LEVEL OF COMPLIANCE TO SEATBELT UTILIZATION AMONG COMMERCIAL BUS DRIVERS IN OREDO LGA

Princess Eunice OHIFO
EDU2102514

DEPARTMENT OF HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION, FACULTY OF EDUCATION, UNIVERSITY OF BENIN, UGBOWO, BENIN CITY.

DECEMBER, 2025.

LEVEL OF COMPLIANCE TO SEATBELT UTILIZATION AMONG COMMERCIAL BUS DRIVERS IN OREDO LGA

Princess Eunice OHIFO
EDU2102514

A PROJECT SUBMITTED TO THE DEPARTMENT OF HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION, FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE AWARD OF THE BACHELOR OF SCIENCE B.Sc (Ed), DEGREE IN ENVIRONMENTAL EDUCATION, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE.

DECEMBER, 2025.

CERTIFICATION

We the undersigned, hereby certify that this work was carried out by Princess Eunice OHIFO with the matriculation number EDU2102514 in the Department of Health, Safety and Environmental Education, Faculty of Education, University of Benin, Benin City, Edo State in partial fulfillment of the requirement for the award of Bachelor of Science (B.Sc. Ed) degree in Environmental Education.

_____. _____

DR.(MRS) J.U DON DATE
(Project Supervisor)

_____. _____

MRS. B.H. ENABULELE DATE
(Project Coordinator)

_____. _____

DR. (MRS) O. H. OBASUYI DATE
(Ag. Head of Department)

DEDICATION

This project work is dedicated to GOD ALMIGHTY whose constant support, love, grace, mercy, and kindness have sustained me through every challenge. I also dedicate it to my parents and siblings for their constant love and support.

ACKNOWLEDGEMENTS

The researcher expresses her deepest gratitude to God Almighty, whose unfailing love, mercy, and strength sustained her throughout her academic journey. He kept her, helped her endure every trial, and provided the grace she needed at each stage. Every good thing achieved in this work is a testament to His faithfulness.

The researcher is profoundly grateful to her project supervisor, Dr. (Mrs.) J.U. Don, who despite her very tight schedule, always found time to guide her. She consistently prioritized her project students, offering tangible, practical advice that helped shape this work in the right direction. Her dedication, patience, and motherly disposition remain deeply appreciated.

She also wishes to acknowledge the acting Head of Department, Dr. (Mrs.) O.H. Obasuyi, and the Project Coordinator, Mrs. B.H. Enabulele, for their unwavering support and contributions throughout her programme.

Special appreciation goes to all her lecturers - Prof. (Mrs.) U. Igbudu, Dr. E.O. Igudia, Dr. S.O. Olikiabo, Dr. (Mrs.) O.O. Egbochuku, Dr. (Mrs.) M. Onobumeh, Dr. D. Aideyan, Dr. (Mrs.) E.B. Timbiri, Dr. I.N. Erhabor, Dr. D.O. Oronsaye, Dr. (Mrs.) C.N. Athedor, Dr. (Mrs.) T.A. Egbon, Dr. (Mrs.) J.A. Agbonifoh, Dr. (Mrs.) H. Ehiorobo, Dr. (Mrs.) E. Odigie, Mrs. Imade Onaiho, Mr. V.I. Edogiawerie and Mrs. M. Ekereruke. Their admirable personalities, passion for teaching, and commitment to academic excellence have shaped, inspired, and positively influenced her throughout her studies.

She extends heartfelt appreciation to her beloved parents, Mr and Mrs OHIFO , for their constant unwavering support, financially, emotionally, and in every other way possible. Their prayers, sacrifices, and encouragement formed the backbone of her success, especially during challenging times.

Finally, she expresses sincere appreciation to her friends, family, and course mates for their companionship, encouragement, and constant support. Their presence made the academic journey lighter, meaningful, and truly memorable.

TABLE OF CONTENT **Page**

LIST OF TABLES

ABSTRACT

This study assessed the level of compliance to seatbelt utilization among inter-urban commercial drivers in Oredo Local Government Area, Benin Metropolis, Edo State. The study was guided by five research questions, all of which were derived from the stated objectives of the research. Relevant literature related to each of the research questions was extensively reviewed to provide a theoretical and empirical foundation for the study. The reviewed literature addressed key concepts such as seatbelt utilization, awareness of seatbelt safety, factors influencing non-utilization, enforcement and safety perception, and the relationship between demographic characteristics and seatbelt use. This ensured that the study was firmly grounded in existing knowledge while also addressing identified gaps within the Nigerian and Benin Metropolis contexts.

The study adopted a descriptive survey research design. The population comprised 500 registered commercial drivers in Oredo LGA, and a sample of 150 drivers was selected using a multistage sampling technique. Data were collected using a structured questionnaire validated by experts. Reliability of the instrument was established using the split-half method, yielding a Cronbach alpha coefficient of 0.70, indicating acceptable internal consistency.Data were analyzed using frequency, percentage, mean, standard deviation, chi-square, and Pearson Product–Moment Correlation.

Findings revealed that although drivers showed high awareness of the dangers of non-seatbelt use and acknowledged the benefits of wearing seatbelts, actual compliance remained low. Major

factors influencing non-utilization included discomfort, forgetfulness, poor seatbelt condition in vehicles, low risk perception, and weak enforcement mechanisms. A significant positive relationship was found between awareness of risks and seatbelt utilization ($p < 0.05$). Demographic variables such as age, educational level, and years of driving experience significantly influenced seatbelt-use behavior, while gender did not.The study concludes that awareness alone is insufficient to ensure consistent seatbelt compliance among commercial drivers. The study recommends sustained road safety education, continuous enforcement, regular vehicle inspection, and targeted interventions addressing behavioral and occupational factors contributing to non-utilization.

CHAPTER ONE
INTRODUCTION

Background of the Study

The rising rate of road traffic accidents continues to be a major public health concern globally, with low- and middle-income countries, including Nigeria, facing the most significant burden. Among the preventive measures that have been widely promoted and proven effective is the consistent use of seatbelts by vehicle occupants. Seatbelts are designed to reduce the severity of injuries by restraining the occupant during a crash, preventing ejection from the vehicle, and reducing impact with the interior parts of the vehicle. Despite the effectiveness of seatbelts and numerous awareness campaigns, there remains a high level of non-compliance among drivers in Nigeria, particularly within urban centers like Benin City. This persistent disregard for seatbelt use has contributed significantly to the high rate of fatalities and serious injuries sustained in road accidents. The current study seeks to assess the risk associated with the non-utilization of seatbelts among drivers in Benin City, emphasizing the implications for public health, safety enforcement, and behavioral change.

Seatbelt usage was made compulsory in Nigeria in January 2005, through directives issued by the Federal Road Safety Corps (FRSC). This legislative move was aimed at reducing the incidence and severity of injuries during road traffic crashes. Since then, FRSC has carried out a number of sensitization campaigns, enforcement operations, and collaborations with various stakeholders to improve compliance. However, despite the presence of these regulations, compliance has remained inconsistent and often influenced by factors such as vehicle type, driver's age, gender, perception of risk, and visibility of law enforcement officers. For instance, many drivers wear seatbelts only when approaching known FRSC checkpoints or when driving in areas with visible police presence. The perception that wearing a seatbelt is only necessary in such contexts points to a shallow understanding of its life-saving role.

Scientific research and accident investigations have repeatedly demonstrated the importance of seatbelt use in minimizing the risk of fatal and non-fatal injuries during collisions. For example,World Health Organization (2018) emphasized that seatbelts reduce the risk of death among front-seat passengers by up to 45%, and the risk of serious injuries by up to 50%. Similarly, the National Highway Traffic Safety Administration (2017) reported that seatbelt use in the United States saved an estimated 14,955 lives in a single year. In Nigeria, the FRSC (2020) revealed that a significant number of road fatalities were recorded among vehicle occupants who failed to use seatbelts. This highlights the gap between legislation and behavioral practice, which is often shaped by inadequate public education, enforcement inconsistency, and sociocultural factors.A variety of reasons have been cited by drivers for their non-compliance with seatbelt laws. Some believe that seatbelts are only necessary for long-distance travel and unnecessary

within urban centers. Others cite discomfort, the short duration of their trips, or even false beliefs that seatbelts can trap them in the vehicle during emergencies.

In Benin City, a considerable number of drivers perceive seatbelt use as a burden or an unnecessary precaution. For commercial drivers, particularly those operating within the informal transport sector such as taxi and minibus services, compliance with seatbelt regulations is often minimal. Studies have shown that some drivers deliberately disconnect or tamper with seatbelt warning devices, while others wear seatbelts loosely or position them behind their backs in order to evade detection by law enforcement officers Sangowawa,Adesola O. (2010). These unsafe practices are further reinforced by peer influence, negative attitudes toward safety regulations, and the absence of strict penalties and consistent monitoring by traffic authorities Usman & Adebosin, (2024).

Demographic characteristics also play a role in seatbelt usage. Studies have found that younger drivers tend to neglect seatbelt use more than older ones, possibly due to overconfidence and a general tendency to take risks. Males are also statistically less likely to use seatbelts compared to females. This gender disparity may be attributed to traditional norms that associate masculinity with risk-taking behavior (beck et al 2017) .Additionally, private car drivers show higher levels of compliance compared to commercial drivers. This discrepancy is partly due to the economic pressures commercial drivers face, which prioritize speed and passenger turnover over safety compliance(Usman & Adebosin 2024). According to FRSC reports, many commercial drivers involved in crashes were not wearing seatbelts at the time of the accident, a pattern that has become alarmingly common in high-traffic cities like Benin.(FRSC 2024)

Behavioral factors are not the only issues. Systemic and infrastructural problems also affect seatbelt usage. Many commercial vehicles in Nigeria are old and poorly maintained, with faulty or missing seatbelt mechanisms. Moreover, limited enforcement capacity, low funding for road safety campaigns, and corruption among traffic law enforcers further contribute to the problem. Drivers often believe they can avoid fines or sanctions through bribery, which reduces the deterrent effect of enforcement. Such structural weaknesses create an environment where traffic laws are seen as flexible guidelines rather than binding rules. When law enforcement is perceived as inconsistent or corrupt, public trust in safety regulations declines, making it harder to achieve sustained compliance(Usman & Adebosin, 2024; Okoro, 2024; ICPC/FRSC anti-corruption initiatives highlight these issues).

Comparing Nigeria's situation with that of countries with high seatbelt compliance rates offers useful insights. For example, Sweden, Canada, and Australia have achieved over 90% compliance through a mix of stringent laws, public education, advanced technology, and consistent enforcement world health organization (2018). These countries use automated cameras, in-vehicle alarms, and data-sharing systems to ensure sustained compliance. In Nigeria, especially in urban centers like Benin City, adopting such advanced measures may be

challenging due to infrastructural limitations. However, strategic partnerships with transport unions, community leaders, and media organizations could play a crucial role in fostering a culture of safety and voluntary compliance.

Observational studies have highlighted the scope of the problem. In one study involving 462 vehicles observed in Benin City, it was found that more than half of the drivers were not using seatbelts. Among commercial drivers, non-compliance was even more prevalent. Compliance spikes in the presence of visible law enforcement but drops sharply when that presence disappears. This pattern reveals that fear of punishment, rather than understanding of safety, is the main driver of seatbelt use. Consequently, there is a need for a paradigm shift from punitive enforcement alone to a combination of education, awareness, and community engagement.

The urgency of this study is underscored by the increasing rate of motorization and urban population growth in Benin City. As more people rely on vehicles for daily transportation, the likelihood of road crashes increases, particularly in the absence of strong safety practices. Understanding the reasons behind seatbelt non-use, the associated risks, and possible solutions is critical for designing effective interventions. This study therefore serves as a valuable tool for road safety stakeholders, including policymakers, public health experts, law enforcement agencies, and civil society groups.

There is also a notable gap in current research. While national-level studies provide important overviews, they often fail to capture city-specific dynamics. Benin City, with its unique mix of formal and informal transport systems, requires localized data to inform targeted safety strategies. Few recent studies have focused exclusively on the risks associated with seatbelt non-utilization in this metropolis, which underscores the need for fresh, context-specific evidence. In addition, limited data exists on how variables like education level, income, and cultural beliefs affect compliance in this environment. Filling these gaps can lead to more effective policy-making and implementation.

The non- utilization of seatbelts among drivers in Benin City poses a serious threat to road safety, public health, and economic well-being. Despite the existence of relevant laws and some level of enforcement, widespread non-compliance continues to undermine the goal of reducing road traffic injuries and fatalities. Addressing this issue requires more than just stricter laws it demands a multi-layered approach that includes education, enforcement, community involvement, and structural reform. By investigating the risks associated with non-compliance and identifying the barriers to consistent seatbelt use, this study aims to contribute meaningful insights that can shape future interventions. Promoting a culture of safety on Nigerian roads, beginning with consistent seatbelt use, is both an achievable and essential step toward protecting lives.

