

# Management of Accidents in Informal Sector and Sustainable Healthy Living in Ibadan Metropolis Nigeria

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## Abstract

The International Labor Organization (ILO, 2024) estimates that more than 60% of jobs worldwide are in the informal sector, where poor regulations frequently result in hazardous working environments. In Nigeria, employment in the informal sector has risen significantly since the 1980s, especially in urban regions like Ibadan. The National Bureau of Statistics indicates that 92.6% of the Nigerian workforce is now engaged in this sector. While this sector plays a crucial role in providing livelihoods, informal workers face high levels of workplace injuries, with minimal government action to protect their well-being. This research explores the types and reasons for workplace accidents among informal workers in Ibadan, Oyo State, along with the strategies these workers employ in the absence of official safety protocols. Adopting an exploratory qualitative method, the study conducted 20 in-depth interviews across five key informal work areas in Ibadan, focusing on high-risk professions such as automobile repair, welding, vulcanizing, and panel beating. Participants were chosen through purposive sampling and offered valuable perspectives on the causes of accidents, management practices, and effects on health and livelihoods. Grounded in Heinrich's Domino Theory, the study reveals that human error, defective equipment, and lack of safety training contribute to frequent and severe injuries, which workers often treat with improvised methods due to inadequate healthcare access. The results highlighted the pressing need for government-initiated safety measures, such as mandatory safety training, affordable protective equipment, and dedicated healthcare facilities, to improve the safety of informal sector workers and support Nigeria's economic development.

**Key words:** Informal sector, Occupational health, Workplace accidents, Safety regulations, Coping strategies

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## 1.Introduction

The ability of a nation to prosper and advance is partly influenced by the skills, vitality, and resilience of its workforce in both formal and informal economies (World Bank, 2021). The ILO (2023) reports that illness and accidents at work are the most common causes of death for workers worldwide, nearly 3 million people die of work-related accidents and diseases, including in developed and developing nations. Most of these work-related fatalities, totaling 2.6 million deaths, stem from work-related diseases. Work accidents account for an additional 330,000 deaths, according to the analysis (ILO, 2023).

The growth of the informal economy is a worldwide phenomenon, driven by factors such as rapid population growth, limited formal employment opportunities, and the surge in entrepreneurship. In Nigeria, the informal sector began to expand significantly after the implementation of non-liberal economic policies in the 1980s. Nigerian formal and informal sectors have seen an alarming increase in industrial accidents in recent years, endangering the nation's progress and prosperity (Aluko, Adebayo, Adebisi, Ewegbemi, Abidoye and Popoola, 2016). Many formal sector employees who lost their jobs transitioned into the informal economy. In Africa, for instance, Tamunomiebi and Ukachukwu (2018) stated that informal work accounted for almost 80% of non-agricultural employment, over 60 per cent of urban employment and over 90% of new jobs over the past decade. By the first quarter of 2023, the National Bureau of Statistics reported that 92.6% of employed workers in Nigeria were engaged in informal sector jobs, making it a key source of employment for youth and the unemployed (Punch, 2023).

Despite its rapid growth, there is a lack of sufficient data on occupational health within the informal sector, and these workers have received less governmental recognition in terms of health and safety policies. Adeogun and Okafor (2019) observed that fewer records of occupational hazards exist for the informal sector compared to the

formal sector. Numerous scholars, such as Samuel (2020), Afolabi (2018), Loewenson (2021), and Alli (2008), have thoroughly examined the difficulties encountered by workers in the informal sector, which include unsafe working conditions and the risk of occupational hazards. Those engaged in this sector are at a high risk of suffering injuries and health issues due to inconsistent employment, inadequate working environments, and the absence of health and safety standards. The informal sector's unregulated nature, combined with limited oversight, exacerbates the occurrence of unsafe work conditions.

Many individuals employed in this sector either lack awareness of safety risks or cannot afford protective gear, thereby exposing themselves to dangerous situations. To address occupational risks within the informal sector, it is crucial to adopt forward-thinking policies and strategies. Such initiatives can reduce work-related accidents and illnesses, improve workers' health and safety, enhance productivity and morale, and ensure workers are equipped with knowledge about the latest tools and technologies in their field. These measures will ultimately contribute to the nation's overall development.

Against this backdrop, this study contributes to knowledge by addressing the following research questions: What are the types and causes of accidents associated with workers' occupations in the informal sector? What are the experiences of workers concerning the various forms of accidents linked to their jobs in the informal sector? Furthermore, how are these accidents managed to ensure sustainable healthy living for workers in the Ibadan metropolis? Lastly, what preventive and coping strategies are adopted by informal sector workers in mitigating accidents in their workplaces? These research questions aim to understand the safety and health challenges that informal workers face in Nigeria. By exploring real-life experiences, the study provides much clearer insight into the nature of informal occupational accidents, their causes, and the management strategies employed. This study thus fills a gap, by providing contemporary narratives and interpretations relating to occupational health within the informal sector in Nigeria, particularly in the complex urban settings of Ibadan metropolis. This research is essential for understanding both the preventive and coping mechanisms employed by workers, and how these strategies can be improved to enhance safety and productivity, contributing to a healthier and more secure workforce in the informal economy.

