly curb occupational accidents at the Tin Can Port, Lagos (P<0.05). This implies that emergency preparedness and response measures have a significant impact in curbing occupational accidents. By implementing effective emergency protocols, training employees, and conducting regular drills, organizations can effectively minimize the occurrence and severity of accidents, ensuring a safer work environment for all.

Research question four: Will compliance with regulations and standards significantly curb occupational accidents at the Tin Can Port, Lagos?

Table 4: Regression analysis of research question four

R = .282 R^2 =.079 Multiple R^2(adjusted)=.070 Standard error of estimate= 1.292					
Analysis of variance					
Model	Sum of square (SS)	DF	Mean square	F	Sig.
Regression	28.087	1	14.043	8.416	.000[b]
Residual	325.368	198	1.669		
Total	353.455	199			

The table shows that independent variable (compliance with regulations and standards) will significantly curb occupational accidents, this is represented by the value of R =.282 and R^2 (adjusted) =.079, P = .000. However, the result shows that compliance with regulations and standards significantly curb occupational accidents at the Tin Can Port, Lagos (P<0.05). This implies that compliance with regulations and standards plays a vital role in curbing occupational accidents. Organizations that prioritize and adhere to safety regulations and standards experience a significant reduction in accidents, emphasizing the importance of maintaining a culture of compliance to ensure a safer workplace.

Discussion of Findings

The study showed that stress management programs significantly curb occupational accidents at the Tin Can Port, Apapa, Lagos. This discovery lined-up with the study of Tiny (2018) who opined that high levels of stress can impair concentration, decision-making, and reaction times, making individuals more prone to errors and accidents. By implementing stress management programs, organizations provide employees with the tools and techniques to effectively manage and reduce stress, leading to improved cognitive functioning and better safety performance. Ashok (2016) also stated that stress can also contribute to fatigue and exhaustion, which further increase the risk of accidents in the workplace. Prolonged stress can disrupt sleep patterns and decrease overall energy levels, diminishing an individual's ability to stay alert and focused on the job. Stress management programs often include strategies for promoting restorative sleep, relaxation techniques, and encouraging healthy lifestyle habits. By addressing stress and its impact on fatigue, these programs help employees maintain optimal energy levels and mental acuity, reducing the likelihood of accidents caused by fatigue-related errors. Similarly, Hanson (2022) asserted that stress management programs foster a positive and reassuring work environment that promotes open communication and encourages employees to seek help when experiencing high levels of stress. By reducing the stigma associated with stress and promoting a culture of well-being, employees are more likely to proactively address and manage stress before it escalates and affects their job performance. This proactive approach not only mitigates the risk of accidents but also improves overall employee morale, job satisfaction, and retention rates.

The study showed that safety training programs significantly curb occupational accidents at the Tin Can Port, Lagos. This discovery agrees with the study of Joel and Kelley (2017) who asserted that safety training programmes equip employees with ineptness necessary in the control of potential hazards in the workplace. By making available comprehensive training on safety processes, procedures, and best practices, employees are better prepared to prevent accidents and respond appropriately in emergency situations. It raise awareness about the importance of safety among employees. Through interactive training sessions, workshops, and simulations, employees gain a deeper understanding of the potential risks and consequences associated with their work tasks. This increased awareness fosters a safety-conscious mindset and supports employees to take liability for their own safety and that of others. As a result, accidents caused by complacency or lack of awareness are significantly reduced. Moreover, Arinnanye (2015) also affirmed that safety training programs facilitate a culture of continuous learning and improvement. They

create opportunities for ongoing education and skill development, keeping employees ready with the latest safety regulations and industry best practices. Regular refresher courses and follow-up training sessions ensure that employees remain competent and vigilant in their safety practices, reducing the likelihood of accidents caused by outdated knowledge or inadequate training.

