Oyediran, *et al* (2017) assessed the effects of occupational health hazards on artisanal fish production in Ogun State, Nigeria. For this study, a simple random sampling technique was used to select 240 fishermen as the sample size. Descriptive statistics were used for objectives, while Pearson Product Moment Correlation was used to test hypotheses. The results of the study revealed that the average age of the respondents was 41.58 years old. The majority (71.67%) of respondents were male, had a secondary education (68.33%) and had spent 610 years in artisanal fishing. The result also indicated that the estimated income loss was ₦23,705.40 per month. The results of the correlation showed that there was a positive and significant relationship between occupational health risks and loss of income ($p < 0.05$). It was concluded that artisanal fishers are affected by occupational health risks. Consequently, considerable incomes and manday were loss on daily basis by the victims in the study area.

Akangbe, Komolafe and Oduwaiye (2015) studied the perceived effects of occupational hazards on farmer productivity in Kwara State, Nigeria. A total of 160 respondents were selected using a multistage random sampling technique. Descriptive statistical techniques such as frequency, percentages as well as Pearson's product momentum correlation analysis were used for the empirical analysis. The results showed that common agricultural production included maize, yams and cassava. The results also revealed the predominant occupational hazards, included cuts/injuries from agricultural tools, malaria from mosquito bites, and body pain. The results also revealed that injuries from agricultural tools and general body pain had significant effects on agricultural productivity. The study concluded that occupational (Agriculture) hazards, particularly general body pain, have negative effects on agricultural productivity.

development. An overview of occupational hazards, fishing in Nigeria and occupational hazards in fishing with empirical evidence from Nigeria. The study indicated that occupational hazards had adverse effects on the level of fish production, fishing income and the loss of man hours.

Addae (2019) studied occupational health and safety among auto artisans in Suame Kumasi Magazine, Ghana. The study aimed to assess occupational health and safety (OSH) among auto artisans practicing all existing craft trades in the enclave with the aim of contributing to a broader understanding of occupational safety among auto artisans in Suame Magazine. The study was guided by positivist philosophy. Protective motivation theory and the conceptual framework of the DEFENS study were used for the study. The survey (N=957) and 58 observations were used to generate data for the study. Data were analyzed using descriptive and inferential statistics. Twenty-nine self-crafting trades have been identified in the enclave. It has been found that the Occupational Safety Guide is organized for new car craftsmen. OSH guidelines have been found to influence risk awareness in the workplace, but not occupational risk perception. While organizational factors were associated with safety practices among automotive artisans, they were not associated with willingness to pay for occupational health and safety services.

Tunji-Olayeni, *et al* (2019) assessed the implications of occupational hazards on the achievement of Sustainable Development Goals in the Nigerian construction sector. The study reported the results of a survey of 100 artisans in Lagos, Nigeria. The data obtained through the survey were analysed by means of frequencies and graphs. The study showed that most artisans surveyed suffered from some form of health problem. Occupational hazards deprive workers of resources. They also lead to absenteeism, low productivity and poor project performance. Nationally, occupational hazards increase the burden of disease, which represents an additional cost for public health expenditure.

resources for coping with an event that is seen as challenging. As a result, these individuals then find that they are able to reduce the intensity of the disturbing emotional feelings which result in either absenteeism from work or reduction of work commitment level.

2.2.3 Cognitive System Engineering Theory

Cognitive System Engineering theory is another theory that explains the issues under our investigation. It covers a broader spectrum of issues as it affects workers as regards individual, socio-economic and environmental factors. He used three zones to explain workers behaviour in various work hazard conditions: Zone I or the safe zone, Zone II or the hazard zone, and Zone III or the loss of control zone. Emphasis was placed on workers operating within the safe zone, work activities can be excellently performed. The workers working in the Hazard zone (Zone II) are taken to be working at the edge. The theory describes Zone II as hazard zone which could result in traumatic, exposure, and/or ergonomic type injuries as well as fatalities. Zone III is the loss of control zone where accidents occur more frequently, and control is lost leading to injuries and/or fatalities. In this case, when it occurs, workers adopts counterproductive work behaviour such as being absent from work and low commitment to work. Since health and safety plays an influential role in workers performance, the review of these theories highlights occupational hazards as the most probable cause of absenteeism, low workers commitment, and low level performance because it places unhealthy and unsafe dynamics on workers.