## 2.Review of Literature

The informal sector plays a crucial role in Nigeria's economy, employing a significant portion of the workforce. Recent estimates indicate that over 90% of newly created jobs and 60% of urban employment are in the informal sector (Tamunomiebi and Ukachukwu, 2018). In the first quarter of 2023, the National Bureau of Statistics reported that 92.6% of employed workers in Nigeria were engaged in informal activities (Punch, 2023). The sector's importance has grown since the 1980s, particularly after the implementation of non-liberal policies that led to job losses in the formal sector (Tamunomiebi and Ukachukwu, 2018). However, occupational health and safety in the informal sector have received insufficient attention, with few documented records of hazards compared to the formal sector (Adeogun & Okafor, 2019).

Workers in the informal sector face a variety of occupational hazards due to the nature of their work. These hazards include physical, chemical, biological, ergonomic, and psychosocial risks. The diversity of occupations, ranging from street vendors to small-scale manufacturers, contributes to the wide range of risks. Entrepreneurs in the informal sector frequently face a lack of job security and are subjected to unfavorable working conditions, increasing their vulnerability to workplace accidents and health problems (Loewenson, 2021). Additionally, the absence of formal employment agreements leaves many workers without access to social protection programs like health insurance and workers' compensation (Alfers & Rogan, 2015).

A major contributor to workplace dangers in Nigeria's informal sector is the lack of regulatory oversight. Unlike the formal sector that is governed by safety regulations, the informal sector typically has minimal supervision (Ogunnubi & Adebayo, 2022). Many workers either do not recognize safety hazards or cannot afford protective gear, resulting in a continuation of unsafe working environments (Afolabi, 2018). Even when workers are conscious of the dangers, financial constraints often compel them to prioritize earning an income over ensuring their safety (Oluranti & Omobowale, 2019).

Several research works have documented the experiences of informal workers with various accident types. In Ghana, a study by Amfo-Otu and Agyemang (2016) revealed that auto mechanics in the informal sector often encountered injuries, such as cuts, burns, and damage, due to insufficient protective gear. Meanwhile, Afolabi (2019) reported in Nigeria that informal business operators dealt with workplace challenges like musculoskeletal

disorders, respiratory illnesses, and stress. These issues emphasize the urgent need for improved accident management and safety protocols within the informal sector.

Recent studies continue to highlight the precarious nature of informal work globally, particularly in developing countries. According to the ILO (2015), informal sector workers remain largely excluded from national occupational health policies, with minimal oversight leading to disproportionate exposure to workplace hazards. Lund, Alfors, and Santana (2016) also report a growing concern over the long-term respiratory and musculoskeletal effects associated with informal industrial activities, especially among auto technicians and metalworkers. These findings reinforce the health implications already noted in the Nigerian context and support calls for integrated safety-health interventions.

In countries with comparable socio-economic profiles, such as India and Kenya, research has identified innovative grassroots responses to occupational hazards. For instance, Denny (2022) found that the implementation of basic occupational health services significantly improved hazard response among informal workers. These emerging strategies offer valuable insights into how community-led, low-cost interventions might be localized in Nigeria's informal economy.

Despite these developments, Nigeria still lacks a coordinated framework for occupational health in informal environments. While prior studies (Afolabi, 2019; Adeogun & Okafor, 2013) establish a foundational understanding of the risks, more nuanced, place-based analyses—like the present study focused on Ibadan—are needed to design relevant and scalable solutions. This study thus bridges a critical gap by providing context-rich narratives that inform policy and practice in urban Nigeria's informal sector.

Research and policy discussions have increasingly concentrated on managing accidents within the informal sector. Loewenson (2001) pointed out the necessity for holistic strategies that merge occupational health services with primary healthcare to enhance accessibility and efficacy. Ngwama (2016) recommended a framework for occupational health and safety in Nigeria, advocating a collaborative approach that includes government bodies, labor unions, and employers. Additionally, Samuel et al. (2015) stressed the significance of customized interventions that cater to the distinct requirements of those working in the informal economy.

Workers in the informal sector have implemented strategies for both prevention and coping to handle accidents. According to Sabitu et al. (2009), although welders in Northern Nigeria exhibited a good level of awareness regarding occupational hazards, their use of protective gear was minimal, primarily because of costs and discomfort. Ametepheh et al. (2013) noted that workers in Ghana frequently depended on traditional methods to cope with injuries and resorted to self-medication, highlighting the necessity for better access to healthcare and education on occupational health.

Informal sector workers in Nigeria undoubtedly encounter various occupational dangers due to insufficient regulation and poor safety protocols. To effectively manage these incidents, there is a need for education, improved access to healthcare, and stronger regulatory systems. Although some measures have been implemented by workers, there is a pressing requirement for comprehensive and customized interventions to support sustainable health practices among informal workers in Ibadan and similar urban areas of developing nations. This study aims to fill this gap by offering an in-depth analysis of accident management within the informal sector of Ibadan, which can aid in shaping policy and enhancing occupational health strategies, thus contributing to sustainable health for informal workers in Ibadan and comparable urban regions in developing countries.

## **2.1 Theoretical Framework**

The Heinrich Domino Theory offers a framework for analyzing workplace accidents in the informal sector. Heinrich (1941) suggested that such accidents arise from a chain of interrelated factors, drawing a parallel to a series of falling dominoes. He argued that 88% of industrial accidents are caused by unsafe acts, 10% by unsafe conditions, and 2% are unpreventable.

