

**A STATISTICAL APPRAISAL ON ROAD TRAFFIC ACCIDENT RATE  
IN KWARA STATE (A CASE STUDY OF ILORIN TO JEBBA)**

**BY**

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HIGHER NATIONAL DIPLOMA IN CIVIL ENGINEERING**

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## **CERTIFICATION**

This is to certify that this research study was conducted by AKINTAYO, Sodiq Olabisi (HND/23/CEC/FT/0190) and had been read and approved as meeting the requirements for the award of Higher National Diploma (HND) in Civil Engineering of the Department of Civil Engineering, Institute of Technology, Kwara State Polytechnic, Ilorin.

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## DEDICATION

This project is wholeheartedly dedicated to **God Almighty**, for His grace, wisdom, and strength throughout the course of this work.

My **Siblings**, for their endless love, prayers, and unwavering support that have shaped my academic journey.

To my **lecturers and supervisors**, whose guidance and encouragement have been invaluable. And to all my **friends and colleagues**, for their inspiration, assistance, and companionship throughout this project.

## ACKNOWLEDGEMENT

First and foremost, I give all glory and thanks to **God Almighty** for His guidance, strength, and wisdom throughout the course of this project.

My sincere appreciation goes to my **project supervisor**, [ENGR. A. NAALLAH], for his invaluable guidance, constructive criticism, and encouragement at every stage of this work. Your support made a significant impact on the successful completion of this project.

I am deeply grateful to my **beloved parents Mr. and Mrs. Akintayo** for their unwavering love, moral and financial support, and constant prayers. Your belief in me has been my greatest motivation.

I also wish to thank my **colleagues and friends** for their cooperation, encouragement, and contributions, especially during challenging times. Your support and shared experiences have made this journey worthwhile.

## ABSTRACT

*Road traffic accidents (RTAs) have become a critical public health and socioeconomic issue in Nigeria, with alarming rates particularly observed along major highways. This study provides a statistical appraisal of road traffic accident rates along the Ilorin–Jebba corridor in Kwara State. The research aims to examine the trend, frequency, causes, and consequences of road traffic accidents over a five-year period. Data were collected from secondary source, records from the Federal Road Safety Corps (FRSC). Using descriptive and inferential statistical methods, the study analyzes accident patterns based on variables such as time of occurrence, driver behavior and road condition. Data from road safety (FRSC) were collected to identify significant relationships between these factors and accident frequency. The findings reveal a fluctuating increase and decrease in accident rates within the year of study. Human factors such as over-speeding, and wrong overtaking were identified as major contributors, alongside poor road infrastructure. The study concludes that targeted interventions, including road maintenance, driver education, and enforcement of traffic regulations, are crucial in mitigating road traffic accidents. Recommendations are provided for policymakers, road safety authorities, and the general public to promote safer road usage along the Ilorin–Jebba route.*

## TABLE OF CONTENTS

Title Page .....	i
CERTIFICATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
ABSTRACT .....	v
TABLE OF CONTENTS .....	vi
LIST OF FIGURES .....	ix
CHAPTER ONE.....	1
1.0 Introduction.....	1
1.1 Problem Statement .....	5
1.2 Aim and Objectives: .....	5
1.4 Scope Of The Study: .....	6
CHAPTER TWO.....	8
LITERATURE REVIEW .....	8
2.1 Global Perspective On Road Traffic Accidents .....	8
2.2 The Concept of Road Traffic Accidents .....	10
2.3 Road Traffic Accidents in Nigeria .....	10
2.2.1 Prevalence and Trends .....	11
2.2.2 Human Factors .....	11
2.2.3 Mechanical and Environmental Factors.....	11
2.2.4 Economic Impact .....	12
2.2.5 Regional Disparities .....	12
2.2.6 Preventive Measures and Challenges .....	13
2.3 Causes of Road Traffic Accidents.....	13
2.3.1 Human Factors .....	13
2.3.2 Vehicle-Related Factors.....	14
2.3.3 Road Infrastructure and Environmental Factors.....	15
2.3.4 Socioeconomic and Cultural Factors .....	15
2.4 Trends in Road Traffic Accidents .....	16
2.5 Consequences of Road Traffic Accidents .....	16

2.6 Road Traffic Accidents in Kwara State and the Ilorin–Jebba Corridor .....	17
2.6.1 Regional Accident Trends and Statistics.....	17
2.6.2 Infrastructural and Environmental Factors .....	18
2.6.3 Human and Operational Factors .....	19
2.6.4 Policy Implications and Mitigation Strategies .....	20
2.7 Mitigation Strategies .....	20
2.7.1 Enforcement.....	21
2.7.2 Education.....	21
2.7.3 Engineering Interventions .....	21
CHAPTER THREE .....	22
METHODOLOGY.....	22
3.1 Description of study Area.....	22
3.2 Population of the Study.....	23
3.3 Data Collection .....	23
3.4 Research Design .....	23
3.5 Sample And Sampling Technique .....	24
CHAPTER FOUR.....	25
RESULTS AND DISCUSSION .....	25
4.1 Accident Trends Analysis .....	25
4.3 Determine the Number of people Involved, Killed and Injured.....	28
CHAPTER FIVE.....	30
CONCLUSION AND RECOMMENDATIONS .....	30
5.1 CONCLUSION .....	30
5.2 Recommendations .....	30
5.3 Contribution to Knowledge .....	31

## LIST OF TABLES

TABLE	TITLE	PAGE
4.1:	Determine the number of people involved, killed and injured	28



## **LIST OF FIGURES**

<b>FIGURES</b>	<b>TITLE</b>	<b>PAGE</b>
3.1:	Geographical map of the area.	20
4.1:	Accident trend for the year 2019-2023	25
4.2:	Identify Factors that Causes the Road Traffic Crash	27

## **CHAPTER ONE**

### **1.0 INTRODUCTION**

Road traffic accidents (RTAs) are a significant public health issue globally, and Nigeria is no exception. The increasing number of vehicles on the roads, coupled with inadequate infrastructure and enforcement of traffic regulations, has led to a rise in accident rates. This project proposal aims to conduct a statistical appraisal of the road traffic accident rate between Ilorin and Jebba in Kwara State, Nigeria. The study will analyze historical data on accidents, identify trends, and propose recommendations for reducing these incidents