The study showed that emergency preparedness and response significantly curb occupational accidents at the Tin Can Port, Apapa, Lagos. This implies that having well-defined emergency plans and procedures in place ensures that employees are adequately prepared to handle unexpected events. Through regular training, drills, and simulations, employees become familiar with emergency protocols, enabling them to respond quickly, effectively, and safely in the event of an accident or crisis. This level of preparedness minimizes the potential for accidents to escalate and helps mitigate their impact. This discovery is in line with the study of Tobias (2013) who noted that effective emergency preparedness and response measures ensure that employees have access to necessary resources and equipment during an emergency. This includes appropriate safety gear, first aid kits, fire suppression systems, and evacuation routes. By providing employees with the tools they need to address emergency situations, organizations empower them to take swift and appropriate action, reducing the likelihood of accidents and injuries. Haimes, Crowther and Horowitz (2008) further noted that emergency preparedness programs promote a culture of proactive risk management and safety consciousness. By emphasizing the importance of identifying potential hazards, reporting near misses, and maintaining a vigilant attitude towards safety, organizations create an environment where employees actively participate in accident prevention. This culture of preparedness and risk awareness helps identify and address potential hazards before they lead to accidents, further reducing the overall occurrence of occupational accidents.

The study showed that compliance with regulations and standards significantly curb occupational accidents at the Tin Can Port, Apapa, Lagos. This implies that regulations and standards are developed based on extensive research, industry best practices, and lessons learned from past accidents. Compliance with these regulations ensures that organizations adopt and implement proven safety measures, reducing the risk of accidents. By keeping to instituted guidelines, organizations demonstrate their commitment to maintaining a safe work environment for employees. This finding correlates with the study of Wachter and Yorio (2014) who noted that compliance with regulations and standards fosters a culture of accountability and responsibility. When organizations prioritize compliance, they create a framework that holds both management and employees accountable for safety. This culture of accountability encourages individuals at all levels to actively participate in accident prevention and risk mitigation. Employees are more likely to follow safety procedures and report potential hazards, knowing that compliance is a shared responsibility. Moreover, Arewa and Farrell (2012) was also of the opinion that compliance with regulations and standards often requires regular inspections, audits, and evaluations to ensure ongoing adherence to safety requirements. These proactive measures help identify and rectify potential hazards before they lead to accidents. By conducting routine checks and assessments, organizations can continuously improve their safety practices, update their systems, and implement necessary corrective actions, further reducing the occurrence of occupational accidents.

Conclusion and Recommendations

Implementing stress management programs leads to a noticeable reduction in accidents, indicating that addressing and managing stress among employees is crucial for maintaining a safe work environment. However, safety training programs have a substantial impact in curbing occupational accidents. The implementation of these programs has resulted in a notable reduction in accidents, highlighting the effectiveness of providing comprehensive safety training to employees as a key preventive measure. Moreover, emergency preparedness and response measures have a significant impact in curbing occupational accidents. By implementing effective emergency protocols, training employees, and conducting regular drills, organizations can effectively minimize the occurrence and severity of accidents, ensuring a safer work environment for all. Compliance with regulations and standards plays a vital role in curbing occupational accidents. Organizations that prioritize and adhere to safety regulations and standards experience a significant reduction in accidents, emphasizing the importance of maintaining a culture of compliance to ensure a safer workplace. Based on the discoveries from the research, the following are recommended.

(i) Organizations should categorise the implementation of stress management programs that address the unique stressors faced by employees. These programs can include techniques such as mindfulness, relaxation exercises, and work-life balance initiatives. By providing resources and support to manage stress effectively, organizations can reduce the likelihood of accidents caused by stress-related impairments.

(ii) It is crucial for organizations to allocate resources towards extensive safety training initiatives that encompass all facets of workplace safety. This includes training on identifying hazards, practicing safe work methods, understanding emergency response protocols, and utilizing personal protective equipment.

(iii) Ongoing training sessions, refresher courses, and continuous education should be implemented to ensure that employees remain well-informed about safety procedures. By furnishing employees with the needed knowledge and skills to prioritize safety, organizations can effectively minimize the occurrence of occupational accidents.

(iv) Organizations should regularly review and update their emergency protocols and conduct frequent drills to guarantee that employees are foresighted in responding to any potential crisis. This includes training employees on evacuation procedures, first aid techniques, and proper use of emergency equipment. By regularly practicing emergency scenarios, organizations can improve response

times, minimize panic, and effectively handle accidents or emergencies, ultimately reducing the impact and severity of accidents.

(v) Organizations should prioritize compliance with safety regulations and standards at all levels. This involves creating a culture where safety is valued, communicated, and enforced throughout the organization.

(vi) Regular safety inspections, audits, and evaluations should be conducted to identify areas of improvement and ensure ongoing compliance. By emphasizing the importance of compliance and holding all individuals accountable for safety, organizations can create a safer work environment and reduce the occurrence of occupational accidents.

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