Heinrich's theory outlines five steps in accident causation: Social Environment and Ancestry, Fault of a Person, Unsafe Acts or Unsafe Conditions, Accident, and Injury or Damage. This progression highlights the complex nature of workplace accidents (Heinrich, 1941; Sabet et al., 2013; Amfo-Otu & Agyemang, 2016). Alli (2008) describes hazards as conditions that pose risks to human lives, can cause damage to property, or may negatively impact the environment. These hazards encompass physical, chemical, biological, ergonomic, and psychosocial factors.

Despite its power, the theory is not without criticism. It fails to take account of the managers' responsibility for accident prevention Bird and Loftus (1971); it has a linear model Peterson 1971; it blames workers. In response to this, Bird and Loftus (1974) amended the theory with a new model which put more focus on management role proposed different steps of Loss Causation Model: 1- Lack of Control/Management, 2-Basic Causes, 3-Immediate Causes, 4-Incident and 5-Loss.

The updated model suggests security management is what prevents accidents on the ground, in that it also includes a limited perspective regarding personal and job-related factors. Such an expanded perspective recognizes that organizational issues and human aspects contribute to individual worker behaviors, making effective prevention more likely when basic causes and immediate event factors are identified.

In conclusion, the Heinrich Domino Theory, along with its revision, provides a valuable framework for understanding occupational accidents in the informal sector. It highlights the importance of individual behavior and organizational oversight in accident prevention. Despite its limitations, the theory underscores the need for comprehensive interventions that address both personal behaviors and organizational practices to ensure safer working conditions in the informal sector.

### 3.Methodology

The research employed an exploratory and qualitative design which was a good method for the setting given that well over half of households in Ibadan are into informal sector work. Because so little attention has been paid to occupational health and safety in this sector, the approach was flexible yet thorough when examining workplace stressors. Besides, the participant observation and key result area (KRA) were essential tools for focusing on depth of incidence with an inside method to explore types, cause factors and solutions based related work hazards as per holding domain.

The exploratory mode of this study allowed the researchers to be flexible, as fieldwork was highly unpredictable and influenced by ad-hoc events that ultimately made access possible for informal sector employees. Unstructured, open-ended interviews fostered intensive conversations during which participants were able to express more freely their thoughts on workplace accidents and safety issues. It also allowed the research to be responsive to emerging issues (e.g. new safety concerns or coping strategies that emerged during interview).

The study was conducted at different informal sector hubs within Ibadan metropolis (one of the largest and most economically active cities in Nigeria), such as; Akala Express, Alakia, New Garage, Elebu and Samonda which play host to large number of formal sector workers. Study population consisted of workers in high exposure risk occupations of car mechanics, vulcanizers welders, automobile AC engineers and panel beaters etc.

In order to assess the research questions, only those workers who were working in informal sector for more than a year were considered so as to collect data from experienced persons. Participants who had experience of workplace accidents were selected using a purposive sampling technique, as they could provide rich and insightful perspectives on the main research questions that are aimed at exploring this paper.

Overall, 20 IDIs were conducted across various occupational categories of the workers. The sampling of respondents was chosen by their expertise, numbers, and availability. We prepared open-ended interview guides to guide the interviews but allow participants more flexibility in telling their stories. Through the IDIs, researchers were able to gather in-depth information on accident types and their causes as well as coping strategies of workers. The interviews were recorded and transcribed, and themes related to etiology of accidents, adaptations made for safety practices as well as compensatory responses.

On ethical grounds, care was taken throughout the research. However, the interviews were conducted after obtaining informed consent and with a guarantee of anonymity to participants. Procedures for the handling of data protected confidentiality, and participants could opt out at any time.

These results are presented as qualitative narratives, which capture the voices of our respondents and their stories while retaining structural analysis. In so doing, it not only bolsters the credibility of its results but also contributes a deeper understanding into the dynamics and context in which these occupational safety and health hazards play out within Ibadan's urban informal sector.

The data collected from the in-depth interviews were analyzed using a thematic analysis approach, following the six-phase process outlined by Braun and Clarke (2006). This involved familiarization with the data through repeated readings, initial generation of codes, identification and organization of patterns into themes, review of those themes in relation to the dataset, definition and naming of themes, and the production of the final report. Coding was done manually, enabling the researchers to remain close to the narratives and capture nuanced insights that reflected the lived experiences of respondents. Emerging themes were shaped by the study objectives and Heinrich's Domino Theory, ensuring alignment between data patterns and theoretical framing. Peer debriefing and the use of illustrative quotes enhanced credibility and preserved the authenticity of participants' voices

## 4.Data and Results

### 4.1Types and Causes of Accidents in the Informal Sector

This research question is about the different types of accidents that workers in informal sector are involved and what causes these incidents. Findings from the data gathered by some of whom claimed to be vulcanizers, mechanics, welders and painters show that accidents are a regular feature on their job. The results are divided into double themes namely: Common Accidents and Factors Behind Occurrence of such accidents, to comprehend the happenings in these informal sites.