The world's first road traffic death involving a motor vehicle is alleged to have occurred on 31 August, 1869. Irish scientist Mary Ward died when she fell out of her cousins' steam car and was run over by it. Road traffic accident occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or utility pole. Road traffic Accident, updated 4 January. (2013). Road traffic accident may also be defined as anything which happens by chance, anything occurring unexpectedly and un-designed. (Odugbemi, O.O 2010). Since road traffic accident would rarely give warning, although reckless drivers should anticipate the consequences of their

recklessness; human recklessness, carelessness or negligence should be avoided at all cost by road users. On a lot of Nigerian roads across the country deterioration often begins with the origin of cracks or pot holes on the road pavements either at the edges or along the drive way which differs by their shapes, configuration, amplitude of loading, movement of traffic and rate of deformation. (Agbonkhese, O. et al. 2013). The presence of these pot holes aside from human and vehicle related factors are known to be major causes of road traffic accidents in Nigeria. The immediate cause of a road accident may also be attributable to mechanical factor and carelessness in the form of omission to check and maintain the vehicle at the appropriate time. Road traffic accident is therefore an unexpected phenomenon that occurs as a result of the operation of vehicles including bicycles and handcarts on the public highways and roads. Accidents may be fatal, resulting in deaths of the road users (passengers, drivers or pedestrians), or minor when it is not severe enough as to cause substantial hardship.

Road traffic accidents occur worldwide but the incidence is more in developing countries. Annually, about 1.24 million people die each year as a result of road traffic crashes. Road traffic injuries are the leading cause of death among young people, aged 15–29 years. 91% of the world's fatalities on the

roads occur in low-income and middle-income countries, even though these countries have approximately half of the world's vehicles. Half of those dying on the world's roads are “vulnerable road users”: pedestrians, cyclists and motorcyclists. Without action, road traffic crashes are predicted to result in the deaths of around 1.9 million people annually by 2020. Only 28 countries, representing 416 million people (7% of the world's population) have adequate laws that address all five risk factors (speed, drink-driving, helmets, seat-belts and child restraints).WHO Road traffic injuries; fact sheet N° 358. (2013). In Nigeria today, hardly a day goes by without the occurrence of a road traffic accident leading to generally increasing incidence of morbidity and mortality rates as well as financial cost to both society and the individual involved. Information on some of these traffic accidents get to the news rooms of media houses and are aired while majority goes unreported. Nigeria has the highest road accidents rate as well as the largest number of death per 10,000 vehicles. Sheriff, M.A. (2009). One may be tempted to believe that the level of awareness on the causes of road traffic accidents is very low among Nigerians. Put differently, Nigerian roads have become killing fields without protection for their users. Travellers heave a sigh of relief if they make their destinations. (Eze, B. 2012). Contrary to the general belief that Nigerians posses very low level of

awareness on the causes of road traffic accidents, previous research has shown that Nigerians know quite a lot about what could cause road traffic accidents. (Asalor, J.O. 2010).

Road accidents, also known as traffic crashes or collisions, occur when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary objects, resulting in damage, injury, or death (World Health Organization, 2018). These accidents can be classified into four main types: single-vehicle accidents, multi-vehicle accidents, pedestrian accidents, and cyclist accidents. Understanding the types of road accidents is crucial for developing effective prevention strategies.

The causes of road accidents are diverse and interconnected. Human factors, such as speeding, reckless driving, and fatigue, are major contributors (National Highway Traffic Safety Administration, 2020). Vehicle factors, including mechanical failure and poor maintenance, also play a significant role. Additionally, environmental factors like poor road conditions and adverse weather conditions can increase the risk of accidents (Federal Road Safety Corps, 2020).

The consequences of road accidents are severe and far-reaching. They result in significant loss of life, injury, and property damage, as well as

economic losses and psychological trauma (American Automobile Association, 2020). According to the World Health Organization (2018), road traffic accidents claim over 1.35 million lives annually worldwide. Effective measures to prevent road accidents and mitigate their consequences are essential to ensure road safety.

## **1.1 PROBLEM STATEMENT**

Road traffic accidents along the Ilorin to Jebba corridor remain a major concern despite Nigeria's efforts to improve road safety. Inadequate data analysis and ineffective intervention strategies exacerbate the problem, necessitating a comprehensive investigation into accident causes, trends, and correlations.

## **1.2 AIM AND OBJECTIVES:**

### **Aim**

The study aim to analyze the statistical appraisal on road traffic accidents Rate in Kwara State ( a case study of Ilorin to Jabba)

### **The Objective includes:**

To analyze accidents trends

To identify factors that causes RTAs

To determine the number of people involved, killed and injured

### **1.3 JUSTIFICATION:**

This study is justified due to the alarmingly high road traffic accident rates along the Ilorin to Jebba corridor, exceeding national averages and necessitating urgent attention. A knowledge gap exists as existing studies focus on national or state-level analyses, neglecting localized hotspots. The economic implications are severe, with accidents impacting Nigeria's economy through lost productivity, damaged infrastructure, and increased healthcare costs. This research will inform evidence-based policy decisions on road safety, transportation infrastructure, and traffic management. By identifying causal factors and correlations, targeted interventions can reduce accidents and save lives. This study contributes to existing literature on road traffic accidents in Nigeria, providing valuable insights for future research and practical applications for transportation agencies, policymakers, emergency services, and the public.

### **1.4 SCOPE OF THE STUDY:**

This study focuses on conducting a statistical appraisal of road traffic accidents along the Ilorin to Jebba corridor in Kwara State, Nigeria. Geographically, the study area spans approximately 110 kilometers of federal and state roads connecting Ilorin and Jebba. The study will use accident data

from Federal Road Safety Corps (FRSC) for a period of five-year (2019-2023) to analyze accident trends and patterns. Methodologically, the study will employs a mixed-methods approach, combining descriptive and inferential statistics with spatial analysis. Topically, the study explores accident frequency, severity, causes, and contributing factors, including road conditions, Recommendations will be provided for policymakers, transportation agencies, and stakeholders to enhance road safety and reduce accidents along the corridor.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 GLOBAL PERSPECTIVE ON ROAD TRAFFIC ACCIDENTS

Road traffic accidents are a significant public health concern worldwide. The World Health Organization (WHO) estimates that approximately 1.35 million people die each year due to road traffic crashes, with millions more sustaining non-fatal injuries. Low- and middle-income countries, including Nigeria, bear a disproportionate burden, accounting for about 90% of global road traffic deaths despite having only about 60% of the world's vehicles

Road traffic accidents (RTAs) remain a pressing global public health concern. According to the World Health Organization's (WHO) *Global Status Report on Road Safety 2023*, approximately 1.19 million people die annually due to road traffic crashes. Notably, RTAs are the leading cause of death among children and young adults aged 5–29 years. Over half of these fatalities involve vulnerable road users, including pedestrians, cyclists, and motorcyclists, particularly in low- and middle-income countries (LMICs) World Health Organization (WHO).