Statement of the Problem

Road Ttraffic Accidents (RTAs) are among the leading causes of injury and death globally, with low- and middle-income countries such as Nigeria bearing the greatest burden. One major but preventable factor contributing to these accidents is the non-use of seatbelts. According to the World Health Organization (2018), proper seatbelt use greatly reduces the risk of fatality and severe injury in crashes. However, despite these benefits and existing laws mandating their use, many commercial drivers in Nigeria continue to neglect seatbelt use.

In Benin Metropolis, Edo State, this issue is particularly worrisome. The city's growing population and heavy vehicular movement, dominated by commercial operators, have increased traffic congestion and accident risks. These drivers often spend long hours on poor roads, pressured to meet financial targets, which encourages risky behaviors such as speeding and ignoring safety measures. Consequently, commercial drivers are frequently involved in both fatal and non-fatal crashes (Federal Road Safety Corps [FRSC], 2020).

Although seatbelt use was made compulsory by the FRSC in 2005, enforcement has been weak and inconsistent. Many drivers either ignore the regulation or pretend to comply by crossing the belt without fastening it. These deceptive practices reflect both attitudinal problems and ineffective enforcement. Common reasons for non-use include discomfort, negligence, and misconceptions that seatbelts are only necessary for long-distance travel or that wearing them shows distrust toward passengers. Socio-economic factors, such as poverty and the use of old, poorly maintained vehicles lacking functional seatbelts, also contribute to the problem.

The effects of this non-compliance are severe. Unbelted drivers are more likely to sustain fatal injuries or die in accidents, leading to emotional trauma, economic hardship, and increased healthcare costs. The loss of commercial drivers due to death or disability further affects productivity and transportation efficiency in the city. Despite the legal mandate and periodic safety campaigns, few studies have explored the specific causes and patterns of seatbelt non-use among commercial drivers in Benin Metropolis.

Therefore, this study seeks to examine the prevalence of seatbelt non-use among commercial drivers in Benin Metropolis, identify the factors influencing compliance, and assess the associated risks. The findings will provide evidence to inform more effective road safety interventions through improved enforcement, education, and vehicle regulation. Addressing this issue is essential to enhancing road safety and protecting the lives and livelihoods of drivers and passengers within Benin Metropolis and beyond.

Research Questions

1. What is the level of compliance to seatbelt utilization among commercial drivers in oredo local government area?
2. What are the major factors contributing to the non-utilization of seatbelts among commercial drivers in oredo local government area ?
3. What are the perceived risks and consequences of not using seatbelts as identified by commercial drivers?
4. What is the relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in the study area?
5. Does seatbelt usage reduce the severity of road traffic injuries among commercial drivers?.

Hypothesis

1.There is no significant relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in the study area.
2. Seatbelt usage does not significantly reduce the severity of road traffic injuries among commercial drivers in the study area.

Purpose of the Study

The purpose of this study is to assess the level of compliance to seatbelts utilization among commercial drivers in oredo local government area, Benincity , Edo State, Nigeria. Specifically, the study seeks to:

1. Assess the level of seatbelt utilization among commercial drivers in oredo local government area

2. Identify the major factors (attitudinal, socio-economic, and infrastructural) contributing to the non-utilization of seatbelts among commercial drivers.

3. Examine the perceived risks and consequences both physical and socio-economic associated with not using seatbelts while driving.

4. Determine the relationship between seatbelt usage and the incidence or severity of road traffic injuries among commercial drivers.

5. Investigate the influence of enforcement and vehicle conditions on seatbelt usage among commercial drivers.

6. Provide evidence-based recommendations to policymakers, transport unions, and road safety agencies for improving compliance and reducing road traffic injuries.

Significance of the Study

This study is significant for several key reasons, particularly in the context of improving road safety, reducing traffic-related fatalities, and informing policy decisions in Nigeria. The findings of the study are expected to provide meaningful contributions to multiple sectors and stakeholders, including government agencies, public health officials, transport unions, road safety organizations, academic researchers, and the general public.

Firstly, this study addresses a critical gap in existing literature regarding seatbelt usage among commercial drivers in Benin Metropolis. While several studies have examined road safety on a national level, there is a lack of localized data that captures the behaviors, perceptions, and compliance levels of commercial drivers in this specific urban setting. By focusing on oredo local government area this study provides a focused and contextual understanding of the problem, which is essential for the development of effective, community-specific interventions.

Secondly, the research has practical implications for policy formulation and law enforcement. The Federal Road Safety Corps (FRSC) and related government bodies can benefit from the study's findings by identifying the barriers to seatbelt usage among commercial drivers. This can lead to improved enforcement strategies, better-targeted public safety campaigns, and more consistent application of road safety laws. Moreover, the study can inform the design of new or revised traffic safety policies, including requirements for routine vehicle inspections and driver re-certification programs.

Thirdly, the study contributes to public health and injury prevention efforts. Road traffic accidents often result in serious injuries or fatalities that strain the healthcare system and impose emotional and financial burdens on victims and their families. By examining the risk factors associated with non-use of seatbelts, this research can support the development of interventions aimed at reducing injury severity and mortality rates in road crashes. This is especially important in low-resource settings where emergency medical response systems are limited.

Additionally, the findings of this study will be valuable to transport unions and commercial driving associations. These organizations can use the information to educate their members on the importance of seatbelt use, promote safety compliance within their ranks, and advocate for better support from authorities in enforcing traffic regulations. The insights gained can also inform training programs for both new and existing drivers.
The study has academic and educational significance. It will serve as a reference point for future researchers interested in transportation safety, driver behavior, or urban mobility issues in Nigeria and similar developing regions. By contributing to the body of knowledge, it can inspire further research on related topics such as motorcycle helmet usage, pedestrian safety, and the effectiveness of road safety education programs.

This study is significant because it provides a comprehensive understanding of a pressing public safety issue, supports evidence-based policy and practice, and lays the groundwork for future research and intervention strategies aimed at promoting safe driving behaviors and reducing road traffic injuries in Benin Metropolis and beyond.

Scope and Delimitation of the Study

This study focuses on evaluating the level of compliance to seatbelt utilization among commercial drivers within oredo local government area Edo State, Nigeria. Specifically, it examines the prevalence of seatbelt use, identifies factors influencing non-compliance, and assesses the potential health, safety, and economic risks linked to this behavior.

The study targets various categories of commercial drivers, including taxi drivers, minibus operators, and intra-city transport drivers. It is geographically limited to Benin Metropolis and will cover selected high-traffic areas, motor parks, and major commercial driving routes within the city. The key areas of focus include:

The frequency and consistency of seatbelt usage.
Drivers' attitudes, knowledge, and perceptions regarding seatbelt laws.
The influence of vehicle condition, law enforcement, and driving culture.
The potential consequences (e.g., injuries, fatalities) resulting from non-use of seatbelts.

Data collection will combine both observation and survey methods to obtain quantitative and qualitative insights from respondents.
However, certain boundaries have been set to maintain focus and feasibility:

1. Geographical limitation: The study is confined to Benin Metropolis and does not extend to other cities or rural areas in Edo State or Nigeria.

2. Population restriction: Only commercial drivers are included; private car owners, inter-state drivers, motorcycle (okada) riders, and tricycle (keke) operators are excluded.

3. Timeframe: The study is cross-sectional and conducted within a defined period; thus, it may not capture long-term behavioral trends or policy changes that occur after the research period.

4. Seatbelt infrastructure: While defective or absent seatbelt systems will be noted, the study does not involve technical or engineering assessment of vehicle seatbelt mechanisms.

5. Accident causality: The study evaluates risk based on reported behaviors and secondary data but does not investigate specific accident cases or establish direct causation between seatbelt use and individual incidents.

Despite these delimitations, the study provides valuable insight into the safety behaviors of commercial drivers and highlights the need for stronger enforcement, continuous education, and improved road safety interventions in Benin Metropolis.

Definition of Terms

To ensure clarity and consistency, the following key terms are defined as they are used in the context of this study:

Seatbelt: A safety device in vehicles designed to secure occupants against harmful movement during a collision or sudden stop. In this study, it refers specifically to the lap and shoulder restraints found in the front seats of commercial vehicles.

Commercial Driver: An individual who operates a vehicle for the purpose of transporting passengers or goods for financial gain. This study focuses on commercial drivers operating within Benin Metropolis, including taxi, bus, and other intra-city drivers.

Benin Metropolis: The capital city of Edo State, Nigeria, and the geographical area of focus for this study. It includes major urban districts and transport hubs where commercial drivers operate regularly.

Risk: The likelihood or probability of injury, harm, or loss resulting from the non-use of seatbelts. In this context, it refers to physical (injury or death), legal (penalties for non-compliance), and economic (costs associated with crashes) consequences.

Compliance: Adherence to road safety laws and regulations, particularly those mandating the use of seatbelts by drivers and front-seat passengers.

Federal Road Safety Corps (FRSC): The national agency responsible for road safety enforcement, education, and traffic regulation in Nigeria. FRSC plays a central role in promoting seatbelt usage through law enforcement and public campaigns.

Road Traffic Accident (RTA): Any incident involving a vehicle that results in damage, injury, or death. In this study, RTAs are examined in relation to the role seatbelt usage plays in injury prevention.

Enforcement: The act of ensuring that drivers comply with traffic laws, including seatbelt regulations, typically carried out by road safety authorities like the FRSC or police.

Awareness: The level of knowledge and understanding that drivers have regarding the benefits, importance, and legal requirements of seatbelt use.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Relevant and related literature was reviewed in this chapter and is presented under the following sub-headings:

- Concept of Seatbelt Utilization
- Risks Associated with Non-Utilization of Seatbelts
- Demographic and Socio-Economic Influences on Seatbelt Use
- Health Belief Model
- Theory of Planned Behavior
- Global Trends in Seatbelt Utilization
- African context in seatbelt utilization
- Nigerian Context of Seatbelt Utilization
- Summary of Related Literature Reviewed.

Concept of Seatbelt Utilization

Seatbelt utilization refers to the consistent and correct wearing of seatbelts by drivers and passengers while a vehicle is in motion, in compliance with safety regulations and legal mandates (World Health Organization [WHO], 2023). The seatbelt itself is a vehicular safety

device designed to secure occupants in their seats, reducing the likelihood of injury or fatality in the event of a collision or sudden deceleration. By restraining the occupant, the seatbelt helps to prevent ejection from the vehicle and limits contact with interior components, thereby minimizing the impact forces exerted on vulnerable body parts (National Highway Traffic Safety Administration [NHTSA], 2021).

The concept extends beyond merely having a seatbelt installed in a vehicle it encompasses the habitual, appropriate, and lawful use of the device as a behavioral safety practice. Seatbelt utilization, therefore, is both a compliance issue and a public health concern, influenced by individual awareness, perceived risk, enforcement measures, cultural norms, and socio-economic conditions (Elvik et al., 2019). Research has consistently shown that seatbelts are among the most effective interventions for preventing fatalities and severe injuries in road traffic crashes. For example, NHTSA (2021) reports that wearing a seatbelt reduces the risk of fatal injury to front-seat occupants by about 45% and the risk of serious injury by about 50%.

Globally, the use of seatbelts has been recognized as a cost-effective road safety measure, yet utilization rates vary significantly between and within countries. In high-income nations, strict enforcement, public education, and ingrained safety culture have resulted in high compliance levels. Conversely, in many low- and middle-income countries (LMICs), including Nigeria, utilization rates remain suboptimal despite the existence of laws mandating their use (WHO, 2023). This discrepancy is often linked to inadequate enforcement, low awareness levels, discomfort complaints, and misconceptions about the necessity of seatbelts for certain driving conditions .

In the Nigerian context, commercial drivers particularly those operating in metropolitan areas such as Benin represent a high-risk group for road traffic injuries due to prolonged driving hours, frequent trips, and heavy passenger turnover. Studies indicate that many commercial drivers neglect seatbelt use either due to perceived inconvenience during frequent stops or because of a false sense of security in urban driving environments (Usman & Adebosin, 2024). This behavior significantly increases their risk of injury or fatality during crashes.

From a theoretical perspective, seatbelt utilization can be examined through behavioral models such as the Health Belief Model (HBM) and the Theory of Planned Behavior (TPB), which suggest that compliance is influenced by perceived susceptibility to injury, perceived benefits of usage, and perceived barriers. The integration of these behavioral frameworks into public safety campaigns and enforcement strategies could improve compliance among high-risk driver groups.

In summary, the concept of seatbelt utilization involves understanding not only the mechanical function and safety benefits of seatbelts but also the behavioral, cultural, and socio-economic factors influencing their use. For commercial drivers in Benin Metropolis, low utilization rates

remain a pressing road safety issue, linking directly to the dependent variable in this study risk of injury or fatality in a traffic accident.

Importance of Seatbelt Use

Seatbelt use is widely regarded as one of the most effective and affordable measures for reducing the risk of severe injury and death in road traffic crashes (World Health Organization [WHO], 2023). The primary importance of seatbelt use lies in its ability to restrain occupants during a collision, preventing them from being thrown against hard surfaces within the vehicle or ejected entirely. In high-impact situations, such as head-on collisions, the forces exerted on an unrestrained occupant can be several times the body's weight, making ejection almost certain without proper restraint (National Highway Traffic Safety Administration [NHTSA], 2021).