#### Frequent Accidents

Here, it is shows that a high proportion of informal workers suffer accidents of all types in their activities with smaller and less lethal ones to the most serious. Typically, their work is physically demanding, the environment where they are employed can be quite hazardous and dangerous tools and machineries are used on a regular basis. Respondents described accidents such as cuts, burns, impact injuries, and incidents involving heavy machinery. For example, a vulcanizer described a severe injury while inflating a tire:

*Yes, I had an accident when the tire burst while I was filling it with air. It hit my chest, and I had to go to the hospital, this happened when the air is too much for the tire or when the tire has tear in a side or weak in one side. (IDI / Vulcanizer / Akala Expressway / 1 year Experience)*

Similarly, a panel beater shared a harrowing experience with burns:

*Yes, Carbide can explode and affect any part of the body. It can hit the arm or any part of the body. It can even kill someone. A fatal accident once happened to me a long time ago when I was at Akure. It almost burned my whole arm, but I quickly prevented it by using eggs and pap to treat the burned arm.*

IDI / Panel beater / Akala Expressway with Over 15-years' experience

A senior car mechanic shared his experience with a life-threatening incident where a vehicle fell on him while he was working underneath it:

*One of the common accidents is when jacking a car up and you did not use like a big stone or anything to wedge or hold the tire from moving. It can come down on the person, hurt them, or even kill them. It happened to me very long time ago; the car dropped on my hand, and it hurt me badly.*

IDI / Car Mechanic / Alakia / 40 years of experience

Overall, these frequent accidents in the informal sector paint a vivid picture of the hazardous environments these workers operate in. From vulcanizers dealing with high-pressure tires to mechanics working under poorly secured vehicles and Panel beater working with dangerous chemicals among other, the types of accidents reported are varied and severe. These accidents are often the result of carelessness, inadequate safety measures, and the use of poorly maintained equipment. The lack of formal safety protocols or proper protective gear leaves workers vulnerable to repeated injuries, creating a dangerous cycle in which accidents are frequent and often preventable with the right precautions.

## 4.2 Causes of Accidents

The causes of accidents in the informal sector, as reported by the respondents, stem from a combination of human error, poor safety practices, inadequate tools, and the physically demanding nature of their occupations. Many of the workers operate in environments that lack safety regulations, leading to preventable accidents.

Many workers operate in environments that lack safety regulations, leading to preventable accidents. Common causes include:

Carelessness or inattention to safety procedures: A vulcanizer highlighted how neglecting to properly check the condition of a tire can lead to dangerous situations:

*Accidents occur when the air is too much in the tire. This will cause the tire to burst. Also, when the tire is weak or has a tear on one side.*

IDI / Vulcanizer / Akala Expressway / 5-year Experience

Another respondent emphasized the mishandling of tools and failure to use protective gear, a mechanic explained:

*When you don't wedge the car well while jacking it, it can drop on you and cause injury. I have seen this happen to someone who wasn't careful enough, and the car fell on him.*

IDI / Car Mechanic / Alakia / 40 years of experience

Lack of proper maintenance and faulty equipment: A welder discussed how faulty equipment often leads to injuries:

*The cutting machine we were using scattered while grinding, and it banged my hand. That machine wasn't good at all, and we didn't have the proper safety boots or gloves.*

IDI / Welder / Elebu / 3 years of experience

Exposure to dangerous chemicals and materials: An automobile air-conditioning engineer shared:

*The kind of gases we use, some are flammable, some are not flammable. We have to be very very careful with them. When you are making use of those gases, the flammable ones sometimes can cause fire outbreaks and things like that.*

IDI / Automobile and domestic AC Engineer / Samonda / 10 years of experience

Other causes of these accidents are Overconfidence and complacency: A welder explained:

*Accidents happen when people are lazy or not careful. Sometimes we think we know everything, so we don't take precautions, and that's when accidents happen.*

IDI / Welder / New Garage / Welder / 40 years of experience)

There are varieties and etiologies of accidents in the informal sector, everyday, workers put their lives at risk ranging from small cuts to near death injuries. These are due at least in part to human factors like negligence and overconfidence, as well systemic components that included missing safety measures or faulty machinery or equipment. These problems are only exacerbated by the lack of safety training and regulations, leading to excessive injury risk for workers due to accidents that occur way too often.

## 4.3 Experiences and Health Impacts of Accidents in the Informal Sector

This research question investigates the personal experiences of workers regarding different types of accidents within the informal sector and examines how these experiences affect their ability to sustain a healthy lifestyle. The information gathered from individuals in various jobs, including vulcanizers, mechanics, panel beaters, and painters, indicates that accidents occur frequently and have significant repercussions on the health and well-being of workers. The results are categorized into two main topics: Personal Experiences with Accidents and the Impact on Sustainable Health, to thoroughly illustrate the effects of these incidents in informal work settings.



### 4.3.1 Experienced Accidents

The examination of the interviews indicates that a majority of individuals in the informal sector face various types of accidents throughout their careers, ranging from minor injuries like cuts and bruises to harm that jeopardizes their ability to earn a living. These incidents are frequently attributable to the strenuous nature of their jobs, the unsafe conditions in which they work, and the regular use of hazardous tools and equipment. Respondents described accidents such as explosions and chemical exposure, though rarely common, unlike burns and cuts. The following examples illustrate the severity and diversity of these accidents:

One vulcanizer shared his harrowing experience when a tire exploded unexpectedly:

*It has happened to me personally when I was filling this trailer tire. I didn't notice it was weak on one side, the tire burst, and it hit my chest. They had to take me to the hospital.*

IDI / Vulcanizer / Akala Expressway / 1-year Experience

This account underscores the physical dangers that workers face, even in seemingly routine tasks like inflating tires. The sudden nature of such accidents can result in immediate and severe injuries, leaving workers unable to perform their duties and necessitating costly hospital visits. Medical expenses are usually most times difficult for workers in the informal sector, since there is nothing like insurance.