Despite a modest 5% reduction in global road traffic deaths since 2010, the current rate of decline is insufficient to meet the United Nations' target of

halving road traffic deaths and injuries by 2030 World Health Organization (WHO).

The economic ramifications of RTAs are profound. The WHO estimates that road traffic crashes cost most countries 3% to 5% of their gross domestic product (GDP), stemming from healthcare expenses, loss of productivity, and property damage

Data reliability poses a significant challenge in addressing RTAs globally. Ahmed et al. (2023) highlight issues such as underreporting, inconsistent data collection methods, and delayed data release, which hinder the development of effective prevention strategies

In LMICs, several factors exacerbate the prevalence of RTAs. Hossain et al. (2024) identify poor road infrastructure, inadequate enforcement of traffic laws, and limited public awareness as key contributors. Additionally, socioeconomic and demographic factors, such as lower education levels and economic disparities, influence the incidence of RTAs

The urgency of addressing RTAs has been recognized at the highest levels. The Marrakech Declaration, adopted during the 4th Global Ministerial Conference on Road Safety in 2025, underscores the necessity for a paradigm shift in transportation planning. It advocates for designing transport systems that

prioritize people over vehicles, ensuring safety for all road users, and integrating road safety into broader sustainable development goals.

## **2.2 The Concept of Road Traffic Accidents**

Road traffic accidents involve collisions between vehicles, pedestrians, or stationary objects, resulting in injury, death, or property damage. According to Agbonkhese et al. (2013), RTAs are largely unpredictable, yet human factors like negligence, vehicle defects, and poor road maintenance significantly contribute to their occurrence. The Federal Road Safety Corps (2020) categorizes accidents into single-vehicle crashes, multi-vehicle collisions, and pedestrian-related accidents, emphasizing the multifactorial nature of these events.

## **2.3 Road Traffic Accidents in Nigeria**

Nigeria has one of the highest rates of road traffic accidents globally. Between 1980 and 2003, the country recorded an annual average of 8,000 to 10,000 traffic accident deaths My Project Circuits. Factors contributing to this high rate include human errors, poor road conditions, vehicle defects, and inadequate enforcement of traffic regulations.

Road traffic accidents (RTAs) are a significant public health concern in Nigeria, contributing substantially to morbidity, mortality, and economic losses.

Despite various interventions, the incidence of RTAs remains high, necessitating a comprehensive understanding of their causes and implications.

### **2.2.1 Prevalence and Trends**

Nigeria has consistently recorded high rates of RTAs. Between 2006 and 2014, the country experienced a significant number of fatal road accidents, with over 36,000 deaths reported during this period. The Federal Road Safety Corps (FRSC) reported that in 2012 alone, at least 473 individuals died from 1,115 vehicular accidents nationwide . These statistics underscore the persistent and alarming nature of RTAs in Nigeria.

### **2.2.2 Human Factors**

Human error is a predominant factor in RTAs across Nigeria. Studies indicate that driver-related issues, such as speeding, reckless driving, and disregard for traffic regulations, contribute to approximately 57% of road traffic accidents. In Lagos State, a study identified that drivers' attitudes, including impatience and risk-taking behaviors, significantly influence the occurrence of RTAs.

### **2.2.3 Mechanical and Environmental Factors**

Vehicle conditions and environmental factors also play crucial roles in RTAs. Poor vehicle maintenance, including faulty brakes and worn-out tires, has

been linked to increased accident rates. Additionally, inadequate road infrastructure, such as potholes and lack of proper signage, exacerbates the risk of accidents. A study highlighted that even with road improvements, accidents persist due to violations of speed limits and other traffic rules.

#### **2.2.4 Economic Impact**

The economic implications of RTAs in Nigeria are profound. Accidents result in significant financial burdens on victims' families and the broader society. A study assessing the impact of RTAs on Nigeria's economy between 1990 and 2013 found that accidents negatively affect economic growth, with losses stemming from medical expenses, loss of productivity, and property damage.

#### **2.2.5 Regional Disparities**

There are notable regional disparities in the incidence of RTAs within Nigeria. Urban areas like Lagos experience high accident rates due to dense traffic and high vehicle volumes. In contrast, rural areas often suffer from poor road conditions and limited enforcement of traffic laws, contributing to accidents. A study focusing on Lagos State identified specific high-risk locations and emphasized the need for targeted interventions.

### **2.2.6 Preventive Measures and Challenges**

Various measures have been implemented to curb RTAs in Nigeria, including the establishment of the FRSC, public awareness campaigns, and enforcement of traffic regulations. However, challenges such as inadequate funding, corruption, and public non-compliance hinder the effectiveness of these intervention. Moreover, the lack of reliable data complicates efforts to develop and implement effective road safety strategies

## **2.3 Causes of Road Traffic Accidents**

Road traffic accidents (RTAs) are primarily caused by a combination of human, vehicle, road, and environmental factors. These causes interact in complex ways, contributing to the frequency and severity of accidents. Understanding these causes is essential for developing effective prevention measures.

### **2.3.1 Human Factors**

Human error is widely recognized as the leading cause of road traffic accidents. Factors such as speeding, reckless driving, and violation of traffic rules contribute significantly to accident rates. According to a study by Akinyemi and Akinyemi (2014), driver behavior, including fatigue and distracted driving, are critical determinants of road accidents in urban Nigeria

(Akinyemi & Akinyemi, 2014). Additionally, driving under the influence of alcohol and drugs further exacerbates the risk.

A study by Olanrewaju and Adedeji (2015) in Lagos State found that over 60% of traffic accidents were attributed to human factors, emphasizing speeding, failure to obey traffic signals, and lack of attention while driving (Olanrewaju & Adedeji, 2015). This highlights the critical role of driver education and enforcement in reducing traffic-related fatalities.