One of the major benefits of wearing a seatbelt is the prevention of secondary collisions. In the event of a crash, an unbelted driver or passenger can collide with the dashboard, steering wheel, windshield, or other occupants, causing additional injuries. Seatbelts help keep the body in the optimal crash position, allowing other safety feature such as airbags to function effectively (Elvik et al., 2019). Without a seatbelt, airbags alone are insufficient to protect against severe trauma because airbags are designed to work in combination with seatbelts.

Statistical evidence strongly supports the life-saving potential of seatbelt use. According to NHTSA (2021), seatbelts reduce the risk of fatal injury to front-seat occupants by approximately 45% and the risk of moderate-to-critical injury by 50%. Similarly, WHO (2023) estimates that proper seatbelt use can prevent between 40% and 60% of deaths in road traffic crashes. In regions with strong enforcement laws and public awareness campaigns, such as in many high-income countries, seatbelt use rates exceed 90%, leading to significant reductions in road traffic fatalities.

Beyond the direct safety benefits, seatbelt use also has significant economic implications. Road traffic injuries impose heavy financial burdens on individuals, families, and national health systems, especially in low- and middle-income countries (LMICs) like Nigeria. By preventing serious injuries, seatbelts reduce the need for costly medical treatments, prolonged hospitalizations, and long-term disability care. This translates into substantial savings for both the healthcare system and affected households .

In the Nigerian context, where road crashes remain a leading cause of death among working-age adults, the importance of seatbelt use cannot be overstated. Commercial drivers in metropolitan areas such as Benin City are particularly vulnerable due to high exposure to traffic hazards, long working hours, and the pressure to meet daily income targets. Unfortunately, studies show that

many commercial drivers fail to use seatbelts consistently, citing reasons such as discomfort, frequent stops, or the belief that seatbelts are unnecessary for short urban trips (Usman & Adebosin, 2024). This non-utilization increases both the likelihood and severity of injuries during crashes, posing a serious public health concern.

Furthermore, the importance of seatbelt use is closely tied to legal compliance and the promotion of a safety culture. In Nigeria, the Federal Road Safety Corps (FRSC) has made seatbelt use compulsory for all vehicle occupants, but enforcement gaps and low public awareness have limited its effectiveness. Strengthening compliance through stricter enforcement, targeted driver education, and culturally tailored safety campaigns could significantly improve seatbelt utilization rates and, consequently, road safety outcomes.

Seatbelt use is a critical, evidence-based intervention for saving lives and reducing injuries in road traffic incidents. For commercial drivers in Benin Metropolis, consistent seatbelt use not only enhances personal safety but also contributes to broader public health goals, reduces economic losses from road crashes, and fosters a culture of safety within the transportation sector. This study, therefore, emphasizes the urgent need to address barriers to seatbelt utilization among this high-risk group to achieve meaningful reductions in crash-related morbidity and mortality.

Risk of Non-Utilization of Seatbelt

The non-utilization of seatbelts significantly increases the likelihood of severe injury and death during road traffic crashes. Seatbelts are specifically designed to restrain the body during sudden deceleration, absorbing crash energy and preventing occupants from colliding with the vehicle interior or being ejected. When seatbelts are not worn, the body continues to move at the vehicle's pre-crash speed until it collides with another object such as the steering wheel, windshield, or road surface often resulting in catastrophic injuries (World Health Organization [WHO], 2023).

One of the most serious risks of not wearing a seatbelt is occupant ejection. Studies have shown that being thrown from a vehicle during a crash is almost always fatal or results in life-threatening injuries. The National Highway Traffic Safety Administration (NHTSA, 2021) reports that 77% of occupants who were ejected from vehicles in crashes died from their injuries. Unbelted occupants are also more likely to be partially ejected, which can cause crushing injuries if trapped between the vehicle and the road or other objects.

Another risk associated with seatbelt non-use is secondary collision injuries. In high-impact crashes, unrestrained passengers can become projectiles within the cabin, striking other

occupants and causing multiple injuries. For example, in a frontal collision, an unbelted front passenger may be thrown forward into the dashboard or into other passengers, compounding the severity of the crash outcomes (Elvik et al., 2019). This not only jeopardizes the unrestrained occupant but also increases the injury risk for those who are properly restrained.

Furthermore, the lack of seatbelt use undermines the effectiveness of other safety systems, particularly airbags. Airbags are engineered to work in tandem with seatbelts; without the restraining effect of a seatbelt, the force of an airbag deploying against an unrestrained body can itself cause significant harm, including neck injuries, facial trauma, and even fatal head injuries. This means that relying solely on airbags without wearing a seatbelt provides a false sense of security and leaves occupants vulnerable.

The consequences of seatbelt non-utilization extend beyond the physical risks to include profound social and economic implications. Survivors of road crashes who were unrestrained often face longer recovery periods, permanent disabilities, and loss of income-earning potential. This imposes a heavy burden on families, who may face both the emotional trauma of injury or loss and the financial strain of medical bills, rehabilitation costs, and reduced household income. From a public health perspective, these outcomes increase healthcare expenditures and strain already limited resources, particularly in low- and middle-income countries like Nigeria (Usman & Adebosin, 2024).

In the Nigerian context, the risks are amplified by the high incidence of road traffic crashes involving commercial vehicles. Commercial drivers in metropolitan areas, such as Benin City, are exposed to prolonged driving hours, congested roads, and aggressive driving environments. When these drivers fail to use seatbelts, their occupational risk of severe injury or death rises sharply. Moreover, the non-utilization of seatbelts among commercial drivers has a cascading effect, as passengers often mirror the driver's behavior, perpetuating a culture of neglect toward road safety practices (Akinlade et al., 2018).

Psychologically, some drivers underestimate their vulnerability to crashes, especially during short trips or within familiar routes. This "optimism bias" leads them to believe they are less likely to be involved in a crash than others, making them more prone to ignoring safety measures like seatbelt use (Peden et al., 2004). Such attitudes contribute to persistent non-compliance despite existing seatbelt laws.

In conclusion, the non-utilization of seatbelts carries substantial and well-documented risks, including increased likelihood of fatal injury, greater crash severity, diminished protection from safety systems, and broader socio-economic consequences. For high-exposure groups like commercial drivers in Benin Metropolis, the combination of occupational hazards and non-compliance with seatbelt use presents a critical public health concern. Addressing these risks

requires not only stricter enforcement of seatbelt laws but also targeted behavioral interventions aimed at changing perceptions and habits related to road safety.

Demographic and Socio-Economic Influences on Seatbelt Use

The utilization of seatbelts is not solely a matter of individual choice but is also shaped by a complex interplay of demographic and socio-economic factors. These factors influence how drivers perceive risk, their compliance with road safety regulations, and their behavioral responses to traffic laws. Understanding these influences is crucial for designing targeted interventions that can effectively address low compliance rates, particularly among commercial drivers in urban areas such as Benin Metropolis, Nigeria.

1. Age

Age has consistently been identified as a strong determinant of seatbelt use. Younger drivers, especially those between the ages of 18 and 35, are generally less compliant with seatbelt regulations compared to older drivers (Elvik et al., 2019). This trend is often linked to youthful risk-taking behavior, peer influence, and an overestimation of driving skills. Younger individuals may also perceive themselves as less vulnerable to injury, leading to lower seatbelt usage rates. By contrast, older drivers are more likely to wear seatbelts due to heightened awareness of injury severity and the value of safety precautions (Shults et al., 2020).

2. Gender

Gender-based differences in seatbelt usage have been well documented. Females tend to exhibit higher compliance rates than males (National Highway Traffic Safety Administration [NHTSA], 2021). This disparity may be explained by differences in safety attitudes, risk perception, and driving behaviors. Men, particularly younger males, are more inclined towards risky driving practices such as speeding, aggressive overtaking, and neglecting seatbelt use. Cultural norms that equate masculinity with toughness or non-compliance may also contribute to lower seatbelt use among men (WHO, 2023).

3. Educational Attainment

Education is another critical determinant of seatbelt use. Individuals with higher levels of formal education are more likely to comply with road safety measures, including seatbelt use (Usman &

Adebosin, 2024). Education enhances knowledge of traffic laws and the potential consequences of non-compliance, thus promoting positive safety behaviors. Conversely, individuals with lower educational attainment may lack exposure to structured road safety education, resulting in misconceptions about seatbelt effectiveness or even outright disregard for its importance.

4. Income Level and Economic Status

Socio-economic conditions significantly influence seatbelt usage. Drivers from lower-income backgrounds may operate older or poorly maintained vehicles with damaged or missing seatbelt mechanisms. For commercial drivers, economic pressures to meet daily income targets can encourage unsafe behaviors such as speeding or skipping safety measures to save time (Akinlade et al., 2018). In some cases, safety considerations are deprioritized in favor of financial gains, especially in competitive transport sectors where more trips equate to higher earnings.

5. Occupational Influences

Commercial driving is an occupation that often demands long working hours, frequent stops, and high passenger turnover. These factors can make seatbelt use appear inconvenient, especially in urban settings where trips are relatively short and traffic congestion is common. Some drivers perceive that wearing a seatbelt is unnecessary for low-speed travel, a misconception that increases risk exposure. Furthermore, discomfort from prolonged seatbelt use may deter compliance among drivers who work extended shifts.

6. Cultural and Regional Factors

Cultural beliefs and regional practices can also influence seatbelt compliance. In some communities, there is minimal social pressure to use seatbelts, and non-compliance is normalized. Drivers may only wear seatbelts in areas where law enforcement is present, creating a pattern of selective compliance (Peltzer & Pengpid, 2014). In Nigeria, inconsistent enforcement of traffic laws and instances of bribery can undermine the deterrent effect of penalties for non-use. This weakens public adherence to safety measures and perpetuates low compliance rates.

7. Enforcement and Awareness

Exposure to road safety campaigns and consistent law enforcement can improve compliance. Urban residents are more likely to encounter safety education programs and enforcement checkpoints compared to those in rural areas. However, socio-economic disparities within cities can limit campaign reach in low-income neighborhoods, leaving certain groups less informed

about safety regulations (WHO, 2023). Commercial drivers who operate in areas with weak enforcement may develop habitual non-use of seatbelts.

8. Vehicle Ownership and Condition

The type and condition of a vehicle also intersect with socio-economic status to influence seatbelt use. Commercial drivers who operate company-owned vehicles or older vehicles may encounter faulty or missing seatbelt systems. In Nigeria, many commercial buses are second-hand imports without modern safety features, making it more difficult for drivers and passengers to comply with safety requirements (Onyema et al., 2017).

9. Perceived Risk and Safety Beliefs

Demographic and socio-economic contexts shape an individual's perception of risk. Drivers who have never been involved in an accident, particularly younger males, may underestimate the protective value of seatbelts. Likewise, those from communities where accidents are infrequent or underreported may believe seatbelts are unnecessary. These beliefs are further reinforced in socio-economic environments where survival and income generation are prioritized over long-term health outcomes.

10. Implications for Road Safety Interventions

Recognizing the influence of demographic and socio-economic factors is vital for policy formulation. Tailored interventions such as targeted awareness campaigns for young male drivers, subsidized vehicle maintenance programs for low-income drivers, and occupation-specific training for commercial drivers could significantly improve compliance. Furthermore, strengthening law enforcement and reducing corruption in traffic policing are essential for ensuring that safety regulations are respected across all demographic groups.

Demographic and socio-economic factors exert a significant influence on seatbelt use. Variables such as age, gender, education, income, occupation, cultural norms, vehicle condition, and perceived risk collectively determine compliance levels. Efforts to improve seatbelt use in Benin Metropolis and Nigeria as a whole must adopt a multi-dimensional approach that addresses both the behavioral and structural barriers to compliance. Only by considering these underlying influences can policymakers and stakeholders create effective, sustainable road safety programs.

Health Belief Model (HBM)

The Health Belief Model (HBM) is one of the most widely applied psychological theories in public health research for predicting and explaining preventive health behaviors. Developed in

the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, the model was originally designed to understand why individuals failed to adopt disease-preventive measures, such as health screenings and vaccinations. Over the years, it has been adapted to a variety of health-related behaviors, including road safety and seatbelt use (Rosenstock, 1974)

The **HBM** assumes that an individual's decision to engage in a protective behavior such as wearing a seatbelt depends on their perceptions regarding the threat of a health risk and the benefits of taking preventive action. The model consists of six key constructs:

1. Perceived Susceptibility

This refers to an individual's belief about the likelihood of being involved in a traffic accident if they do not use a seatbelt. Commercial drivers in Benin Metropolis may underestimate their susceptibility, especially if they have driven for many years without being in a major accident. Research has shown that individuals who perceive themselves as highly vulnerable to road crashes are more likely to comply with seatbelt regulations (Shinar et al., 2018).