A panel beater shared a harrowing experience with burns:

*A very bad accident once happened to me when I was at Akure. The accident almost burned my whole arm, but I quickly used eggs and pap to treat the burn.*

IDI / Panel Beater / Akala / 15 years' Experience

The above excerpts show that due to the lack of or slow access to medical care, there is higher happenings of accidents and the desperate reliance on improvised first aid measures. The use of these local remedies such as eggs and pap shows that workers have to almost always resort to traditional healing methods in place of normal medical assistance.

### 4.4 Impact on Sustainable Health

The accounts provided by the participants show that incidents within the informal sector significantly affect workers' ability to lead a healthy and sustainable life. These effects go beyond immediate physical injuries and include long-term health problems, financial difficulties, and psychological pressure. The examples that follow further illustrate these effects:

For example, a mechanic discussed how the physical strain in his job, coupled with accidents, had taken a toll on his body:

*Most of our work here includes bending, taking up or screwing something. This usually causes lot backpain for me.*

IDI / Car Mechanic / Alakia / 20 years of experience

The respondent's experience points to the long-term degradation in the physical condition of those who work in this sector. The repetitive strain of bending over vehicles, together with injuries incurred at accident sites, often culminates in chronic pain and other musculoskeletal ailments that severely restrict their ability to work over time. This physical decay is exacerbated by the lack of ergonomic tools or support, making the worker exposed to debilitating conditions.

A welder also shared his experienced on how accidents have compounded his health issues:

*When I pick up heavy things, it causes backpain for me. And also, when accidents happen, it worsens the backpain, so we just take painkillers like paracetamol to ease it.*

IDI / Mechanic / Alakia. / 40 years of Experience

This respondent's use of painkillers as a coping mechanism for both chronic pain and injuries shows the lack of proper medical intervention available to workers. Too much reliance on OTC drugs like paracetamol is common among these informal workers who lack access to professional healthcare, and they are masking rather than treating underlying health problems.

Furthermore, chemical exposure is another significant concern. As noted by one of the respondents:

*The smelling from the paint and other chemicals we use can really affect my breathing sometimes, but we have no other way of managing it. We just keep working.*

#### **IDI / Car Painter / Alakia Expressways/ 37 years of Experience**

With no masks to protect them and with no ventilation system to get rid of the substance in the air, long-term exposure to such toxic chemicals results in respiratory defects, along with a variety of other life-threatening health conditions. For reasons related to the limited options they have for income, many such workers continue to silently endure the risk of being gradually and irreparably harmed in their bodies without halting the work.

These include personal experiences of laborers in the informal sector: accidents are one sure thing they must face, and this happens to them mostly because proper safety measures are not taken into account. Accidents arising from this nature of work and a few medical facilities result in a vicious circle of health and financial effects; hence, the ability of workers to maintain sustainable healthy living is severely challenged. The reliance on makeshift remedies, aside from continued exposure to hazardous materials, adds much to these incidents. Long-term health effects may very well ensue from this. In addition, the financial impact of medical expenses and lost worktime exacerbates the workers' poverty and makes it even more challenging to pay attention to safety and health in their work settings.

#### **4.5 Role of Government Policies**

When asked about the role of governmental policies in accident management and the sustainability of their work, most respondents expressed frustration over the lack of governmental support. Workers in the informal sector often operate outside the scope of formal labor regulations, which means they receive little to no support from government agencies regarding workplace safety or accident management.

One welder explained the absence of any safety regulations from the government:

*The government isn't helping in this our work. There is no government rule regulating this work. I would like it if the government made it compulsory for us to buy safety boots, gloves, everything before starting the work.*

#### **IDI / Welder / Elebu / 3 years' experience**

This welder's plea for government intervention highlights the absence of any formal policies that would require safety measures or provide financial support for workers to purchase protective equipment. Without such regulations, workers are left to manage their own safety without any institutional backing, which increases the risk of accidents and injuries. The lack of enforcement around safety standards means that workers are often operating in unsafe environments, further exacerbating the issue.

Another respondent emphasized that there are no governmental regulations that benefit workers in his occupation:

*Governments don't help us. Government doesn't really see us. Those that enjoy government fund or help are our chairmen, our executives at the state Council, but we the local mechanic here government don't help us. Government can help us by say giving us a big place to work and then provide all sorts of help they want to deliver for us there.*

#### **IDI / Mechanic / New Garage / 35 year experience**

The Mechanic above statement reflects a widespread frustration among informal sector workers who feel overlooked by governmental policies and support systems. His observation that aid seems to reach only high-ranking officials at the state level, such as chairmen or executives, suggests a disconnect between government programs and the workers who need help the most. For local mechanics like him, this exclusion from the



benefits of government support leads to a sense of abandonment, as they struggle with poor working conditions without the resources necessary to improve their situation.

The respondent's plea for government assistance in the form of a big place to work underscores a critical need for infrastructural support. In the informal sector, workers often operate in cramped, hazardous spaces, which not only hamper productivity but also increases the risk of accidents. With better infrastructure, such as a more centralized and well-equipped workspace, the government could also greatly enhance the safety and effectiveness of such workers. Such a space would also enable the government to provide other kinds of support—more effectively—trainings, equipment, and safety materials that ensure workers have what they need to thrive.