### **2.3.2 Vehicle-Related Factors**

Mechanical failures and vehicle-related issues contribute significantly to RTAs. According to a study by Uwadia et al. (2018), factors such as brake failure, tire blowouts, and poor vehicle maintenance have been identified as primary causes of road accidents (Uwadia et al., 2018). Commercial vehicles, especially buses and trucks, are often found to be overloaded, increasing the risk of accidents due to compromised vehicle performance.

A study by Adedayo et al. (2019) further supports this, suggesting that poorly maintained vehicles are a significant hazard on Nigerian roads. They argue that regular maintenance checks, particularly on brakes, tires, and lights, could drastically reduce accident rates (Adedayo et al., 2019).

### **2.3.3 Road Infrastructure and Environmental Factors**

Inadequate road infrastructure plays a critical role in the occurrence of accidents. According to a study by Nwachukwu et al. (2020), potholes, poor signage, and inadequate road markings significantly increase the likelihood of accidents. Poor road design, such as lack of pedestrian crossings and sharp curves, further compounds the problem (Nwachukwu et al., 2020).

Environmental conditions such as heavy rainfall, fog, and foggy conditions also increase accident risks by reducing visibility and road traction. A study by Orji and Odili (2021) highlighted how adverse weather conditions exacerbate the dangers of driving, especially for vehicles with poor tires or faulty brakes (Orji & Odili, 2021).

### **2.3.4 Socioeconomic and Cultural Factors**

Socioeconomic factors such as poverty and unemployment can indirectly contribute to RTAs. As stated by Johnson and Olawale (2016), individuals under economic pressures may engage in unsafe driving practices, such as driving without proper training or licenses. The lack of formal driver education and training is prevalent, particularly in rural areas where access to driving schools is limited (Johnson & Olawale, 2016).



Additionally, cultural attitudes and public perceptions about road safety also play a role. Many Nigerians exhibit a lack of regard for traffic laws and norms, which, according to Adebayo and Eze (2018), results in widespread traffic violations and higher accident rates (Adebayo & Eze, 2018).

## **2.4 Trends in Road Traffic Accidents**

The trend of RTAs in Nigeria has shown a steady increase over the years. Sheriff (2009) observed that Nigeria has one of the highest RTA rates globally, with fatality rates exceeding 33.7 deaths per 100,000 people. Between 2018 and 2022, the Ilorin to Jebba corridor recorded a significant rise in accidents, attributed to increased vehicular traffic and delayed infrastructure upgrades.

## **2.5 Consequences of Road Traffic Accidents**

The consequences of RTAs are far-reaching, affecting individuals, families, and the nation. According to the American Automobile Association (2020), the impacts of RTAs include:

- **Loss of Lives:** The World Health Organization (2018) reports that over 1.35 million people die annually from road accidents.
- **Economic Losses:** Accidents result in direct costs, such as medical expenses, and indirect costs, including lost productivity and property damage.

- **Psychological Trauma:** Survivors and families of victims often experience long-term mental health issues, including anxiety and depression.

## **2.6 Road Traffic Accidents in Kwara State and the Ilorin–Jebba Corridor**

While comprehensive data specific to the Ilorin–Jebba corridor is limited, studies focusing on nearby routes, such as the Ilorin–Omu-Aran road, have highlighted similar challenges. These include high accident rates due to human errors, poor road conditions, and inadequate traffic management My Project Circuits. The Ilorin–Jebba corridor, being a significant route for heavy-duty vehicles, is susceptible to accidents caused by overloaded trucks and deteriorating road infrastructure Academia.

Road traffic accidents in Kwara State have garnered significant attention due to their impact on public safety and the economy. Studies focusing on the Ilorin–Jebba corridor—a critical route connecting the state capital of Ilorin with Jebba—reveal a range of contributing factors and trends particular to this region.

### **2.6.1 Regional Accident Trends and Statistics**

Research by **Idowu and Balogun (2018)** observed that the Ilorin–Jebba corridor consistently experiences high accident rates relative to other routes in Kwara State. Their study noted that factors such as increased vehicle volume

during festive seasons and poor road maintenance significantly elevate accident frequencies. The authors emphasized that the lack of timely road repairs and ineffective traffic management strategies have a direct impact on accident prevalence.

Similarly, **Olatunde (2019)** conducted an analysis of accident patterns along major routes in Kwara State and found that the corridor between Ilorin and Jebba is particularly prone to serious accidents. The study attributed this vulnerability to both infrastructural deficiencies—such as inadequate signage and poorly maintained road surfaces—and human factors, including speeding and non-compliance with traffic regulations.

### **2.6.2 Infrastructural and Environmental Factors**

In terms of road conditions, **Adewale and Oyewole (2020)** explored the role of infrastructural deficits in exacerbating road accidents on the Ilorin–Jebba corridor. They reported that potholes, uneven road surfaces, and insufficient lighting were persistent hazards that not only increased the likelihood of accidents but also hindered the response time of emergency services. Their findings underscore the need for regular road maintenance and the implementation of advanced traffic management systems.

Environmental conditions, particularly during the rainy season, also present significant challenges. **Oluwaseun et al. (2021)** highlighted how heavy downpours and reduced visibility contribute to a surge in accidents during specific times of the year. They noted that these environmental factors, when combined with existing road infrastructure issues, create a precarious situation for road users along the corridor.

### **2.6.3 Human and Operational Factors**

Driver behavior is another critical element identified in the literature. **Akinola (2017)** specifically examined driver-related factors on this route, revealing that speeding, fatigue, and a general disregard for traffic laws are prevalent among drivers operating on the Ilorin–Jebba corridor. Akinola’s study not only linked these behaviors to higher accident rates but also called for enhanced driver education programs and stricter enforcement of traffic laws in the region.

Moreover, **Balogun and Alabi (2020)** investigated the operational aspects that contribute to accidents in Kwara State. Their research found that overloading of vehicles, particularly commercial trucks, is a recurring issue on the corridor. The study highlighted that such practices not only compromise vehicle integrity but also reduce drivers’ ability to control vehicles under challenging road

conditions. This operational neglect further compounds the risk of accidents, signaling a need for regulatory reforms and effective monitoring by traffic authorities.