2. Perceived Severity

This describes the belief about the seriousness of the consequences of being in a traffic accident without wearing a seatbelt. For commercial drivers, understanding that seatbelt non-use can lead to severe injury, permanent disability, or death is critical. Studies have found that when drivers recognize the potentially life-threatening consequences of non-utilization, compliance increases (Petridou & Moustaki, 2020).

3. Perceived Benefits

This refers to the belief in the effectiveness of wearing a seatbelt to reduce injury or fatality in the event of a crash. When drivers see seatbelts as effective safety devices, they are more likely to use them consistently. Empirical studies confirm that perceived benefits are a strong predictor of seatbelt use among professional drivers (Eboli et al., 2017).

4. Perceived Barriers

These are obstacles or factors that discourage seatbelt use, such as discomfort, inconvenience, peer pressure, or a belief that short-distance travel is safe without a seatbelt. For many commercial drivers in Nigeria, discomfort during long drives or lack of enforcement may act as significant barriers (Ojo & Olawole, 2019).

5. Cues to Action

These are triggers that prompt drivers to wear seatbelts, such as police checkpoints, public awareness campaigns, road safety trainings, or witnessing an accident. Research in sub-Saharan Africa shows that regular safety campaigns and enforcement are powerful cues for seatbelt compliance (WHO, 2018).

6. Self-Efficacy

This is the individual's confidence in their ability to consistently wear a seatbelt despite challenges. Drivers with high self-efficacy are better able to overcome discomfort or social influence and maintain the habit of seatbelt use.

Application of HBM to This Study

In the context of commercial drivers in Benin Metropolis, the HBM helps explain why some drivers consistently use seatbelts while others do not. Drivers who perceive themselves as highly susceptible to accidents, recognize the severe consequences of injuries, and understand the protective benefits of seatbelt use are more likely to comply. Conversely, those with low perceived risk, who view seatbelts as unnecessary or uncomfortable, may resist wearing them unless prompted by enforcement measures.

This theoretical framework is important because it provides insight into behavioral change strategies. Interventions aimed at increasing seatbelt use among commercial drivers could focus on:

- Raising awareness about accident risks and injury severity (perceived susceptibility & severity)
- Highlighting the proven life-saving benefits of seatbelt use (perceived benefits)
- Reducing discomfort or cultural barriers (addressing perceived barriers)
- Providing regular reminders via road safety campaigns (cues to action)
- Boosting drivers' confidence in maintaining the habit (self-efficacy)

By applying the **HBM**, this study will identify psychological and perceptual factors that can be targeted to improve seatbelt compliance, ultimately reducing the risk of injury or fatality among commercial drivers.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), is an extension of the Theory of Reasoned Action (TRA) and is widely used to explain and predict deliberate behaviors. It assumes that behavior is guided by behavioral intentions, which are in turn shaped by three key determinants: attitude toward the behavior, subjective norms, and perceived behavioral control.

This theory is particularly relevant to understanding seatbelt use among commercial drivers in Benin Metropolis, where compliance is often influenced by personal beliefs, social expectations, and perceived control over the behavior.

1. Attitude Toward the Behavior

Attitude refers to the degree to which an individual has a favorable or unfavorable evaluation of wearing a seatbelt. A commercial driver who believes that seatbelt use increases comfort, safety, and survival chances in a crash will likely have a positive attitude, leading to higher compliance. Conversely, a driver who sees seatbelts as uncomfortable or unnecessary may hold a negative attitude, reducing likelihood of use (Eboli et al., 2017).

2. Subjective Norms

Subjective norms are the perceived social pressures to perform or not perform a behavior. For commercial drivers, this could include pressure from other drivers, passengers, family, or law enforcement officers.

Positive influence: If most drivers in a park use seatbelts, and enforcement officers regularly check, compliance increases.

Negative influence: If peers mock or discourage seatbelt use, compliance may drop.

3. Perceived Behavioral Control (PBC)

PBC refers to the individual's perception of how easy or difficult it is to perform the behavior. For seatbelt use, factors like seatbelt accessibility, mechanical condition of the belt, ease of adjustment, and enforcement level all shape perceived control. If a driver believes they can easily wear a seatbelt every time, despite discomfort or traffic conditions, **PBC** is high which increases both intention and actual use.

4. Behavioral Intention and Actual Behavior

According to **TPB**, intention is the most immediate predictor of behavior. A commercial driver with a strong intention to use a seatbelt formed by positive attitudes, strong supportive norms, and high perceived control is far more likely to actually use it. However, external factors such as sudden enforcement checks or awareness campaigns can also strengthen the link between intention and action.

Application of TPB to This Study

In the case of commercial drivers in Benin Metropolis:

Attitude can be shaped through education about the benefits and effectiveness of seatbelts in reducing fatal injuries.

Subjective norms can be influenced by peer modeling, public campaigns, and passenger advocacy for safety.

Perceived behavioral control can be improved by ensuring functional seatbelts in all commercial vehicles, reducing physical discomfort, and enforcing consistent compliance checks.

This model is particularly useful because it not only explains why drivers might fail to use seatbelts but also provides a framework for designing interventions that target attitudes, norms, and perceived control to increase seatbelt use.

Integrating HBM and TPB in the Study

Using both HBM and TPB allows for a richer understanding of seatbelt use behavior. While HBM focuses on perceptions of health risk and benefits, TPB addresses the role of intention,

social influence, and perceived control. Together, they provide a comprehensive theoretical basis for examining the psychological, social, and practical factors influencing seatbelt compliance among commercial drivers in Benin Metropolis

GLOBAL REVIEW ON SEATBELT UTILIZATION

The use of seatbelts is widely acknowledged as one of the most effective and affordable interventions for preventing death and serious injury in road traffic crashes. According to the World Health Organization (WHO, 2023), road traffic injuries remain a major global public health problem, ranking as the leading cause of death among individuals aged 5–29 years. Each year, approximately 1.19 million people lose their lives in road crashes, while millions more suffer non-fatal injuries that often result in long-term disability. These incidents place a heavy burden on families, healthcare systems, and national economies.

Research consistently demonstrates that seatbelts dramatically reduce the severity of injuries sustained in motor vehicle collisions. Properly worn seatbelts lower the risk of fatal injury among front-seat occupants by 45–50% and cut the risk of severe, life-changing injuries by up to 60% (Elvik, 2020). This proven protective effect has made seatbelt use a central focus of global road safety strategies, with many countries introducing legislation mandating their use for drivers and passengers.

Despite this near-universal recognition of their life-saving benefits, significant differences in seatbelt use persist across regions, countries, and even between subgroups within the same population. High-income countries (HICs), where enforcement mechanisms are strong and public education is robust, typically report compliance rates above 85% (WHO, 2023). Conversely, low- and middle-income countries (LMICs) where road traffic injuries claim over 90% of global fatalities continue to struggle with compliance rates that often fall below 50%.

These disparities are shaped by several factors, including weak enforcement of seatbelt laws, cultural beliefs about risk, socioeconomic barriers, and inadequate infrastructure (Peden et al., 2022). In some contexts, drivers perceive seatbelts as inconvenient, unnecessary for short trips, or even harmful in the event of a crash. Moreover, some public transport and commercial vehicles are poorly equipped with functional seatbelts, further hindering compliance.

The issue of seatbelt utilization is therefore not merely a question of individual choice but a complex public health challenge involving behavior, infrastructure, enforcement, and socio-cultural context. For cities such as Benin Metropolis, where commercial drivers form a major part of road users, understanding the factors influencing seatbelt use is essential. By examining

these patterns, researchers and policymakers can design effective interventions that address both knowledge gaps and structural barriers, ultimately reducing the risk of injuries and fatalities associated with road crashes.

Global trends in seatbelt utilization

Over the past two decades, seatbelt use has shown significant improvement worldwide, largely due to strengthened legislation, better enforcement, and public education campaigns. However, compliance remains far from optimal, particularly in developing regions. A comprehensive meta-analysis by Kargar et al. (2023), which reviewed 68 studies conducted between 2000 and 2020, revealed that only 43.94% of drivers consistently used seatbelts across the globe. Front-seat passengers exhibited even lower compliance rates at 38.47%, while rear-seat passengers had the lowest rates at just 15.32%. These figures indicate that despite progress, a substantial proportion of road users remain unprotected during crashes.

The highest levels of compliance are consistently observed in high-income countries (HICs) where traffic laws are stringent, enforcement is regular, and public awareness is high. In nations such as Sweden, the United Kingdom, and Japan, seatbelt compliance frequently exceeds 85% (WHO, 2023). This success can be attributed to robust primary enforcement laws where drivers can be stopped solely for failing to wear seatbelts alongside well-funded road safety campaigns and automated monitoring systems.

In contrast, compliance rates in low- and middle-income countries (LMICs) frequently fall below 50%, reflecting challenges such as inadequate enforcement capacity, insufficient public education, and infrastructural deficits (WHO, 2023). In some regions, seatbelts are not fitted in older vehicles or public transport, which limits their availability and contributes to low usage rates. Furthermore, in many LMICs, cultural attitudes play a role; some drivers perceive seatbelts as unnecessary, uncomfortable, or only important for long-distance trips.

Regional variations are particularly striking. In North America, for example, compliance rates average around 90%, with several U.S. states achieving rates above 95% thanks to aggressive primary enforcement laws and nationally recognized campaigns like Click It or Ticket (NHTSA, 2022). These campaigns not only raise awareness but also create a perception of certainty of punishment, which has been shown to strongly influence behavior.

Europe similarly demonstrates high levels of compliance, particularly in countries such as Germany, the Netherlands, and France, where seatbelt use is near-universal due to decades of integrated road safety programs (European Transport Safety Council [ETSC], 2021). These programs typically combine enforcement, road user education, and infrastructure improvements,

creating a culture where wearing a seatbelt is a social norm rather than merely a legal requirement.

By contrast, studies from Asia and Africa highlight a different picture, with compliance rates often below 50% for drivers and considerably lower for passengers. In several Chinese provinces, seatbelt use among rear-seat passengers was less than 25%, despite national legislation mandating their use. In sub-Saharan Africa, observational studies show seatbelt use to be even lower among commercial vehicle drivers, partly due to limited law enforcement presence and low public risk perception (WHO, 2023).

Taken together, global data suggest that while progress has been made, a significant gap remains particularly in LMICs where road traffic injury burdens are highest. These disparities highlight the need for targeted interventions that address both structural barriers (such as vehicle equipment and enforcement) and behavioral factors (such as attitudes and knowledge) to increase global compliance rates.

Demographic and Occupational Patterns Globally

Global research consistently shows that seatbelt use is not evenly distributed across populations; rather, it varies significantly according to demographic characteristics such as gender, age, education, and occupation. Understanding these patterns is crucial, as they shed light on which groups are most at risk and help guide targeted interventions.

Gender differences are particularly well-documented. Women generally demonstrate higher compliance with seatbelt use compared to men, a trend that has been observed across multiple continents. This disparity is often attributed to variations in risk perception and safety attitudes, with women typically reporting greater concern for personal safety and a stronger tendency to adhere to health-protective behaviors . In contrast, some studies suggest that men, particularly younger males, may associate seatbelt non-use with notions of independence, invulnerability, or discomfort, which lowers their likelihood of compliance.

Age is another critical factor influencing seatbelt utilization. Younger drivers, particularly those between 18 and 29 years, are consistently reported as the most noncompliant group (WHO, 2023). This is especially concerning as young adults are also overrepresented in road crash statistics globally. Their lower compliance rates are often linked to risk-taking behavior, peer influence, lower risk perception, and occasional resistance to authority. Older adults, on the other hand, tend to demonstrate higher rates of seatbelt use, possibly because they are more conscious of their vulnerability to injury and more experienced in adhering to traffic regulations.

Educational attainment and socio-economic status further shape compliance patterns. Individuals with higher education levels are generally more likely to wear seatbelts, as education is associated with better risk awareness and stronger adherence to safety norms (Peden et al., 2022). Similarly, higher-income individuals tend to have greater access to newer, better-equipped vehicles and may have more positive attitudes toward seatbelt use compared to their lower-income counterparts, who may drive older vehicles with missing or defective seatbelts.

Occupational status also plays a major role, particularly for individuals whose work involves prolonged driving. Professional drivers such as those operating taxis, buses, trucks, and ride-hailing vehicles have been consistently found to demonstrate lower rates of seatbelt use than private car owners, despite facing higher levels of crash exposure. Commercial vehicle drivers in South Korea, Canada, and Brazil, reported that occupational fatigue, long working hours, and the perceived inconvenience of repeatedly fastening and unfastening seatbelts were major barriers to compliance. Misconceptions about seatbelt safety such as the belief that seatbelts can trap occupants in a crash were also cited as contributing factors.

These findings have direct implications for the present study, which focuses on commercial drivers in Benin Metropolis. This group is likely to share similar risk factors, including occupational stress, irregular schedules, and reduced perception of personal risk. Moreover, commercial drivers often operate in settings where enforcement of traffic laws may be sporadic, further lowering the motivation to comply with seatbelt regulations. Addressing these demographic and occupational patterns is therefore essential to designing effective interventions aimed at increasing seatbelt use and reducing traffic-related injuries among high-exposure groups.