A Welding Engineer at Samonda, another worker in the informal sector, expressed a similar frustration but added a call for more active involvement in safety regulation:

*I don't think there are any policies to protect us. If the government can enforce rules that make sure we all have safety tools and force employers to provide it, it would save us from many accidents. We can't do it alone.*

IDI / Welding Engineer / Samonda / 12 years' experience

The emphasis in this regard is on enforced safety regulations—a fact that surpasses providing infrastructure or equipment. The fact that the government has to enforce rules on workers and employers to use the safety tools shows that something is drastically wrong in the system, with most workers lacking basic safety gear due either to cost or neglect. For any meaningful change to occur, safety regulations must be introduced and consistently enforced. In that way, both workers and employers are made responsible for following safer practices that could reduce workplace accidents by many magnitudes.

Taken together, the cumulative insight by the car mechanic, Brake Master, and Welding Engineer points toward systemic neglect that calls for governmental intervention in the informal sector. Without direct support—like safety equipment, training, or even a safe workplace—workers are vulnerable to frequent accidents and poor conditions. In fact, the local mechanics and welders are not bound with the efficient doing of their work by the lack of tangible government assistance in infrastructure, modern equipment, or enforced safety regulations.

As a result, informal sector workers mostly improvise in the case of accidents, depending on personal vigilance, traditional remedies, and makeshift solutions to first-aid situations. In the absence of appropriate formal safety precautions, or even simple first-aid boxes, workers experience additional hurdles in the instance of an accident, which can manifest as delays to getting proper medical treatment. In the absence of government policy on workplace safety, the workers in the informal sector also do not get the proper support to mitigate and prevent accidents. This theme illustrates rather poignantly the dire need to enhance infrastructure concerning safety, training, and enforcement of policies to achieve sustainability in the quality of life of the workers in this sector.

#### **4.6 Strategies of Prevention and Coping with Accidents in the Informal Sector**

This research question probes into the various measures and coping strategies adopted by workers in the informal sector in preventing and dealing with accidents within the Ibadan metropolis. The responses of subjects working in different occupations within the informal sector reveal both proactive and reactive approaches toward hazards and resultant accidents that happen at workplaces. These workers, working in hazardous environments, have devised ways of minimizing the occurrence of accidents and ways of mitigating the effects when such incidents happen. However, these strategies often work with varying effectiveness since there is often limited resources and sometimes no formal safety training. The findings are further categorized into two sub-themes, namely, Preventive Measures and Coping Strategies, as an explanation of approaches workers take to maintain their safety and well-being in these challenging work environments.

#### **4.8 Preventive Measures**

Employing a view derived largely from personal experience or common sense rather than from any formal training in safety matters or regulation, most people in the informal sector have devised ways of preventing such incidents from occurring, thus breaking this cyclic threat of accidents. These measures, though useful, cannot in isolation, or in absence of proper infrastructure and equipment for safety, adequately protect them against workplace accidents.

One of the key preventive strategies many respondents mentioned is awareness and mindfulness:

*The main thing is to be very aware of what I am doing. I make sure not to handle dangerous things carelessly. I don't allow distractions because one small mistake can be dangerous. IDI / Car Turner Engineer / New Garage / 37 year Experience)*

Here, the focus is on maintaining concentration and avoiding distractions. This respondent's emphasis on staying aware speaks to the high stakes involved in informal sector work especially in this kind of his work, where even a momentary lapse in attention can lead to severe accidents. The strategy of maintaining constant vigilance is a preventive measure that relies heavily on personal discipline, but without external safety measures in place, it remains a limited form of protection.

An Automobile air-conditioning and domestic air-conditioning engineer highlighted both human security measures and workplace safety protocols that he and his colleagues implement to prevent accidents:

*In terms of security in the human factor, we put some measures in place that, just in case there is anything like theft, we have those who are here to secure things for us. Maybe at night, then during the day, we have ourselves to take care of our things. But when you talk about the work sector, in terms of security, when you are at work, there are some safety measures we put in place. Like maybe you must put on your safety gloves, eyeglasses, your goggles and everything to protect you from any kind of hazard.*

IDI / Automobile and domestic AC engineer / 10-year experience

This response reflects a dual approach to safety—securing the workspace from **theft** and maintaining **personal safety** while working. By ensuring protective gear, such as gloves, goggles, and eyeglasses, is worn, the AC engineer attempts to reduce the risk of accidents related to welding. His mention of the human security factor also emphasizes the broader need for protecting assets, which can indirectly reduce workplace stress and distraction, thereby decreasing the likelihood of accidents.

A welder, emphasized training and the use of personal protective equipment (PPE), despite limitations in resources:

*What we ought to be using, like insulated shoes, that is metal pointed shoes, but we don't normally use them, because we are roadside pattern presently. But when training my apprentice, we train them to clean their boots and we do it also. What I mean by boots is, we call it welding boots. Your environment is where you weld. It's called welding boots. And we make them realize that you don't place metals on high rising places, so that it won't fall on your feet. Secondly, the use of PPE, like your welding boots, hand gloves, coverall, and your eyeshade. In case of grinding, you have the transparent eyeshade to protect your eyes from splashes or splatters coming from the grinding.*

IDI / Welding engineer / Samonda / 12 year experience

This respondent emphasized the importance of education and training in accident prevention, particularly when teaching apprentices. While noting that proper safety gear, such as insulated shoes, is not always used due to their roadside setting, the respondents stressed the significance of training workers to maintain their PPE and work environments. His focus on welding boots, hand gloves, coveralls, and transparent eyeshades for protection against sparks and metal fragments during grinding operations highlights the worker's awareness of safety risks and the need to mitigate them through available tools and training.