#### **2.6.4 Policy Implications and Mitigation Strategies**

The cumulative findings from these studies illustrate the multifaceted nature of road traffic accidents in the region. **Idowu and Balogun (2018)**, for example, recommended targeted infrastructural improvements and the installation of advanced traffic monitoring systems along the corridor. In contrast, **Olatunde (2019)** and **Akinola (2017)** stressed the importance of driver behavior modification through education and strict law enforcement.

Furthermore, **Adewale and Oyewole (2020)** called for a public–private partnership approach to tackle maintenance challenges, suggesting that combined efforts could accelerate road improvements and enhance overall safety. These studies collectively indicate that an integrated strategy addressing infrastructure, driver behavior, and regulatory oversight—is crucial for reducing the high accident rates along the Ilorin–Jebba corridor

#### **2.7 Mitigation Strategies**

Effective strategies for reducing RTAs involve a combination of enforcement, education, and engineering interventions.

### **2.7.1 Enforcement**

Strict enforcement of traffic laws, such as speed limits, seatbelt use, and drunk-driving prohibitions, has been effective in reducing accident rates in some areas. The Federal Road Safety Corps\’ (FRSC) deployment of road marshals and mobile courts has enhanced compliance in Nigeria.

### **2.7.2 Education**

Public awareness campaigns, driver training programs, and community engagement initiatives are essential for promoting road safety (Odugbemi, 2010).

### **2.7.3 Engineering Interventions**

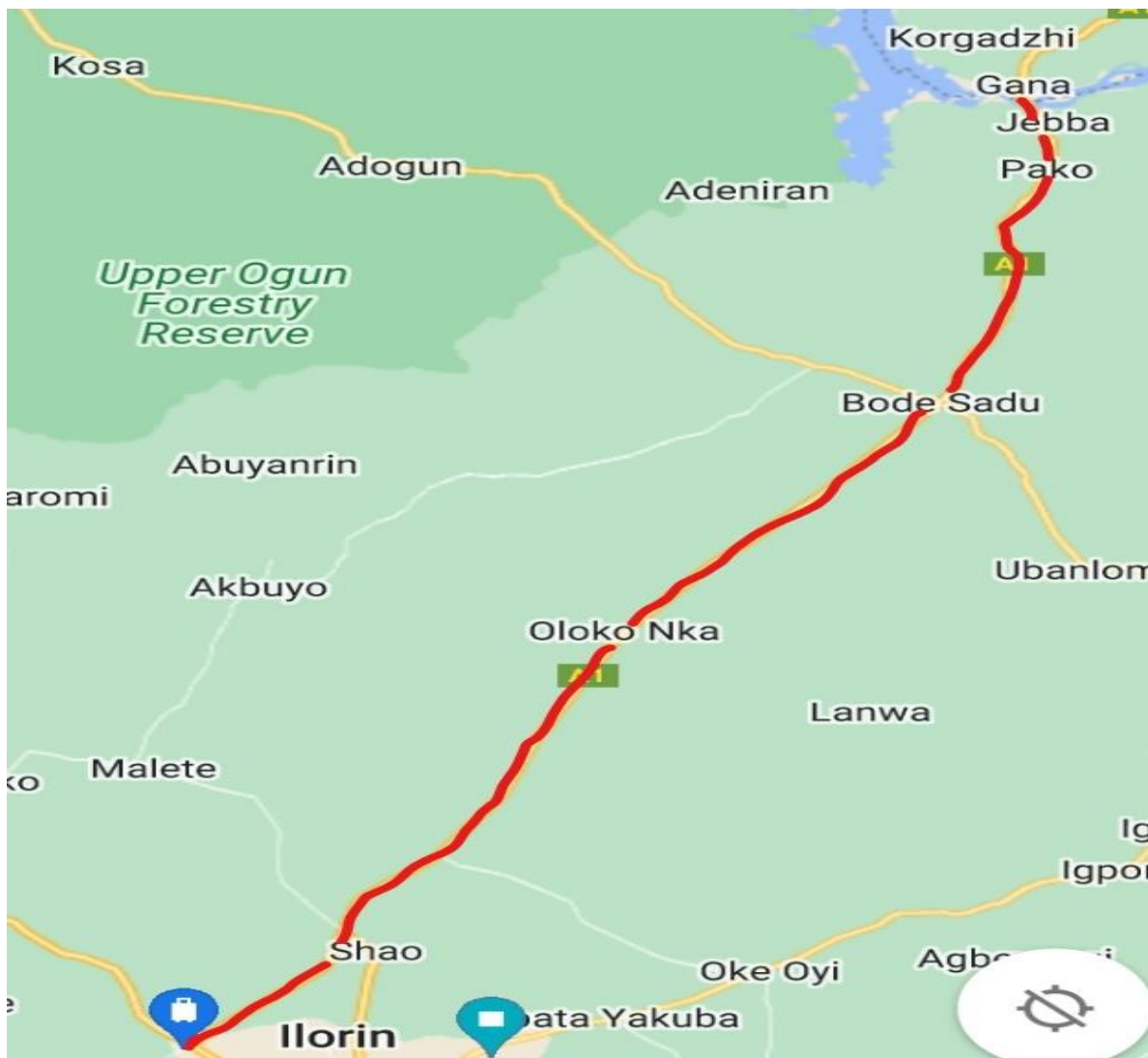
Improving road infrastructure, such as widening lanes, filling potholes, and installing reflective signage, is critical for accident prevention. For the Ilorin to Jebba corridor, targeted investments in road maintenance and expansion are necessary to accommodate increasing traffic volumes

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Description of study Area.

The study covers the 82km road corridor from Oko-olowo junction – Jebba. The road cut across two main towns, Olooru and Bode-sadu as shown in figure 3.1



**Fig 3.1 Geographical map of the area.**

### **3.2 POPULATION OF THE STUDY**

The population of this study includes all reported cases of road traffic accidents along the Ilorin–Jebba corridor from 2019 to 2023. This covers accident reports obtained from relevant authorities such as the Federal Road Safety Corps (FRSC]

### **3.3 DATA COLLECTION**

The data was collected from Federal Road Safety Corps include causes of accident, nature of accident, number of casualties, number of people involved.

### **3.4 RESEARCH DESIGN**

This study adopts a descriptive and analytical research design. The descriptive aspect focuses on summarizing and describing the patterns and trends of road traffic accidents along the Ilorin–Jebba corridor, while the analytical component involves statistical techniques to explore relationships among variables such as accident frequency, causes, vehicle types, and environmental factors. A mixed-methods approach was employed, combining both qualitative insights and quantitative data analysis for a comprehensive appraisal.