2.3 EMPIRICAL REVIEW

The following extant literature were reviewed for the study. Olalekan and Wahab (2020) studied the occupational health risks associated with Nigerian fishing. The purpose of the study was to review the literature on occupational health risks associated with Nigerian fisheries. This was done by specifically reviewing the literature on the links between occupational health and sustainable

incidents result from a chain of sequential events, metaphorically like a line of dominoes falling over. When one of the dominoes falls, it triggers the next one. The theory posits that removing a key factor (such as an unsafe condition or an unsafe act) prevents the start of the chain reaction. The theory posits that two factors lead to unsafe workplaces: persons' faults and work-related factors. The person's fault included recklessness, nervousness, excitability, inconsiderateness, and ignorance of safe practices. Work-related factors include work overload, wear and tear, low-quality equipment, and bad design or maintenance. The theory posits that a person's faults and work-related causes

2.2.2 Cognitive Appraisal Theory

Cognitive appraisal theory of Richard Lazarus (2000) which emphasizes the appraisal of information from several sources. Appraisal involves cognition, or the processing of information from the environment, the body, and the memory. Such appraisal could be from individual's interpretation of the events in their lives as harmful, threatening, or challenging and their determination of whether they have the resources to effectively cope with the events. Furthermore, memories of past encounters with similar situations, dispositions to respond in certain ways, and consideration of the consequence of actions that might result from the emotional state are all part of appraisal. In the opinion of Lazarus, such events could be primary or secondary appraisal. In primary appraisal, an individual interprets whether an event involves harm or loss that has already occurred, or the threat of some future dangers, or even a challenge to be overcome. Case of health or safety hazards is a threat. In secondary appraisal, individuals evaluate whatever resources available to them and determine how effectively they can be used to cope with the event. The secondary appraisal depends on the degree to which the event from the primary appraisal was appraised as harmful threatening, or challenging. Occupational hazards as a challenge during primary appraisal paves the way for such during secondary appraisal but people sometimes do not have the adequate

1. Whenever there is accident (industrial), there will be slower production, resulting in loss of production.
2. Exposing employees to hazardous substance can lead to injury. The employee with injury may not be able to contribute meaningfully to production effectiveness, thereby leading to financial loss, resulting in-less profit, discomfort, pains etc.
3. Occupational hazards can also lead to damage materials and machinery, leading to time loss, and loss of production.
4. If occupational hazards are not properly handled, it may leads to loss of trained skilled employees, leading to financial loss.
5. Occupational hazard can also lead to staff turnover, thereby affecting the quality of skilled man power in the organization.
6. If proper and effective control measures are not put in place, occupational hazards can lead to bad publicity for the organization, resulting in denting the image of the organization.

Factory managers should attach more importance to achieving high standards of safety management as they do to other key areas or aspect of their business activities. There is no hazard which cannot be overcome by simple safety measures in place. Safety training should be given to workers as part of their pre-employment industrial training and this should be integrated into the actual situation so as to remind workers of the need for safety measures (Asogwa, 2007).

2.2 THEORETICAL FRAMEWORK

Several theories provide theoretical backbone 'for-understanding employee health and safety practices of business organizations.