#### 4.9 Coping Strategies

While preventive measures are crucial, accidents in the informal sector are often inevitable due to the hazardous nature of the work and the lack of or insufficient safety infrastructure. As a result, workers have developed coping strategies to manage the aftermath of accidents, relying on personal resilience, home remedies, and, in some cases, formal medical intervention.

One respondent explained how they cope with minor injuries:

*When I get cut or burned, I don't go to the hospital right away. I apply brake oil or sometimes petrol to the wound. It helps to stop the bleeding.*

IDI / Car Painter / Akala Expressway / 10-year experience

The reliance on home remedies, for instance, brake fluid/brake oil and petrol by this respondent is proof that some people do not have access to first aid and improvisation in coping at the informal sector. These remedies may provide temporary relief but are medically not recommended and sometimes worsen the injury. But due to a lack of access to affordable medical care, to say nothing of formal first aid tools, workers like this respondent are left with little choice but to rely on such coping methods.

A panel beater described a similar approach to burns, highlighting the use of local remedies:

*When my arm got burned while working, I quickly used eggs and pap to treat the burn before I could go to the hospital. It's what we do when there's no immediate help around.* IDI / Panel Beater / Akala Expressway / 15 year experience

In this case, remedies such as eggs and pap for burns among workers are immediate responses. This is a common trend within the informal sector, where occupational injuries are first treated with readily available local remedies. The fact remains that these remedies offer temporary relief, while their biggest drawback is that they delay proper medical intervention which results in complications and prolongs the recovery period. The need for hospital care is acknowledged, but financial constraints and a lack of access often push formal treatment further down the line.

Another worker mentioned the importance of staying positive and trying to avoid stress after an accident:

*Sometimes, when I get injured, I just take painkillers and try not to think too much about it. Stress makes it worse, so I try to stay calm and focus on getting better.*

IDI / Welder / Samonda 12-year experience

This coping strategy emphasizes mental resilience and the management of stress, as physical pain is often compounded by the psychological pressure of missing work or losing income. By taking painkillers and focusing on their recovery, workers like this respondent attempt to navigate the emotional and physical toll that accidents take on their lives. However, the long-term effects of relying on such coping strategies—both the overuse of painkillers and the suppression of emotional distress—are concerning.

A mechanic reflected on the practical aspect of coping:

*We don't have much choice but to keep working. If the injury is not too bad, I just bandage it myself and continue working because if I don't work, there's no money.*

IDI / Welder / Elebu / 3 year experience

This response highlights a harsh reality for informal sector workers: they cannot afford to stop working, even in the face of injuries. The practice of self-bandaging and returning to work underlines the economic pressure that forces workers to prioritize earning a living over their health. This coping strategy not only puts workers at risk of further injury but also shows how economic necessity drives informal sector workers to disregard their well-being, creating a cycle of vulnerability and risk.

When accidents occur, informal sector workers rely on various coping strategies, many of which are improvised due to a lack of immediate access to medical care.

An Automobile air-conditioning and domestic air-conditioning engineer described his coping mechanisms when dealing with fires and other hazards:

*Well, not personally but all around in vehicles, most of the vehicles we work on, there are fire extinguishers in them. So, if there is anything like that, sometimes we make use of the fire extinguisher, sometimes we make use of maybe just water. And if it is going beyond, there are some kind of, there is a way we, you know, we need to add detergent into water to quench off the fire.*

IDI / Automobile and domestic AC engineer, 10-year experience

This response illustrates the improvised use of fire safety equipment, such as fire extinguishers found in vehicles. The method of using water mixed with detergent reflects an understanding of how to manage certain types of fires, likely when fire extinguishers are unavailable or insufficient. While practical, this approach shows how

workers must rely on their creativity and adaptability when facing fire-related hazards in the absence of formal fire safety equipment or training.

The prevention and coping strategies of informal sector workers represent a mix of caution, vigilance, improvisation, and resilience. The preventive measures, which have been found very effective but mostly inadequate, involve the use of personal protective equipment and raising awareness in light of resource and formal safety protocol constraints. Meanwhile, coping mechanisms like the use of home remedies, painkillers, and mental toughness hint at the endurance potential of the workers but also bring to light serious lapses regarding their access to medical care and safety infrastructure. While making every possible effort to remain safe and handle accidents, lack of governmental support and formal safety regulations continues to put these workers at risk on both physical and financial fronts.

## **5.0 Discussion of Findings**

This present study, therefore, provides useful information into the occupational health and safety problems of informal sector workers in the Ibadan metropolis. It looks specifically at the types and causes of accidents; workers' experiences and resultant health implications; accident management practices; and prevention and coping strategies.

### **5.1 Types and Causes of Accidents**

The findings of this study are consistent with previous literature conducted on the nature of accidents within the informal sectors, where a high number of physical injuries from cuts, burns, and musculoskeletal damages are often reported. On this regard, Loewenson, 2021 adds that workers in the informal sector are more exposed to work-related hazards due to unsafe working environments and lack of formal protection measures. These unsafe conditions, narrated by workers in the study, include a bursting tire injuring a vulcanizer and a panel beater experiencing severe burns. This agrees with the identification of unsafe working conditions by Alli 2008 and Afolabi 2018. The study showed that the reasons for these accidents mostly include human error, poor safety practices, and faulty equipment. This is consistent with Heinrich's Domino Theory, which suggests that unsafe acts or conditions are the basic causes of 88% of all the falling accidents occurring. Heinrich, 1941. Thus, this theory has put great emphasis on the need for effective preventive measures which break accident causation. .