### **3.5 SAMPLE AND SAMPLING TECHNIQUE**

A purposive sampling technique was used to select relevant accident data specific to the Ilorin–Jebba road. Data from a five-year period (2019–2023) was extracted to observe trends over time. Additionally, stratified sampling was used to categorize accident data based on:

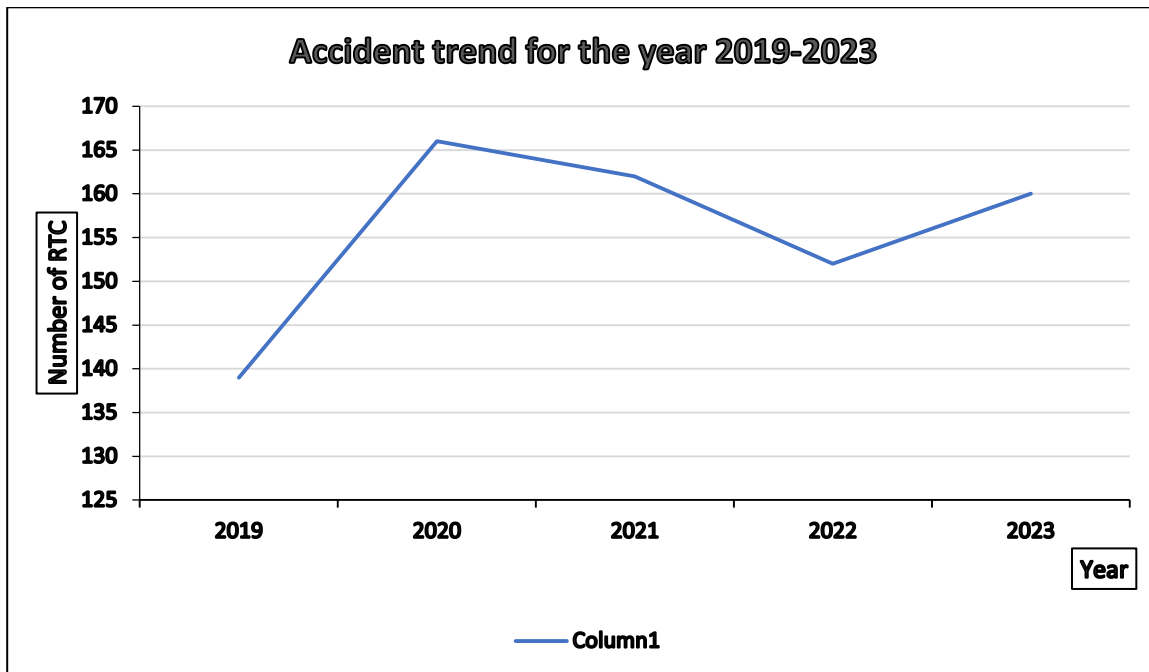
- Year of occurrence
- Type of vehicle involved
- No of people involved
- Nature and cause of the accident

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Accident Trends Analysis

The accident cases data obtained from Federal Road Safety Commission (FRSC).



**Figure 4.1: Accident trend for the year 2019-2023**

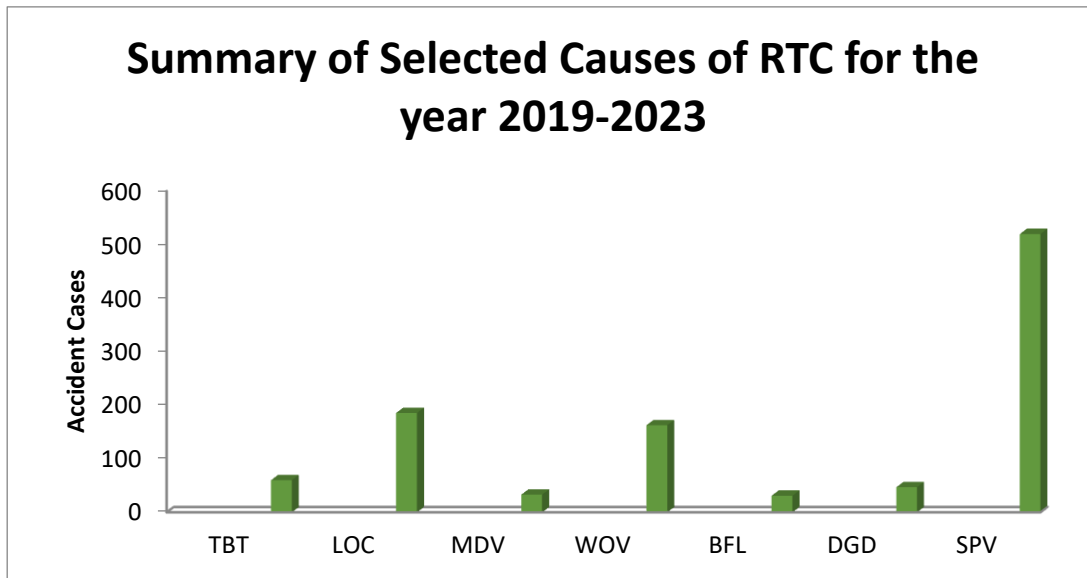
Fig 4.1: show the rate of RTC for the selected year of study. Year 2019 has the lowest rate of RTC with 139 cases and increased in year 2020 to 166 which is the year that has the highest RTC for the selected year of study and reduced in year 2021 to 162 cases with further reduction in year 2022 to 152 RTC then

finally increase to 160 in year 2023 which is the last of the selected year of study.

The data collected from FRSC showed that Ilorin- Jebba road had 779 RTC cases with 323 fatal, 396 serious and 60 minor cases as shown in Appendix A6. The response from the respondent showed that the road is straight with little bend and most of the drivers move at high speed within the region which lead to overspending which is the major causes of RTC according to FRSC.

This indicates that the rise of the RTC figure shows the number of people we are losing to road traffic accidents. The rate at which road traffic accident occurred had placed a heavy burden on global and natural economy. The incidents of people dying in large numbers, year-in year-out, as a result of incessant road mishaps have become more or less institutionalized in Nigeria.