2.2.1 Domino Theory:

Domino theory developed by Heinrich (1931). According to the Domino theory, all incidents are directly related to a lack of safety programmes such as ergonomics, emergency, transfer, and safety training. The theory posits that

1. **National**: Where the productivity of a nation or group of nations is measured, international comparisons are then made, and the resulting debates often lead to blame being allocated to various groups such as stock holders, operation managers and research managers.
2. **Industry**: Where the productivity of particular sectors within the economy is measured. Most governments issue statistics on the relative performance of both manufacturing and service industries. Often expressed as output per employee per hour. Such statistics are useful for individual firms to compare their performance to the industry average, although, relative change is probably more important than absolute measure.
3. **Organization** where the productivity of a particular organization is measured.

Undertaking a quality improvement programme is one way to address the issue of improvement. Often, companies have trouble getting started on productivity improvement because; they do not have measures of productivity, commitment to change or feedback on result received. It should be born in mind that any improvements in productivity should be made within the context of the organization as a whole, and after consideration on how productivity improvement affects other performance objectives, such as increased flexibility and reduced lead-time (Nwaochei, 1997).

Considering the effect of job hazards on productivity, prevention of job hazards need to be adequately put in place by ensuring that workers are in good health at the point of employment and that their health is not in jeopardy by virtue of their jobs (Shilling R.S.F., 2001), Shilling suggested that an enterprises must be re-tooled for higher productivity in order to compete successfully in the nearest future and that there is need to prevent the incidence and prevalence of job hazards to enhance the working ability of the working population.

2.1.8 Effect Of Occupational Hazards On Employees Productivity

Some of the effects of occupational hazards are explained below;

success. ,We also have to bring effectiveness and quality into the equation to identify star performers. Back to manufacture: someone who churns out a high number of products in record time can be considered productive. If, however, those products are regularly rejected by quality control, the employee isn't effective and could end up costing the company.

Likewise, with sales, someone who sources hundreds of leads, but coverts few to sales is productive but ineffective. Conversely, a colleague that sources far fewer leads but converts most of them into sales is both productive and effective.

2.1.7 Productivity As A Performance Measure

Measuring performance is one of the most important aspects of operation management, and which has received a great deal of attention during the past few years. In order to make any improvements to the functioning of the transformation process, there must be methods for measuring its current effectiveness.

Productivity is the broadest and most common measures of operations management performance and basically assesses how resources are utilized and managed to achieve a set of desired results. Productivity is defined as the ratio of output to input (Hannagan, 1995).

$$\frac{\text{Output}}{\text{Input}} = \frac{\text{results achieved}}{\text{resources consumed}}$$

An increase in productivity can therefore result from either an increase in output or a decrease in input. However, the problems of measuring output and input in the same units, and the debate about whether the resulting ratio has any meaning have lead to productivity being considered in relative terms i.e. considering changes in ratio, comparing result in one period with those in another.

Productivity has been a popular measure for many years, primarily because is directly linked to profit, and therefore attracted a good deal of senior management attention. There are three levels at which productivity may be measured.

types of dust injurious to health. Medical inspection of factories was inaugurated in 1897, in which the idea of compensation of workers was adopted (Entwistle, 2020).

2.1.6 Employee Productivity

Employee productivity is generally understood as the ability of an employee to take input (instructions, direct, requirements, etc.) and turn them into output. Effectively, it's the measure of how employees produce input and turn it into output, in a given period of time. Productivity may be evaluated in terms of the output of an employee over a specific time. Typically, the productivity of a given worker is assessed relative to an average for employees doing similar work. Because much of the success of any organization relies upon the productivity of its workforce, employee productivity is an important consideration for businesses. Employee productivity is one element of IT productivity, the relationship between an organization's technology investments and its corresponding efficiency gains, or return on investment. This is especially important as workforces are more physically distributed and many employees continue to work from home. Use of employee productivity monitoring and analysis software has become a major management tool for ensuring that employee productivity is achieving the required goals.

Employee productivity is a measure of how much work an employee delivers within a specific time. It can also be used to quantify the output of a group or team. To measure anything, you have to have predetermined standards and timeframes. Those can be established by taking an average based on the collective output of people performing the same job.