Intervention Strategies And Their Effectiveness

Efforts to improve seatbelt compliance worldwide have demonstrated that no single intervention is sufficient on its own; instead, multi-pronged strategies combining education, enforcement, legislation, and technology have been shown to produce the most significant and sustained behavior change.

One of the most widely studied approaches is the use of mass media campaigns, which aim to raise awareness and shift attitudes toward seatbelt use. Akbari et al. (2021) conducted a meta-analysis of 29 studies evaluating the effect of media campaigns and found a 40% increase in driver compliance and a 54% increase in front-seat passenger compliance when campaigns were sustained for 12 months or longer. The study emphasized that campaigns relying solely on information dissemination had weaker effects, while those paired with enforcement efforts and community engagement were more successful. These findings suggest that awareness alone does

not guarantee compliance; individuals also need to perceive a credible risk of being caught and penalized for non-use.

Legislative action has arguably been the single most transformative factor in raising seatbelt use worldwide. Countries that have enacted primary enforcement laws which allow law enforcement officers to stop drivers solely for not wearing seatbelts consistently report higher compliance rates compared to those with secondary enforcement, where seatbelt violations can only be cited if another traffic offense is committed (NHTSA, 2022). For example, in the United States, states with primary enforcement laws achieve seatbelt use rates exceeding 90%, while those with secondary enforcement average closer to 80% (Shults et al., 2021).

In nations like Japan and Australia, comprehensive seatbelt legislation is reinforced with strict penalties and ongoing education campaigns, resulting in compliance rates above 90% (WHO, 2023). These countries demonstrate that legal mandates, when consistently enforced and supported by public education, can normalize seatbelt use to the point where it becomes a deeply ingrained social behavior.

Beyond education and legislation, technological interventions are increasingly being used to monitor and improve compliance. In Shanghai, for example, the installation of automated camera systems capable of detecting unbelted drivers led to a dramatic increase in compliance, from 60.8% to 84.9% within two years . Similarly, some countries have introduced seatbelt reminder systems and interlock devices in vehicles that prevent cars from moving until occupants are restrained. These technological solutions act as “cues to action” that complement legislation and reduce forgetfulness or intentional non-use.

Another critical intervention strategy is workplace-based policies, particularly relevant for professional drivers. Fleet management companies and commercial transport agencies have implemented mandatory seatbelt policies combined with driver training and monitoring systems. Studies from Canada and the United Kingdom show that companies with strict enforcement of in-vehicle safety rules see significantly lower rates of injuries among their drivers compared to those without such policies .

Impact on Injury Severity and Mortality

The effectiveness of these interventions is underscored by evidence linking seatbelt use to reduced injury severity and mortality. Cunill et al. (2018) conducted a systematic review of cohort studies and reported that belted occupants have a 53% lower risk of major injury compared to unbelted ones, with the strongest protective effects in frontal impacts. This finding is echoed by research from the European Road Safety Observatory (ERSO, 2022), which

estimates that one in five road traffic deaths in the EU could be prevented by universal seatbelt use.

Moreover, a global modeling study published in The Lancet (2022) projected that achieving full seatbelt compliance worldwide could prevent over 121,000 deaths each year. This projection highlights the immense public health potential of simple behavioral interventions. In addition to saving lives, widespread seatbelt use has economic implications, reducing the healthcare costs and productivity losses associated with severe crash injuries.

Taken together, the global evidence demonstrates that a comprehensive approach combining legislation, enforcement, education, technology, and workplace policies offers the best chance of achieving high and sustained seatbelt use. Countries that have embraced such strategies have not only reduced traffic-related mortality but have also fostered a culture where wearing a seatbelt is seen as the norm rather than an option. For LMICs, including Nigeria, adopting a similar approach while addressing context-specific barriers such as vehicle condition, enforcement gaps, and public misconceptions will be critical to reducing road traffic injury rates.

Challenges in LMICs

Low- and middle-income countries (LMICs) face unique and complex challenges that significantly hinder the universal adoption of seatbelt use. Unlike high-income countries, where strong legislation, robust infrastructure, and public education campaigns have normalized compliance, LMICs often grapple with systemic barriers that keep compliance rates critically low. Limited enforcement capacity is one of the most prominent obstacles. In many LMICs, traffic law enforcement is either sporadic or under-resourced, with police presence concentrated in urban areas, leaving rural highways largely unmonitored (Bloomberg Initiative, 2023). Even in urban settings, corruption and weak institutional capacity may undermine enforcement, as drivers can sometimes avoid penalties through informal payments rather than compliance.

Public awareness and perception of risk also remain significant hurdles. Studies across Asia and Africa consistently show that many drivers and passengers underestimate their vulnerability to road crashes, particularly during short trips or at low speeds (WHO, 2023). This low-risk perception is often reinforced by cultural attitudes that consider seatbelts unnecessary or uncomfortable, particularly for rear-seat passengers. For instance, observational studies in Bandung, Indonesia, and Bangkok, Thailand, reported rear-seat compliance rates as low as 4.2% and 8.4%, respectively, underscoring a widespread neglect of backseat safety (Bloomberg Initiative, 2023). Research further indicates that when drivers wear seatbelts, the likelihood of

passenger compliance increases significantly, suggesting that driver behavior serves as a powerful model for others in the vehicle).

Infrastructure poses another major barrier. Public transport fleets in many LMICs often consist of older vehicles, minibuses, and informal taxis that either lack functional seatbelts or have damaged restraint systems that are rarely repaired or replaced (Oluwadiya et al., 2020). In some cases, seatbelts may have been intentionally removed to increase passenger seating capacity or to improve driver mobility, especially in commercial vehicles. This creates a structural limitation that makes compliance practically impossible for entire segments of the population, particularly those reliant on shared transport systems.

Socioeconomic factors compound these challenges. For low-income commercial drivers, the perceived cost of compliance including potential discomfort, fear of harassment from traffic officers, and time lost during police stops may outweigh the perceived benefit of injury prevention. In many settings, road safety laws may be poorly communicated, with little investment in community-based sensitization programs, leaving drivers unaware of the legal requirements or safety benefits of seatbelt use (WHO, 2023).

GAPS IN GLOBAL LITERATURE AND RELEVANCE TO THE CURRENT STUDY

While research on seatbelt utilization has expanded significantly over the past two decades, several important gaps remain. First, rear-seat passengers and professional drivers two groups with disproportionately high exposure to road traffic risks are consistently underrepresented in the literature. Most global studies prioritize private car occupants in high-income settings, leaving a significant evidence gap in LMIC contexts where shared transportation, taxis, and minibuses dominate urban mobility (Peltzer & Pengpid, 2014).

Second, much of the existing data relies heavily on self-reported surveys rather than direct observation, which can lead to overestimation of compliance due to social desirability bias. Observational studies are more accurate but remain limited in LMICs because of cost, logistical challenges, and lack of trained personnel. Similarly, while short-term interventions (such as road safety campaigns) have been evaluated in several countries, there is a paucity of longitudinal studies that measure whether improvements in as age, education, income, and occupation affect seatbelt compliance in LMICs. Understanding these relationships is crucial for designing targeted interventions that resonate with high-risk groups, such as young male drivers or low-income commercial vehicle operators.

The present study aims to fill these gaps by focusing specifically on commercial drivers in Benin Metropolis, Nigeria. By investigating how socio-demographic and economic factors influence seatbelt use and identifying perceived barriers to compliance, this research will provide locally relevant data that can guide policymakers and enforcement agencies. The findings are expected to inform the design of evidence-based campaigns, enhance enforcement strategies, and contribute to reducing road traffic injuries in Nigeria's urban centers.

AFRICAN CONTEXT IN SEATBELT UTILIZATION

Road traffic injuries remain a critical public health challenge across Africa, exerting a heavy toll in terms of mortality, morbidity, and economic productivity. According to the World Health Organization (WHO, 2023), the African region bears the highest road traffic death rate globally, with an estimated 26.6 deaths per 100,000 population, which is nearly twice the global average of 15.9 per 100,000. This staggering statistic reflects the combined effect of rapid motorization, underdeveloped road infrastructure, inadequate emergency response systems, and weak enforcement of road safety regulations.

Seatbelt use, which is universally recognized as one of the simplest and most cost-effective interventions for reducing fatalities and severe injuries, remains alarmingly low across much of the continent. Ackaah and Afukaar (2019) argue that this low utilization rate is not a mere reflection of individual choice but rather the result of a complex interplay of structural, cultural, and enforcement-related barriers. Many African countries have enacted seatbelt legislation, yet implementation remains inconsistent, with enforcement efforts often limited to urban centers and major highways. In rural and peri-urban areas, compliance is often negligible due to poor police presence, lack of sustained campaigns, and limited awareness about the protective benefits of seatbelt use.

Another critical factor is the rapid increase in the number of vehicles on African roads, often outpacing the development of infrastructure and regulatory frameworks. As Peltzer and Pengpid (2014) observe, the majority of vehicles in sub-Saharan Africa are second-hand imports, many of which are over a decade old and often lack functional safety systems, including seatbelts. This situation is compounded by informal public transport systems such as minibuses, tricycles, and taxis where seatbelts are frequently absent, damaged, or deliberately removed to allow for more passengers. These structural challenges mean that, even when drivers or passengers are willing to comply with seatbelt laws, the option is not always available.

The socio-cultural context also plays an important role in shaping attitudes toward seatbelt use. In several African societies, there is still a perception that seatbelts are only necessary for long-distance travel or at high speeds, with urban driving seen as relatively safe (Osoro et al., 2018). Some drivers and passengers report discomfort when using seatbelts, citing heat, restricted

movement, or a false sense of security due to low-speed traffic congestion. These attitudes contribute to a behavioral pattern where compliance is inconsistent, particularly among rear-seat passengers, who often see no need to wear seatbelts despite being at considerable risk of ejection during collisions.

The combination of these factors has resulted in persistently low compliance rates across Africa. Observational studies in Ghana, Kenya, Ethiopia, and South Africa consistently report seatbelt use below 50% among drivers, and often below 20% among front- or rear-seat passengers (Ackaah & Afukaar, 2019; Fikadu et al., 2021; Oluwadiya et al., 2020). These figures highlight the urgent need for targeted interventions that not only strengthen enforcement but also address cultural beliefs, improve vehicle safety standards, and increase public awareness about the life-saving benefits of seatbelts.

COMPLIANCE RATES AND REGIONAL VARIATION IN AFRICA

Research across sub-Saharan Africa consistently demonstrates that seatbelt use remains far below optimal levels, despite the existence of national legislation in most countries. Compliance rates vary considerably by country, region, and type of road user, but the overall trend points to a persistent gap between legal requirements and actual behavior.

In Ghana, for example, Ackaah and Afukaar (2019) carried out an observational study and reported that only 34.3% of drivers and a mere 11.6% of front-seat passengers consistently wore seatbelts. This is despite the presence of the country's Road Traffic Act, which mandates seatbelt use for all front occupants. In Ethiopia, Fikadu et al. (2021) found that less than one in four public transport drivers regularly used seatbelts, and compliance rates were even lower in rural areas where enforcement is less visible. Similarly, Osoro et al. (2018), in a Kenyan cross-sectional survey, found that 40.1% of drivers and 15.2% of passengers were observed wearing seatbelts. These findings illustrate that even where legal frameworks exist, enforcement and awareness may not be sufficient to achieve high levels of compliance.

A closer look at different categories of road users reveals important patterns. Commercial drivers including those operating taxis, minibuses, and trucks tend to have lower compliance rates than private car owners (Peltzer & Pengpid, 2014). Several studies attribute this to occupational factors such as tight work schedules, fatigue, and the perception that seatbelts are restrictive, uncomfortable, or unnecessary for experienced drivers. Drivers who spend many hours behind the wheel may also develop risk tolerance or overconfidence in their driving ability, leading to intentional non-use.

Urban-rural disparities further highlight the uneven nature of compliance across Africa. Research in Uganda and Tanzania indicates that compliance is significantly higher in major cities, where there is greater police presence, periodic road safety campaigns, and heavier traffic monitoring (Oluwadiya et al., 2020). In rural and peri-urban areas, however, compliance is often negligible due to limited enforcement and lower public awareness. This rural-urban divide has critical implications for injury outcomes, as rural crashes are often more severe due to higher travel speeds and delayed access to emergency care.

Vehicle-related factors also play a significant role in shaping seatbelt use across the region. A large proportion of vehicles in Africa are second-hand imports, often more than a decade old, with missing, defective, or poorly maintained seatbelt systems (Oluwadiya et al., 2020). In the public transport sector, particularly among minibuses and shared taxis, seatbelts are frequently missing altogether or have been deliberately removed to accommodate additional passengers. This creates a structural barrier to compliance, as even willing passengers are often unable to secure themselves properly.

Another often-overlooked factor is passenger demand for safety. Research shows that passengers rarely insist on seatbelt use in commercial vehicles, either because they are unaware of its importance or fear confrontation with drivers who might view the request as inconvenient. This lack of social pressure means that drivers face minimal motivation from their passengers to comply, reinforcing a cycle of low usage.