## Factors that Causes the Road Traffic Crash



**Figure 4.2: Identify Factors that Causes the Road Traffic Crash**

TBT - Tire Bust

LOC - Lost of Control

MDV - Mechanical Deficiency

WOV - Wrong Overtaking

BFL - Break failure

DGD - Dangerous Driving

SPV - Speeding or over speeding

The figure above shown that the most causes of accident in human factor is overspeeding with 520 causes within the year under review. Loss of control second the most causes by 186 causes. Loss of control which can be

accomplished by some factor such as tyre burst, mechanical deficiency (steering), brake failure etc. The third most prevalence causes in the research was wrongful overtaking as shown in Appendix B.

#### **4.3 Number of people Involved, Killed and Injured.**

Road traffic accident occur on the road, different categories and types of vehicle clamp the road surface for specific purpose. The nature and design of the road have a relationship on the occurrence of accident. Most causes of road accident are human factor. Below are the analysis to show the relationship:

**Table 4.1: Number of people involved, killed and injured**

<b>YEAR</b>	<b>RTC CASES</b>	<b>PEOPLE INJURED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
2019	139	679	158	1318
2020	166	716	209	1562
2021	162	708	136	1263
2022	152	615	112	1334
2023	160	708	136	1353
<b>TOTAL</b>	<b>779</b>	<b>3325</b>	<b>654</b>	<b>6602</b>

Table 4.1 showed that 3325 people was injured and 654 people was killed along Ilorin – Jebba road from the year 2019 -2023. Observing the variation, it show that the rate of RTC in year 2019 was minimal when the rehabilitation of the road just began compared to when the construction is getting to finish stage. The prevailing causes of road crash was overspeeding and wrongly overtaking which result to the nature of the road.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 CONCLUSION**

The study analyze the accident trend As the accident trend fluctuates with 2019 having the lowest road traffic accident rate and the following year, 2020 having the highest accident rate during the study period. This study also reveals that the factors that contribute to the causes of road Traffic accidents in the study area are over Speeding, wrong overtaking, loss of control, brake failure, tire burst, dangerous driving and mechanical deficiency. With overspending causing the most road traffic accidents in the study area. The study also determined the total number of people involved, injured and killed within the study period.

#### **5.2 RECOMMENDATIONS**

On the basis of the findings obtained from this research, the following are recommended

1. Government at all levels should introduce road education in Nigeria system of education.
2. Government at all levels should pay more attention to the maintenance of high ways and roads in general for safe use of the citizens.

3. Personnel in charge of road should enforce the use of seatbelts by all motorists.
4. Driving license should be issued under strict compliance with the government regulations.
5. Motor Vehicles should be inspected to ensure their road worthiness before registration

### **5.3 CONTRIBUTION TO KNOWLEDGE**

This study would be very useful for the analyst and decision making body scheduled with improving the road traffic safety in the country.



## APPENDIX

### Appendix A1:Nature of RTC cases for the Year 2019

MONTH	RTC CASES			TOTAL
	FATAL	SERIOUS	MINOR	
<b>JAN</b>	5	5	3	<b>13</b>
<b>FEB</b>	5	6	1	<b>12</b>
<b>MAR</b>	5	6	0	<b>11</b>
<b>APR</b>	4	11	3	<b>18</b>
<b>MAY</b>	9	11	1	<b>21</b>
<b>JUN</b>	6	8	0	<b>14</b>
<b>JUL</b>	6	6	0	<b>12</b>
<b>AUG</b>	7	5	0	<b>12</b>
<b>SEPT</b>	1	1	0	<b>2</b>
<b>OCT</b>	5	0	1	<b>6</b>
<b>NOV</b>	4	1	1	<b>6</b>
<b>DEC</b>	6	5	1	<b>12</b>
<b>TOTAL</b>	<b>63</b>	<b>65</b>	<b>11</b>	<b>139</b>

**Appendix A2:Nature of RTC cases for the Year 2020**

<b>MONTH</b>	<b>RTC CASES</b>			<b>TOTAL</b>
	<b>FATAL</b>	<b>SERIOUS</b>	<b>MINOR</b>	
<b>JAN</b>	6	13	0	<b>19</b>
<b>FEB</b>	4	5	1	<b>10</b>
<b>MAR</b>	13	5	3	<b>21</b>
<b>APR</b>	12	6	0	<b>18</b>
<b>MAY</b>	5	10	2	<b>17</b>
<b>JUN</b>	10	4	0	<b>14</b>
<b>JUL</b>	4	5	1	<b>10</b>
<b>AUG</b>	3	3	0	<b>6</b>
<b>SEPT</b>	12	5	3	<b>20</b>
<b>OCT</b>	4	3	0	<b>7</b>
<b>NOV</b>	7	3	0	<b>10</b>
<b>DEC</b>	6	7	1	<b>14</b>
<b>TOTAL</b>	<b>86</b>	<b>69</b>	<b>11</b>	<b>166</b>

**Appendix A3:Nature of RTC cases for the Year 2021**

<b>MONTH</b>	<b>RTC CASES</b>			<b>TOTAL</b>
	<b>FATAL</b>	<b>SERIOUS</b>	<b>MINOR</b>	
<b>JAN</b>	5	9	1	<b>15</b>
<b>FEB</b>	7	5	1	<b>13</b>
<b>MAR</b>	5	6	2	<b>13</b>
<b>APR</b>	10	8	2	<b>20</b>
<b>MAY</b>	5	5	1	<b>11</b>
<b>JUN</b>	2	2	0	<b>4</b>
<b>JUL</b>	3	10	1	<b>13</b>
<b>AUG</b>	3	5	1	<b>9</b>
<b>SEPT</b>	0	10	2	<b>12</b>
<b>OCT</b>	10	7	2	<b>19</b>
<b>NOV</b>	6	10	2	<b>18</b>
<b>DEC</b>	7	8	0	<b>15</b>
<b>TOTAL</b>	<b>63</b>	<b>85</b>	<b>15</b>	<b>162</b>