For example, in manufacturing, if it takes a group of workers an hour, on average, to put out a finished product, then an hour is your measure for production. In sales, it can be based on the number of leads sourced and leads converted to sales every week or month. But high productivity alone doesn't translate to

very terrible conditions. They worked for many under crowded conditions and with little or no food or good water to drink (Entwistle, 2018).

Injuries, diseases and deformities multiplied among the workers. They suffered in silence as medical services were not readily provided. Employers did not take interest in the welfare of their employees seriously. In fact, the employees had no right as they could be sacked or relieved of their jobs at will without notice or warning until the evolution of occupation health services in 1897 (Kalejaiye, 2023).

The evolution of occupational health services brought about the enactment of safety laws and Regulations in 1833. The general conviction then that accidents were predestined and inevitable was no longer acceptable to a growing population of the English public (Nwajei, 2023). They argued strongly that accidents could indeed be controlled, and that it was ignorance of safety precautions, inefficiency and carelessness that prevented people from living safely in the expanding mechanized world. They therefore called for safety education and other occupational health services to put a stop to the suffering of factory workers (Nwajei, 2023). It all started in 1802 when the British parliament passed the "Health and Morals Act," aimed at regulating the labour of children and adults in the cotton industry. In 1833, the British Factories Act was passed, limiting the hours of work for children and providing for factory inspection to monitor working condition. Among other things, this act required. that workers be adequately protected from injuries in their places of employment by applying guards to moving parts of machinery (Duebenspeek, 2014).

Several trades were brought under the control of the British Factories Act in 1864. Later, the Act was broadened to include many industries and places that employed more than 50 persons. This Act prohibited the eating of meals in poisonous or very unpleasant plant atmosphere and required the artificial ventilation of factories by mechanical means for the control of toxic and other

4. Psychological/behavioral hazards:

Psychological/behavioral hazards are a subtype of occupational hazards that affect the social life or psychological health of workers. These include burnout and job stress. They can manifest as boredom, production pressure, repetitive tasks and low wages.

2.1.4 Cost of Occupational Hazard

The cost of occupational risk is high and can be categorized into direct and indirect costs (Mendeloff & Staetsky, 2014). Leigh, Markowitz, Fahs and Landrigan (2000) described direct costs as insured and easily quantifiable costs. Safe Work Australia (2012) categorized direct costs to include workers' compensation premiums paid by employers or payments to injured or disabled workers by workers' compensation groups. Indirect costs, on the other hand, are seen as the lost opportunities for the injured employee, their family, their employer, their colleagues, the community and the government as a whole (Leigh et al., 2000). According to Safe Work Australia (2012), indirect costs are lost productivity, loss of current and future earnings, potential loss of production, and the cost of providing social protection programs to injured or disabled workers directly related to treatment and repair of the injury. In Contrast to direct costs, indirect costs are generally intangible in nature. This means that they are much more difficult to calculate. One of the main indirect costs of accidents at work and occupational diseases is the loss of working hours. However, the indirect costs of accidents and illnesses at work are estimated at 2.7 times the direct cost (Health and Safety Executive, 2018).

2.1.5 Concept of Occupation Health and Safety

The evolution of modern industrial safety movement had its roots in England, at the dawn of the 18th century industrial revolution era. By 1750, machines had been invented and mining and manufacturing industries became established. Men, women and children were employed to work in factories under

2.1.3 Categories of Hazard

Hazards are categorized into physical, chemical, biological, psychological etc.

1. **Physical hazards:** Physical hazards are materials, substances or activities that threaten the physical safety of a worker. According to Harwood (2015), physical hazards involve environmental hazards that can cause harm with or without contact. These are injuries that occur on parts of the body such as hands, eyes, legs, etc. They are often the most common in any workplace. They include noise, heat and cold stress, bruising from falls, lighting, vibration and electromagnetic radiation.