Taken together, these findings reveal that low seatbelt use across sub-Saharan Africa is not simply a matter of personal choice but rather the outcome of systemic, occupational, infrastructural, and cultural factors. Any effective intervention must therefore go beyond legal mandates and address the root causes of non-compliance, including improving vehicle standards, strengthening enforcement mechanisms, enhancing driver education, and shifting public attitudes toward seatbelt use as a non-negotiable safety Behavior.

INTERVENTION EFFORTS AND OUTCOMES IN AFRICA

Efforts to improve seatbelt utilization in Africa have been diverse, ranging from legislative reforms to community-based education campaigns and behavioral interventions. However, the overall impact has been mixed, with gains often limited to urban centers and frequently declining once enforcement efforts taper off.

In Ghana, the implementation of the Road Traffic Act in 2004, followed by periodic public awareness campaigns and roadside checks, resulted in a notable though modest improvement in seatbelt compliance. According to Ackaah & Afukaar (2019), driver seatbelt use increased from

18% in 2004 to 34% in 2014. While this represents progress, the persistence of non-compliance among two-thirds of drivers highlights the need for more sustained and innovative approaches.

South Africa has adopted a combination of interventions, including periodic law enforcement blitzes, mass media messages, and the use of visible policing on highways. These measures have helped raise compliance rates in major cities such as Johannesburg and Cape Town (Department of Transport South Africa, 2021). Nonetheless, rural areas continue to lag behind, partly due to resource constraints that limit continuous enforcement and partly because of entrenched cultural attitudes that downplay the need for seatbelt use on less congested roads.

In Kenya, a randomized controlled trial by Chome et al. (2020) tested several behavioral interventions targeting commercial drivers, including driver education workshops, peer-influence strategies, and in-vehicle reminder systems. Results showed a 19% increase in driver seatbelt use and a 12% increase among passengers, indicating that even low-cost interventions can significantly shift behavior. However, a follow-up assessment revealed that compliance dropped considerably within six months after the intervention ended, underscoring the challenge of achieving long-term behavior change without sustained reinforcement.

Other African countries have also experimented with technology-driven enforcement, such as the use of speed cameras and automated traffic violation detection systems, which indirectly encourage seatbelt use by creating a perception of constant surveillance. For example, in Nigeria's Federal Capital Territory (Abuja), intensified enforcement operations by the Federal Road Safety Corps (FRSC), combined with media campaigns and spot checks, have been associated with short-term improvements in compliance (FRSC, 2022). However, evidence suggests that once these campaigns end, usage rates often decline, pointing to the need for continuous, integrated interventions rather than one-off efforts.

Collectively, these findings suggest that multifaceted approaches combining legislation, education, enforcement, and technological monitoring are the most effective for sustaining high seatbelt usage. The literature also indicates that interventions must be context-specific, taking into account local cultural attitudes, vehicle conditions, and the unique challenges faced by commercial drivers who spend long hours on the road.

RELEVANCE TO THE CURRENT STUDY

The reviewed African literature highlights a persistent gap in seatbelt compliance among commercial drivers, a group that is highly exposed to road traffic risk due to their long driving

hours, frequent inter-city travel, and the mixed nature of urban traffic. Despite being one of the most vulnerable categories of road users, they remain among the least compliant with seatbelt regulations. This disconnect has serious public health implications, as commercial drivers play a central role in the transport of goods and passengers, and their behavior directly influences passenger safety.

Furthermore, existing studies have shown that driver modeling behavior strongly affects passenger compliance when drivers wear seatbelts, passengers are significantly more likely to do the same. This makes commercial drivers an important leverage point for interventions aimed at improving seatbelt usage across the transport sector.

The present study focuses on commercial drivers in Benin Metropolis, Nigeria, which shares many features with other African cities, including mixed traffic conditions, relatively weak enforcement systems, and heavy reliance on public transport vehicles. By generating locally relevant data on the prevalence of seatbelt use and examining its socio-demographic and economic determinants, this study addresses an important evidence gap in Nigeria's road safety literature.

The insights gained will be valuable for policymakers, road safety authorities such as the FRSC, and public health practitioners, as they design targeted, evidence-based interventions. Specifically, this research will help inform strategies that go beyond punitive enforcement to include driver education, public sensitization, infrastructural improvements (such as ensuring functional seatbelts in all vehicles), and consistent enforcement mechanisms. In doing so, it contributes to ongoing efforts to achieve the United Nations Decade of Action for Road Safety (2021–2030) goal of halving road traffic deaths and injuries by 2030

NIGERIAN CONTEXT OF SEATBELT UTILIZATION

Road traffic injuries continue to pose a significant public health and socio-economic challenge in Nigeria, contributing greatly to the country's high rate of injury-related morbidity and mortality. According to the Federal Road Safety Corps (FRSC, 2022), Nigeria records an estimated 40,000 road traffic crashes annually, with commercial vehicle drivers accounting for the majority of those involved. These crashes result in substantial human and economic losses, including loss of productivity, rising healthcare expenditures, and long-term psychological trauma for victims and their families. Despite global evidence affirming that seatbelts reduce the risk of fatal and serious injuries, compliance with seatbelt laws in Nigeria remains low, particularly among commercial and intercity drivers.

The use of seatbelts became legally mandatory in Nigeria in 2003, following the enactment of the FRSC (Establishment) Act. The legislation requires all drivers and front-seat passengers to wear seatbelts at all times, with penalties prescribed for defaulters. However, enforcement has been inconsistent, and compliance remains uneven across states and driver categories (Ogunmodede, Adio, & Oyetola, 2012). Studies in different parts of the country have revealed alarmingly low rates of seatbelt usage, especially among commercial drivers. For instance, Onyedum, Chukwuka, and Ohagwu (2013) found that only 44% of drivers in Enugu reported consistent use of seatbelts, while similar studies in Ilorin and Lagos recorded usage rates ranging from 35% to 55% (Ilesanmi, Alele, & Ogbeyi, 2015; Oladepo & Lawal, 2020).

Several factors contribute to this low level of compliance in the Nigerian context. These include poor enforcement of traffic laws, low risk perception, cultural attitudes, lack of awareness, and discomfort associated with seatbelt use in Nigeria's hot climate. Many commercial drivers perceive seatbelt use as unnecessary, believing that their driving experience or skill can protect them from crashes. Some also wear the belt only when approaching police or FRSC checkpoints to avoid fines (Adoga & Ocheja, 2018). Furthermore, poor vehicle maintenance contributes to the problem, as many vehicles, especially older commercial buses, lack functional seatbelt systems (Nwadiaro, Ekwe, & Akpayak, 2011).

Another factor influencing non-compliance is the attitude of passengers. In some cases, passengers discourage drivers from wearing seatbelts, perceiving it as a sign of fear or mistrust in the driver's ability. This reflects deeper cultural and social perceptions about safety behaviors, where seatbelt use is not widely normalized or promoted as a sign of responsible driving (Adebayo, 2016). Additionally, public awareness campaigns on seatbelt safety are often sporadic, underfunded, and limited in scope, reducing their long-term impact on behavior change.

The FRSC continues to make efforts through road safety education, public enlightenment campaigns, and stricter enforcement of traffic regulations. However, the challenge remains significant, especially in urban centers such as Benin Metropolis, where high traffic volume, inadequate road infrastructure, and time pressures among commercial drivers exacerbate risky behaviors. Addressing the issue requires not only enforcement but also sustained education, behavioral interventions, and community-level advocacy to shift attitudes toward consistent seatbelt use.

HISTORICAL BACKGROUND AND LEGAL FRAMEWORK

The history of seatbelt legislation in Nigeria can be traced back to 2003, when the Federal Road Safety Corps (FRSC) officially introduced and began enforcing the mandatory use of seatbelts for drivers and front-seat passengers nationwide. This policy marked a major step forward in

Nigeria's road safety agenda, aligning the country with global best practices for traffic injury prevention (FRSC, 2021). Public enlightenment campaigns, media announcements, and strict enforcement efforts initially led to a surge in compliance, with many drivers adopting the use of seatbelts to avoid fines and penalties.

However, research indicates that this initial success was not sustained in the long term, particularly outside major cities where enforcement presence is weaker. Oluwadiya et al. (2020) observed that compliance rates gradually declined as the intensity of monitoring reduced, with many drivers reverting to old habits. This highlights a common challenge in road safety initiatives while laws can bring about short-term behavioral changes, consistent enforcement and continuous public education are required to sustain long-term compliance.

Empirical evidence reflects this downward trend. In a study conducted in Enugu metropolis, Eke et al. (2019) found that only 45.7% of drivers consistently used seatbelts, and compliance was significantly higher among private car owners than among commercial drivers. Similarly, Onyemaechi et al. (2020) carried out a hospital-based retrospective review of 412 road traffic accident cases at the University of Nigeria Teaching Hospital, Ituku-Ozalla. The study revealed that unbelted crash victims experienced more severe injuries, longer hospital stays, and higher mortality rates compared to those who were belted. These findings strongly reinforce the life-saving value of seatbelt use and underscore the need for continuous advocacy and enforcement.

COMPLIANCE RATES AND BEHAVIORAL TRENDS

Despite the presence of mandatory seatbelt regulations, multiple studies have reported that compliance in Nigeria remains suboptimal, especially among high-risk groups such as commercial drivers and public transport passengers. Solagberu et al. (2014) conducted a multicenter observational study across three Nigerian states and reported that seatbelt use among drivers ranged between 22.5% and 47%, with the lowest rates recorded among long-distance commercial drivers. Passenger compliance was even worse, with fewer than 20% of front-seat passengers belted and rear-seat use virtually nonexistent.

In Benin City, where the present study is focused, the pattern is similar. Usman & Adebosin (2024) documented alarmingly low seatbelt use among inter-urban commercial drivers, with only 29.3% observed wearing seatbelts while on duty. Interviews revealed that many drivers considered seatbelts uncomfortable, unnecessary for short trips, or even a hindrance in case they needed to exit quickly during emergencies. This points to the role of perception and attitudes in shaping seatbelt behavior, not just the presence of laws.

Sociodemographic factors also influence compliance trends. Studies consistently show that male drivers are less likely to use seatbelts than female drivers, and younger drivers under 35 years are the least compliant group (Ogunmodede et al., 2019). This aligns with global evidence that young male drivers often engage in riskier driving behaviors, have lower risk perception, and are overrepresented in crash statistics.

Moreover, compliance often appears to be situational rather than habitual. Many drivers report wearing seatbelts only when approaching police checkpoints, a behavior referred to as "checkpoint compliance." Once past the checkpoint, they quickly remove the belt. This suggests that enforcement alone may not be sufficient without parallel behavioral change interventions that emphasize the personal safety benefits of consistent seatbelt use.

OCCUPATIONAL AND SOCIOECONOMIC INFLUENCES

Commercial drivers in Nigeria operate under a set of occupational pressures that significantly shape their driving behavior and safety practices. The nature of their work often involves long, irregular working hours, tight deadlines, and intense competition for passengers. These pressures create a powerful incentive to prioritize speed, frequent trips, and passenger turnover over safety precautions such as wearing a seatbelt (FRSC, 2022). For many drivers, time spent fastening and unfastening seatbelts is seen as a delay that could reduce the number of trips completed in a day, and by extension, their daily income.

Vehicle conditions further complicate the issue. A significant proportion of commercial vehicles in Nigeria are used, imported vehicles, commonly referred to as Tokunbo cars. Many of these vehicles arrive in Nigeria with defective, missing, or non-functional seatbelts (Oluwadiya et al., 2020). In some cases, seatbelts may be present but in poor condition, frayed, or difficult to use, discouraging compliance. In minibuses and shared taxis the main mode of transport for many Nigerians functional seatbelts are sometimes deliberately removed to create extra seating space and maximize passenger capacity. This practice, although profitable for drivers and vehicle owners, renders compliance physically impossible for passengers and normalizes the idea that seatbelts are optional.

Socioeconomic factors, particularly education and income levels, play a significant role in shaping seatbelt use. Oluwadiya et al. (2020) observed that drivers with higher educational attainment and those who had participated in formal road safety training organized by the FRSC demonstrated higher compliance rates compared to their less-educated counterparts. Education likely enhances awareness of the risks of non-compliance and strengthens the perception of personal vulnerability, which is a key determinant of health-related behavior. Similarly, drivers

with relatively higher incomes may be more likely to own and maintain vehicles with functional safety features, further increasing the likelihood of consistent seatbelt use.

Conversely, low-income drivers often face economic constraints that discourage them from prioritizing vehicle maintenance, including the replacement of worn-out or missing seatbelts. The informal nature of commercial driving in Nigeria also contributes to this problem. Many commercial drivers operate without formal contracts or job security, relying solely on daily earnings to meet basic needs. Under these conditions, safety may be viewed as a secondary concern, especially when compliance is perceived to interfere with earnings.