**Appendix A4:Nature of RTC cases for the Year 2022**

<b>MONTH</b>	<b>RTC CASES</b>			<b>TOTAL</b>
	<b>FATAL</b>	<b>SERIOUS</b>	<b>MINOR</b>	
<b>JAN</b>	3	7	1	<b>11</b>
<b>FEB</b>	5	6	0	<b>11</b>
<b>MAR</b>	6	2	1	<b>9</b>
<b>APR</b>	8	6	3	<b>17</b>
<b>MAY</b>	6	5	3	<b>14</b>
<b>JUN</b>	8	5	0	<b>13</b>
<b>JUL</b>	1	12	1	<b>14</b>
<b>AUG</b>	5	5	0	<b>10</b>
<b>SEPT</b>	2	10	0	<b>12</b>
<b>OCT</b>	2	4	1	<b>7</b>
<b>NOV</b>	4	7	1	<b>12</b>
<b>DEC</b>	4	15	3	<b>22</b>
<b>TOTAL</b>	<b>54</b>	<b>84</b>	<b>14</b>	<b>152</b>

**Appendix A5:Nature of RTC cases for the Year 2023**

<b>MONTH</b>	<b>RTC CASES</b>			<b>TOTAL</b>
	<b>FATAL</b>	<b>SERIOUS</b>	<b>MINOR</b>	
<b>JAN</b>	5	15	0	<b>20</b>
<b>FEB</b>	4	8	0	<b>12</b>
<b>MAR</b>	9	6	2	<b>17</b>
<b>APR</b>	5	4	0	<b>9</b>
<b>MAY</b>	5	14	1	<b>20</b>
<b>JUN</b>	2	6	0	<b>8</b>
<b>JUL</b>	1	4	0	<b>6</b>
<b>AUG</b>	6	11	0	<b>17</b>
<b>SEPT</b>	6	3	1	<b>10</b>
<b>OCT</b>	4	7	1	<b>12</b>
<b>NOV</b>	4	9	2	<b>15</b>
<b>DEC</b>	6	6	2	<b>14</b>
<b>TOTAL</b>	<b>57</b>	<b>93</b>	<b>9</b>	<b>160</b>

**Appendix A6: Accident trend for the year 2019-2023**

<b>YEAR</b>	<b>RTC CASES</b>			<b>TOTAL</b>
	<b>FATAL</b>	<b>SERIOUS</b>	<b>MINOR</b>	
2019	63	65	11	<b>139</b>
2020	86	69	11	<b>166</b>
2021	63	85	15	<b>162</b>
2022	54	84	14	<b>152</b>
2023	57	93	9	<b>160</b>
<b>TOTAL</b>	<b>323</b>	<b>396</b>	<b>60</b>	<b>779</b>

**Appendix C1: Severity of RTC for the Year 2019**

<b>MONTH</b>	<b>RTC CASES</b>	<b>PEOPLE INJURED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
<b>JAN</b>	13	58	13	94
<b>FEB</b>	12	42	8	88
<b>MAR</b>	11	84	12	118
<b>APR</b>	18	115	11	205
<b>MAY</b>	21	101	16	251
<b>JUN</b>	14	83	15	120
<b>JUL</b>	12	59	16	139
<b>AUG</b>	12	50	28	136
<b>SEPT</b>	2	10	1	17
<b>OCT</b>	6	22	8	48
<b>NOV</b>	6	19	13	32
<b>DEC</b>	12	36	17	70
<b>TOTAL</b>	<b>139</b>	<b>679</b>	<b>158</b>	<b>1318</b>

**Appendix C2: Severity of RTC for the Year 2020**

<b>MONTH</b>	<b>RTC CASES</b>	<b>PEOPLE INJUIRED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
<b>JAN</b>	19	61	22	146
<b>FEB</b>	10	42	6	81
<b>MAR</b>	21	81	22	222
<b>APR</b>	18	143	33	295
<b>MAY</b>	17	61	12	139
<b>JUN</b>	14	71	28	116
<b>JUL</b>	10	27	8	90
<b>AUG</b>	6	9	5	40
<b>SEPT</b>	20	70	35	173
<b>OCT</b>	7	45	6	65
<b>NOV</b>	10	46	16	106
<b>DEC</b>	14	60	16	89
<b>TOTAL</b>	<b>166</b>	<b>716</b>	<b>209</b>	<b>1562</b>



**Appendix C3: Severity of RTC for the Year 2021**

<b>MONTH</b>	<b>RTC CASES</b>	<b>PEOPLE INJURED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
<b>JAN</b>	15	78	10	136
<b>FEB</b>	13	66	7	120
<b>MAR</b>	13	53	18	94
<b>APR</b>	20	49	10	73
<b>MAY</b>	11	59	5	113
<b>JUN</b>	4	62	6	126
<b>JUL</b>	13	18	12	39
<b>AUG</b>	9	55	13	162
<b>SEPT</b>	12	51	13	85
<b>OCT</b>	19	62	16	95
<b>NOV</b>	18	71	18	115
<b>DEC</b>	15	84	8	105
<b>TOTAL</b>	<b>162</b>	<b>708</b>	<b>136</b>	<b>1263</b>

**Appendix C4: Severity of RTC for the Year 2022**

<b>MONTH</b>	<b>RTC CASES</b>	<b>PEOPLE INJURED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
<b>JAN</b>	11	65	6	101
<b>FEB</b>	11	50	12	98
<b>MAR</b>	9	23	15	68
<b>APR</b>	17	59	12	130
<b>MAY</b>	14	56	12	138
<b>JUN</b>	13	85	15	153
<b>JUL</b>	14	69	8	120
<b>AUG</b>	10	23	6	62
<b>SEPT</b>	12	54	3	117
<b>OCT</b>	7	41	8	85
<b>NOV</b>	12	23	5	68
<b>DEC</b>	22	67	10	194
<b>TOTAL</b>	<b>152</b>	<b>615</b>	<b>112</b>	<b>1334</b>

**Appendix C5: Severity of RTC for the Year 2023**

<b>MONTH</b>	<b>RTC CASES</b>	<b>PEOPLE INJURED</b>	<b>PEOPLE KILLED</b>	<b>PEOPLE INVOLVED</b>
<b>JAN</b>	20	78	10	147
<b>FEB</b>	12	66	7	126
<b>MAR</b>	17	53	18	97
<b>APR</b>	9	49	12	83
<b>MAY</b>	20	54	5	129
<b>JUN</b>	8	61	7	129
<b>JUL</b>	6	13	11	45
<b>AUG</b>	17	47	15	166
<b>SEPT</b>	10	51	11	87
<b>OCT</b>	12	46	13	95
<b>NOV</b>	15	54	15	123
<b>DEC</b>	14	76	7	126
<b>TOTAL</b>	<b>160</b>	<b>648</b>	<b>131</b>	<b>1353</b>

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