### **5.2 Experiences and Health Impacts of Accidents**

This study also depicts the severe health effects accidents have on the workers, from acute physical pain to chronic conditions related to respiratory problems due to chemicals inhaled. A good example is a mechanic who cited back problems resulting from the repetition of pressure to be able to do his job; similarly, Samuel 2020; Amfo-Otu & Agyemang 2016 emphasized the ergonomic dangers in informal workplaces. This position is further compounded by Ametepheh et al. (2013) in discussing that the respondents self-administer their injuries with items such as eggs and pap because of a lack of access to professional healthcare. The findings denote that informal workers are strong, but their health and productivity are impacted negatively due to the inability to access appropriate medical attention, also as brought out by Adeogun & Okafor, 2019.

### **5.3 Accident Management Practices**

On accident management, the study has indicated that informal workers, when injured at work, apply improvised remedies such as thinner acting as disinfectant or apply brake oil on cuts and bruises, an indication that there are no real first-aid kit nor safety practices. This represents a consensual incidence of the absence of organized forms of accident management, in agreement with Alli's observation, where "most workers in the informal sectors are excluded from social protection mechanisms such as health insurance or workers' compensation.". Heinrich's theory insists on unsafe acts and conditions; the high rate of frequency resulting in observed accidents is attributed to insufficiency in safety oversight and management of accidents, as well as proper follow-ups. The management of such accidents requires various stakeholders' contributions, including government agencies and associations of workers themselves, regarding conducting training on safety, providing protective gears as well as ensuring access to health care, Ngwama (2016) suggests.

## 5.4 Role of Government Policies

These findings also clearly indicate a lack of governmental support and regulation for informal sector workers. In fact, very often, the surveyed respondents complain about a shortage of government-imposed safety regulations or at least some sort of aid directed at securing the equipment. This is supported by the facts shown in the literature: Loewenson (2021) and Ogunnubi & Adebayo (2022) observe that workers in the informal sector are normally excluded from formal labor legislation and safety policies. Heinrich's Domino Theory points to unsafe conditions as key to the causation of accidents, but the lack of governmental regulation exacerbates this condition. Bird and Loftus revised Heinrich's theory in 1971, placing much more emphasis on the part that management could play in preventing accidents, which is of even greater relevance to informal sector workers who benefit from the government oversight acting as "management" in order to ensure a safer environment. It neglects to provide oversight; due to this, safety concerns persist, and accidents happen more often.

## 5.5 Preventive and Coping Strategies

The study finds that workers employ various preventive measures, such as staying vigilant and using personal protective equipment (PPE), though resources for PPE are often lacking. These findings align with Sabitu et al. (2009), who reported that awareness of occupational hazards is high, but the use of protective equipment remains low due to cost. Workers also develop coping strategies, such as using painkillers or traditional remedies, to manage injuries, as seen in the accounts of welders and mechanics who rely on home remedies like eggs or brake oil to treat burns and cuts. While these coping strategies demonstrate resilience, they also point to the gaps in healthcare access and safety infrastructure. Heinrich's theory, particularly its emphasis on unsafe acts, is relevant here, as many of these coping strategies are unsafe and risk worsening the workers' health conditions.

## 6.0 Theoretical Implications

The study's findings largely support Heinrich's Domino Theory, particularly in its explanation of how unsafe acts and conditions lead to accidents. However, the critique by Bird and Loftus (1971)—that Heinrich's theory overemphasizes individual responsibility while neglecting management's role—applies to this context, where the lack of governmental oversight leaves workers to manage safety on their own. The study also highlights the importance of integrating Bird and Loftus' revision of Heinrich's theory, emphasizing that safety cannot be entirely left to individual workers. Instead, government policies and employer support are crucial for improving safety conditions in the informal sector.

## 7.0 Conclusion

The research has conducted a thorough investigation into the occupational health issues confronting workers in the informal sector within the Ibadan metropolis. It has uncovered a scenario characterized by frequent accidents, poor safety practices, and limited healthcare access. These results highlight the precarious situation of informal workers who, despite their essential contributions to the Nigerian economy, function in environments where safety measures are neither established nor enforced.

This study provides strong evidence that practical, low-cost interventions—such as safety training, access to basic protective equipment, and first-aid awareness—can significantly reduce accident rates and improve well-being among informal workers. The narratives presented underscore that even small shifts in safety practices can yield meaningful improvements in health outcomes and work continuity.

Given the findings, there is an urgent need for policy interventions tailored to the realities of the informal sector. Government agencies, labor unions, and civil society organizations should collaborate to design and enforce localized safety frameworks. These may include subsidized protective gear, community-based health education, and designated safe workspaces. Integrating such policies would not only reduce injury rates but also support national economic productivity by safeguarding the health of a vital labor force.

Future research could expand on this study by examining gender-specific risks and safety responses within the informal sector. Additionally, longitudinal or intervention-based studies could assess the effectiveness of micro-insurance schemes, mobile health programs, or cooperative safety networks. These directions would further deepen understanding and enhance occupational resilience across diverse informal work environments

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