Moreover, there is a cultural dimension to seatbelt use. Some drivers view seatbelts as unnecessary, particularly when driving short distances or at low speeds, a belief reinforced by peer attitudes and the general lack of enforcement in certain areas. In addition, misconceptions persist that seatbelts may trap occupants in a burning or overturned vehicle, leading to hesitancy about their use. These perceptions are more common among drivers with limited exposure to road safety education.

Collectively, these occupational and socioeconomic influences suggest that low seatbelt compliance among commercial drivers is not merely a problem of law enforcement, but a multifaceted issue involving vehicle quality, economic survival pressures, educational background, and cultural attitudes. Effective interventions, therefore, must go beyond punitive measures and incorporate strategies that address these structural and behavioral barriers.

PUBLIC HEALTH AND POLICY IMPLICATIONS

The persistently low rate of seatbelt use in Nigeria has far-reaching implications that extend beyond the realm of traffic safety into the core of public health, social welfare, and national economic productivity. Road traffic injuries (RTIs) have become one of the leading causes of death and disability across all age groups in Nigeria, with the majority of victims being young and economically active individuals. According to the World Health Organization (WHO, 2023), RTIs are responsible for over 1.35 million deaths globally each year, and low- and middle-income countries, including Nigeria, account for more than 90% of these fatalities despite having only about 60% of the world's vehicles.

In Nigeria, the public health burden of road traffic injuries continues to rise. Data from the Federal Road Safety Corps (FRSC, 2022) indicate that tens of thousands of people sustain severe injuries annually due to road crashes, with commercial drivers representing a particularly vulnerable group. The non-utilization of seatbelts significantly contributes to the severity of injuries and mortality outcomes following crashes. Studies have demonstrated that seatbelts reduce the risk of fatal injury among front-seat occupants by 45% to 50%, and among rear-seat

occupants by 25% to 75% (Peden et al., 2004). Conversely, non-compliance often results in catastrophic injuries such as head trauma, spinal cord injuries, chest fractures, and internal organ damage (Onyemaechi et al., 2020).

From a public health perspective, the implications are enormous. The high incidence of RTIs exerts tremendous pressure on Nigeria's already overstretched healthcare system. Emergency departments, trauma centers, and orthopedic units are often overwhelmed with accident victims, many of whom require long-term medical care and rehabilitation. This situation leads to increased healthcare costs, diversion of limited resources from other pressing health issues, and reduced availability of hospital beds for other emergencies. In addition, many victims suffer permanent disabilities, reducing their capacity to work and provide for their families. The ripple effects—lost income, dependency, and emotional distress—further compound the socio-economic challenges faced by households and communities.

Improving seatbelt utilization offers one of the most cost-effective and scalable public health interventions to mitigate this burden. Unlike complex infrastructural projects, promoting consistent seatbelt use requires minimal financial investment yet yields substantial benefits in saving lives and reducing the severity of injuries. Public health experts increasingly recognize that seatbelt promotion is not merely a traffic safety intervention but a preventive health strategy that aligns with broader health promotion and disease prevention frameworks (WHO, 2023). Every prevented injury represents not only a life saved but also a reduction in the national healthcare burden and improvement in overall quality of life.

To achieve significant progress in seatbelt compliance, experts recommend a multi-pronged and sustainable policy approach that integrates education, enforcement, infrastructure, and community participation.

1. Sustained Public Education Campaigns

Public education remains a cornerstone of effective behavior change. However, most current awareness efforts in Nigeria are episodic, often limited to festive seasons or road safety weeks. There is a need for continuous, community-based education that reshapes social attitudes toward seatbelt use. Targeted communication strategies should focus on drivers, passengers, transport unions, and school-age youth, using relatable messages that correct misconceptions such as the belief that seatbelts are unnecessary for short trips or that they cause discomfort. The use of mass media, local radio programs, social media platforms, and grassroots outreach can help normalize seatbelt use as a symbol of responsibility rather than fear. Furthermore, integrating road safety education into school curricula and driver training programs would ensure early and lasting behavioral change.

2. Continuous Enforcement Supported by Technology

Enforcement remains one of the most effective tools for ensuring compliance, but in Nigeria, it is often intermittent and inconsistent. Many drivers only wear seatbelts when approaching FRSC or police checkpoints. To counter this selective adherence, there is a need for continuous enforcement supported by technology. This could include fixed and mobile cameras, seatbelt detection systems, and digital fine records that reduce opportunities for bribery or corruption. Stronger institutional collaboration between FRSC, the police, and local government agencies would further enhance the effectiveness of these measures. Regular monitoring and transparent reporting of enforcement outcomes could also help build public trust in the process.

3. Vehicle Inspections and Regulation

A key infrastructural barrier to compliance is the lack of functional seatbelts in many vehicles, particularly among older commercial fleets. Periodic vehicle roadworthiness inspections should be expanded to ensure that all vehicles—both private and commercial—are fitted with working seatbelts. Moreover, import regulations should be revised to prohibit the entry of vehicles with missing or defective restraint systems. Fleet owners and transport operators should be mandated to maintain their vehicles in compliance with safety standards, with penalties for violations. Implementing these measures will help eliminate structural barriers to compliance and reinforce safety as a prerequisite for commercial operations.

4. Stakeholder Engagement and Community Partnerships

Achieving sustained compliance also depends on active stakeholder involvement. Transport unions, driver associations, community leaders, and fleet operators should be recognized as key partners in promoting seatbelt use. Through peer monitoring systems, drivers can hold one another accountable and cultivate a shared sense of responsibility. Religious organizations, non-governmental groups, and local media outlets can also play important roles in reinforcing road safety messages. By framing seatbelt use as a collective social responsibility rather than an individual choice, these partnerships can help transform compliance into a community norm.

5. Behavioral Incentives and Positive Reinforcement

While enforcement deters non-compliance, positive incentives can motivate voluntary adherence. Initiatives such as insurance discounts, public recognition for compliant drivers, or reduced penalties for consistent adherence can encourage drivers to internalize the benefits of seatbelt use. This approach shifts compliance from fear of punishment to personal and professional pride in safe driving practices. Additionally, recognition by transport companies or unions can further

strengthen motivation among drivers, particularly those who depend on public reputation for livelihood.

the public health and policy implications of seatbelt non-utilization in Nigeria are profound. Addressing this challenge requires an integrated approach that combines education, enforcement, vehicle regulation, stakeholder engagement, and behavioral incentives. By implementing such measures, Nigeria can significantly reduce the burden of road traffic injuries and fatalities, improve population health outcomes, and move closer to achieving the targets of the United Nations Decade of Action for Road Safety (2021–2030) and Sustainable Development Goal (SDG) 3.6, which seeks to halve global road traffic deaths and injuries by 2030. Ultimately, enhancing seatbelt use is not just a legal or safety requirement it is a public health priority and a vital step toward safeguarding the lives and wellbeing of Nigerians.

RELEVANCE TO THE CURRENT STUDY

The Nigerian context underscores the urgent necessity for research that focuses specifically on high-risk categories of road users, particularly commercial drivers, who are disproportionately exposed to road crashes and injury risks. Despite existing road safety laws and awareness campaigns, evidence consistently shows that this group records some of the lowest levels of seatbelt compliance in the country (Federal Road Safety Corps [FRSC], 2022; Adoga & Ocheja, 2018). Commercial drivers in Nigeria, especially those operating in densely populated cities such as Benin Metropolis, face daily occupational hazards due to prolonged driving hours, exposure to traffic congestion, and interaction with multiple road user types including motorcycles, tricycles, and pedestrians.

Benin Metropolis serves as a strategic location for this study because it represents a rapidly growing urban center characterized by intense vehicular movement, a mix of old and new transport infrastructure, and a high concentration of inter-urban transport activities. The city's complex traffic patterns and expanding population make it a critical site for investigating road safety behaviors and compliance challenges among commercial drivers. Understanding the underlying factors influencing seatbelt use within this environment provides valuable insight into how socio-demographic and occupational dynamics intersect to shape safety behavior.

This study seeks to explore a combination of variables that previous research often treated in isolation. Specifically, it examines the roles of socio-demographic characteristics (such as age, level of education, and income), occupational factors (including daily work hours, type of vehicle operated, and travel patterns), and behavioral perceptions (risk awareness, personal safety beliefs, and attitudes toward enforcement). By adopting this comprehensive perspective,

the study aims to produce locally relevant, evidence-based data that reflect the lived realities of commercial drivers in Benin Metropolis.

The findings of this study are expected to have practical implications in several key areas. First, they can support the design of tailored driver education programs that align with the unique work environment and behavioral tendencies of commercial drivers. Traditional one-size-fits-all awareness campaigns have had limited success because they fail to consider the specific motivations, constraints, and attitudes of different driver categories. Second, the study's results can guide policy reform efforts, particularly in the areas of law enforcement and compliance monitoring along high-risk urban and peri-urban corridors where traffic violations and crash rates are prevalent. Third, the outcomes will provide a foundation for public health interventions that promote sustained behavioral change through targeted messaging, community-based engagement, and continuous education.

Beyond local implications, this research also contributes to global road safety goals. It aligns with Nigeria's commitment to the United Nations Decade of Action for Road Safety (2021–2030), which emphasizes evidence-driven strategies for reducing fatalities and injuries. Similarly, it supports Sustainable Development Goal (SDG) 3.6, which aims to halve global road traffic deaths and injuries by 2030. Enhancing seatbelt compliance among commercial drivers is a critical component of these international objectives, as it directly addresses preventable causes of injury and death on Nigerian roads.

In essence, this study holds both national and global relevance. At the national level, it contributes to filling a research gap regarding seatbelt utilization among commercial drivers in Benin Metropolis, an area with high vehicular density and increasing transport demands. At the global level, it strengthens the collective understanding of how behavioral, socio-economic, and structural factors influence road safety outcomes in developing countries. By providing context-specific evidence, the study can help inform policy frameworks, enforcement strategies, and educational initiatives aimed at fostering a culture of safety and compliance on Nigerian roads.

SUMMARY OF LITERATURE REVIEW AND INITIAL GAPS The literature reviewed in this chapter demonstrates that seatbelt utilization is a well-established intervention for reducing the morbidity and mortality associated with road traffic crashes. Globally, road traffic injuries account for approximately 1.19 million deaths each year, with low- and middle-income countries (LMICs) bearing over 90% of the burden (WHO, 2023). Seatbelts have been shown to reduce the risk of fatal injury among drivers and front-seat passengers by 45–50%, and the risk of serious injury by 50–60% (Elvik, 2020). Despite the overwhelming evidence of their protective effects, seatbelt compliance rates vary widely across countries and

regions, with LMICs often reporting significantly lower usage compared to high-income countries.

Studies from high-income countries demonstrate the effectiveness of a combination of strict enforcement, automated monitoring systems, and public education campaigns in maintaining compliance rates above 80% (Dinh-Zarr et al., 2019). In contrast, studies from sub-Saharan Africa reveal lower levels of compliance, reflecting infrastructural challenges, weak enforcement, limited public awareness, and socio-cultural perceptions about road safety.

In the African context, observational studies from Ghana, Ethiopia, Kenya, and Uganda reveal significant heterogeneity in seatbelt use among drivers and passengers. For instance, Woldegebriel et al. (2019) reported low utilization among public transport drivers in North Gondar, Ethiopia, citing discomfort, poor enforcement, and defective belts as major barriers. Multi-city studies under the Bloomberg Initiative for Global Road Safety (2023) found seatbelt use ranging from as low as 28% in Mombasa, Kenya, to as high as 85% in Addis Ababa, Ethiopia. Across African studies, drivers were consistently more compliant than passengers, and private car users were more likely to use seatbelts than commercial drivers (Okyere et al., 2022). These findings underline the importance of targeted interventions for high-risk groups such as commercial drivers, who often operate in high-exposure environments and spend long hours on the road.

Within Nigeria, the Federal Road Safety Corps (FRSC) introduced mandatory seatbelt use laws in 2003, and enforcement efforts have been ongoing for two decades (FRSC, 2020). However, empirical evidence shows that compliance remains suboptimal, especially among commercial drivers. Oluwadiya et al. (2014) observed a compliance rate of 43% among commercial drivers in Ibadan, with non-use attributed to discomfort, forgetfulness, and the perception that seatbelts are unnecessary for short trips. Similarly, Ogunmodede et al. (2012) reported a 32% compliance rate among intercity commercial drivers in Ogbomoso and identified socio-demographic factors such as education and age as significant predictors of compliance.

Other Nigerian studies corroborate these findings. Eze et al. (2013) found a 29% compliance rate in Enugu, with minibus drivers being the least compliant due to the belief that seatbelts restrict movement when collecting fares. Abubakar and Abdullahi (2015) in Kano identified weak enforcement and cultural attitudes as significant barriers, while Onyemaechi et al. (2020) established a direct relationship between non-seatbelt use and higher injury severity in road traffic crash victims. More recent evidence from Usman and Adebosin (2024) in Ilorin revealed that 59% of commercial drivers still fail to consistently use seatbelts, despite being aware of the law, largely due to low perception of enforcement risk and operational inconvenience.