2. **Chemical hazards**: Chemical hazards are subtypes of occupational hazards resulting from exposure to harmful and hazardous chemical compounds. Chemicals in the form of solids, liquids, gases, fumes, dusts, mists and vapours can have toxic effects on workers if inhaled through breathing, direct skin contact (absorption) or ingested by eating or drinking (World Health Organization, 2001). Hazardous chemicals include neurotoxins, immune agents, skin toxins, systemic toxins, pneumoconiotic agents and sensitizers.

3. **Biological hazards**: Biological hazards are risks in the workplace caused by biological agents such as microorganisms and toxins produced by living organisms (Olaoye, Odebiyi & Abimbola ,2015). They exist due to exposure to bacteria, viruses, fungi, and other living organisms, animals or their products that are subject to biohazards. Examples of biohazards include bites and stings from snakes, insects, scorpions, and spiders. Consistent with the above, Dania (2019) noted that, increased susceptibility to trachoma is also associated with biological agents, generally associated with poverty; poor water supply, sanitation, hygiene, living conditions, housing and therefore, these diseases are indicators of poverty and underdevelopment.

According to Chandrasekar (2021), unsafe and unhealthy workplace environment, especially in terms of poor ventilation, inappropriate lighting, excessive noise among others, affect workers performance. Generally, the causes of occupational accidents are classified as unsafe conditions and unsafe behaviors (Sadullah & Kanten, 2019). Oketunji (2014) remarked that the absence of health and safety system at workplace makes the employees easy victims of occupational hazards that could depress morale and productivity. In any workplace, the safety of employees should be a priority whether one works in a low- or high-risk job (Oketunji, 2014). Occupational safety aims to prevent the accidents caused by the unsafe behavior of the employees and/or the unsafe work environment, and to create a safe working environment. In this context, safety researches advocate for adaptive employee safety behavior, either directly or indirectly. Violation of safety rules escalates workplace hazards that impede the performance of the worker. Health hazards refer to potential risks to the workers' health occasioned by environmental activitieswhich are capable of exposing workers to various diseases. One's occupational role determines to a large extent what one is expected to do and the hazardous nature of the tasks one must perform, thus highlighting the variations in health hazard exposures

2.1.2 Occupational Hazards

An Occupational hazard is a situation that poses a level of threat to life, health, property, or environment. Most hazards are dormant or potential, with only a theoretical risk of harm; however, once a hazard become active, it can create an emergency situation. A hazardous situation that has come to pass is called an incident (Wikipedia, 2014). There are various potential health hazards in which workers are exposed to in their place of work. Health hazards such as industrial hazards, physical hazards, heat hazards, noise hazards, mechanical hazards and so on (Borman, 2014).

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This review is aimed at examining the issues and challenges of occupational health and safety and the compensation of injured, sick or diseased employees in the workplace in Nigeria. These three fold-objectives were sectionalized as follows: The first section deals with the meaning of occupational health and safety, history of occupational health and safety: Global perspective, the development of occupational health in Nigeria organizational performance. The second section pay attention to Health and safety policies and programmes in the workplace, and occupational health risks in Nigeria, Health, Safety and Environment (HSE) programme in Nigeria.

2.1 CONCEPTUAL FRAMEWORK

2.1.1 Concept of Occupation Hazard

Hazard is a condition, object, activity or event with the potential of causing injuries to people, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function (Ilias, Stephen, Michel, Dave, Carmela, Michel, & Clément, 2019). Ahmed, Dosoki, and Nasr (2022) defined hazard as the presence of materials or conditions that have the potential of causing loss or harm or a combination of the severity of consequences and likelihood of occurrence of undesired outcomes. As clarified by Meenesh (2024), hazards in cement production processes can be classified into three (3) categories namely: (a) Routine and general hazards. (b) Special hazards during the cement production and (c) Special hazards as a result of the work environment. Ford and Tetrick (2011) described occupational hazards as 'aspects of one's occupation-specific context that increase the risk of injury'. Occupational hazards refer to the potential risks to the health and safety of those who work outside the home.