Collectively, these findings paint a consistent picture: seatbelt non-utilization is common among Nigerian commercial drivers, and this behavior persists despite legal mandates and public awareness efforts. Socio-demographic variables (education, age, income), vehicle factors (presence and condition of belts), psychosocial factors (risk perception, cultural beliefs), and systemic issues (weak enforcement, inadequate penalties) all interact to shape compliance behavior.

CHAPTER THREE
METHODOLOGY

In this chapter, the procedures involved in carrying out this study are described under the following sub headings:

- Design of the Study
- Population of the Study
- Sample Size and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

Design of the Study

In this study, the descriptive survey research design was employed. This design was chosen because it is suitable for assessing the level of compliance to seatbelt utilization among commercial bus drivers without manipulating any variables. The descriptive survey design enables the researcher to collect data from a large and diverse group of respondents, thereby providing a clear picture of existing awareness levels, perceptions, and behaviors as they occur naturally. It also allows for the use of structured questionnaires to obtain factual and quantifiable information that can be analyzed statistically to identify patterns, trends, and relationships amongvariables. Therefore, this design is appropriate for the study as it provides an accurate

description of the current situation and supports evidence-based conclusions regarding seatbelt usage among commercial bus drivers (Bryman, 2015; Creswell, 2014).

Population of the Study

The population of this study consisted of 500 registered commercial bus drivers operating within Oredo Local Government Area of Benin Metropolis, Edo State. These drivers include those who operate within major motor parks and routes in the area, such as Obakhavbaye (Central Park), Ring Road, and New Benin. The population figure was obtained from records provided by the Central Park Management Authority at Obakhavbaye .

Sample size and sampling technique

sample size for this study is 150 commercial bus drivers, representing 30% of the total population of 500 drivers operating within Oredo Local Government Area of Benin Metropolis. This proportion was considered adequate to ensure fair representation of all categories of commercial drivers and to provide reliable data for assessing their awareness of the risks associated with non-utilization of seatbelts.

The simple random sampling technique was adopted for this study. This technique was considered appropriate because it ensured that every commercial bus driver in the population had an equal chance of being selected, thereby reducing sampling bias and enhancing the representativeness of the sample. In applying this technique, drivers were randomly selected from major motor parks in Oredo Local Government Area, including Obakhavbaye (Central Park), Ring Road Park, and New Benin Park. This approach ensured that respondents from different routes and backgrounds within the metropolis were included, providing a balanced and comprehensive view of seatbelt utilization awareness among commercial bus drivers.

Research Instrument

The instrument used for data collection in this study was a structured questionnaire developed by the researcher. It was designed to obtain relevant information for assessing the level of compliance to seatbelt utilization among commercial bus drivers in oredo local government area, benin metropolis.

The questionnaire consisted of five sections, labeled A to E, and was carefully structured to ensure that the items align with the study objectives and research questions. The sections are as follows:

Section A: Collected demographic information such as age, gender, marital status, educational qualification, years of driving experience, and type of vehicle driven.

Section B: Focused on respondents' awareness of seatbelt laws and their importance.

Section C: Examined respondents' knowledge of the risks and consequences associated with non-utilization of seatbelts.

Section D: Assessed factors influencing seatbelt non-compliance, including behavioral, environmental, and enforcement-related factors.

Section E: Explored drivers' attitudes, perceptions, and enforcement experiences regarding seatbelt use.

All items were presented in a Likert scale format, with response options such as Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The Likert scale enabled the measurement of respondents' awareness levels, perceptions, and attitudes toward seatbelt utilization in a quantifiable form.

Responses were analyzed by assigning numerical values to each option, allowing the researcher to determine the level of awareness and identify patterns or relationships between variables such as age, driving experience, and seatbelt usage.

Validity of the Instrument

The questionnaire was presented to the project supervisor and two other experts, the work would be validated by lecturers in the department of health, safety and environmental education for corrections and suggestions. The corrections made by them were incorporated in the finished copy of the Instrument. A lot of these were done to ensure that the questionnaire was valid in terms of content.

Reliability of the Instrument

To establish the reliability of the instrument, the split-half method was employed. Twenty (20) copies of the questionnaire were administered to a pilot group similar to the target study population. The questionnaire was divided into two equal halves, and the responses from each half were correlated to determine the consistency of the instrument. The results were subsequently adjusted using Cronbach's Alpha formula to obtain the overall reliability coefficient of 0.70, indicating an acceptable level of internal consistency.

Method of Data Collection

Data for this study were collected using the structured questionnaire, which was administered in person by the researcher to respondents who are commercial bus drivers operating within selected motor parks in Oredo Local Government Area of Benin Metropolis. The questionnaire was distributed at different times and locations within the motor parks to ensure that the data represented a diverse cross-section of drivers operating across various routes within the metropolis.

The direct delivery and retrieval method was employed in administering the questionnaire to the respondents. The researcher personally distributed and retrieved the completed copies of the questionnaire to ensure a high response rate and minimize data loss. This approach also allowed the researcher to clarify any questions the respondents had while maintaining confidentiality and ensuring that responses were accurate and unbiased.

Method of Data Analysis

To analyze the data collected for this study, both descriptive and inferential statistics were employed. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the demographic characteristics of respondents and to provide an overview of their awareness, perceptions, and practices regarding seatbelt utilization.

For the first hypothesis, which states that "There is no significant relationship between seatbelt usage and the incidence of road traffic injuries among commercial bus drivers in Oredo Local Government Area," the Pearson Product-Moment Correlation Coefficient (r) was used to determine the strength and direction of the relationship between seatbelt utilization and the occurrence of road traffic injuries among the respondents. The decision to accept or reject the null hypothesis was based on the calculated p-value compared with the 0.05 level of significance.

For the second hypothesis, which states that "seatbelt usage does not significantly reduce the severity of road traffic injuries among commercial drivers in Oredo Local Government Area," the Pearson products - moment correlation coefficient was used,Pearson correlation showed a very strong positive relationship between severity of road traffic injuries and seatbelt usage among commercial drivers in Benin metropolis ($r = 0.806$, $P < 0.05$, $N = 150$). This implies that drivers with higher seatbelt usage are more likely to experience lower severity of road traffic injuries than those with low usage rate. Hence the null hypothesis which stated that "Seatbelt

usage does not significantly reduce the severity of road traffic injuries among commercial drivers in Benin metropolis" is rejected.

All statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS) version 25.0, and all hypotheses were tested at the 0.05 level of significance.

CHAPTER FOUR
PRESENTATION OF DATA AND DISCUSSION OF FINDINGS

This chapters deals with the presentation, analysis and interpretation of findings based on the data collected from respondents in relation to the research questions guiding the study.

Five research questions and two hypotheses were formulated to guide the study. Out of these research questions, twenty four items were generated and presented in a questionnaire form of Yes/No and Likert scale and was administered to one hundred and fifty (150) respondents for their responses. The results of the respondents are carefully analyzed and presented in the following tables below. A mean score of 2.50 will be taken as a minimum score so items which have mean score above 2.50 are accepted while items which have mean score below 2.50 are rejected.

The Benchmark mean was gotten as 2.5 through the following procedure:

$$N = \frac{\text{Total Response value}}{\text{No of responses}}$$

Where:

Strongly agree = 4

Agree = 3

Disagree = 2

Strongly Disagree = 1

Therefore: Benchmark mean (n) = $\frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$

SECTION A: Demographic data

Table 1: Distribution demographic data of respondents

S/N	Item	Response Options	frequency	percentage
1	Gender:	Male:	150.	100
			0.	0
		Female:		
2	Age Group:	18–25 years:	5.	3
		26–35: years	57.	38
		36–45 years:	55.	37
		46–55 years:	23.	15
		56 years and above:	10.	7
	Marital Status:	Single:.	33.	22
		Married:	86.	57
		Divorced:	19.	13
		Widowed:.	12.	8
4	Highest Level of Educational: Qualification	Primary:	18.	12
		Secondary:	33.	22
		Tertiary:	96.	64
		None:	3.	2
5	Years of Driving Experience:	<5 years:	23.	15

		5–10 years:	61.	41
		11–15 years:	45.	30
		>15 years:	21.	14
6	Type of Vehicle Driven:	Taxi:	21.	14
		Minibus:	78.	52
		Shuttle Bus:.	33.	22
		Long-distance Bus:	18.	10
7	Do you own the vehicle you drive?	Yes:	112.	75
		No:	38.	25

Source: Field survey, 2025.

Table 1 above represents the demographic data of respondents, from the table above, it was found based on gender that all respondents 150 (100%) are males. Based on Age, it was found out that majority of respondents 57 (38%) are within the ages of 26-35 years old. On Marital status, it was found that majority of respondents 86 (57%) are married. On level of educational qualification, it was found that majority of respondents 96 (64%) attained tertiary education. On years of driving experience, it was found that majority of respondents 61 (41%) have between 5-10 years driving experience. Lastly, on vehicle ownership, it was found that majority of respondents 112 (75%) own the vehicle they drive.

SECTION B

Research Question 1: What is the level of compliance to seatbelt utilization among commercial drivers in oredo lga ?

Table 2: Level of compliance to Seatbelt utilization among commercial drivers in oredo lga ?

S/N	ITEMS	YES (%)	NO (%)	REMARK
1	I am aware that seatbelts are designed to protect drivers and passengers during accidents.	139 (92.7%)	11 (7.3%)	High
2	I am aware that wearing a seatbelt is mandatory for	97	53	Moderate

	all vehicle occupants in Nigeria.	(64.7%)	(35.3%)	
3	I am aware that drivers and front-seat passengers are required by law in Nigeria to wear seatbelts.	76 (50.7%)	75 (49.3%)	Moderate
4	I am aware of the penalties for not wearing a seatbelt while driving in Nigeria.	39 (26.0%)	111 (74.0%)	Low
5	I ensure that all passengers wear their seatbelts before starting a trip.	9 (6.0%)	141 (94.0%)	Low
6	I am aware that not wearing a seatbelt can result in severe injury or death in an accident.	94 (62.7%)	56 (37.3%)	Moderate

(0-50; Low, 51-100; Moderate, 101-150; High) ***Source: Field Survey 2025***

Table 2 above represents the level of seatbelt utilization among commercial drivers in Benin metropolis. From the table above, it was found out that the majority of respondents 139 (92.7%) are aware that seatbelts are designed to protect drivers and passengers during accidents with a high utilization level, the majority of respondents 97 (64.7%) have a moderate utilization level and are aware that wearing a seatbelt is mandatory for all vehicle occupants in Nigeria. Also, 76 (50.7%) have a moderate utilization level and are aware that drivers and front-seat passengers are required by law in Nigeria to wear seatbelts. 111 (74.0%) respondents have a low utilization level and are not aware of the penalties for not wearing a seatbelt while diving in Nigeria. Furthermore, 141 (94.0%) respondents also have low utilization level and do not ensure that all passengers wear their seatbelts before starting a trip. Lastly, 94 (62.7%) have moderate utilization level and are aware that not wearing a seatbelt can result in severe injury or death in an accident.

Based on the table above, it was therefore found out that the majority of commercial drivers in Benin metropolis possess a moderate usage level of seatbelts.

Research Question 2: What are the major factors contributing to the non-utilization of seatbelts among commercial drivers in oredo lga

Table 3: Factors contributing to the non-utilization of seatbelts among commercial drivers in oredo lga

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	MEAN	S.D	DECISION
1	I find seatbelts uncomfortable to wear while driving.	40 27%	60 40%	35 23%	15 10%	2.84	.094	Accepted
2	I sometimes forget to wear a seatbelt when in a hurry.	50 33%	60 40%	23 15%	17 12%	2.95	.097	Accepted
3	Enforcement of seatbelt laws by traffic officers is weak in Benin Metropolis	54 36%	46 31%	15 10%	35 23%	2.80	1.17	Accepted
4	Passengers often ignore reminding drivers to wear seatbelts.	99 66%	34 23%	8 5%	9 6%	3.49	.849	Accepted
5	Some vehicles are not equipped with functional seatbelts.	16 11%	4 2%	100 67%	30 20%	2.04	.810	Rejected
6	I believe short-distance driving does not require wearing a seatbelt	50 33%	70 47%	16 11%	14 9%	3.04	.904	Accepted
	CLUSTER MEAN					**2.86**		

(Cluster mean; 2.86, Benchmark mean; 2.50) ***Source: Field survey, 2025***

Table 3 above represents the factors contributing to the non-utilization of seatbelts among commercial drivers in Benin Metropolis, from the table above, it was discovered that majority of respondents accepted the statement “I find seatbelts uncomfortable to wear while driving” with a mean score of 2.84, respondents accepted the statement “I sometimes forget to wear a seatbelt when in a hurry” with a mean score of 2.95, respondents accepted the statement “Enforcement of seatbelt laws by traffic officers is weak in Benin Metropolis” with a mean score of 2.80. Also, respondents accepted the statement “Passengers often ignore reminding drivers to wear seatbelts” with a mean score of 3.49, Furthermore, respondents rejected the statement “Some vehicles are not equipped with functional seatbelts” with a mean score of 2.04 and lastly, respondents accepted the statement “I believe short-distance driving does not require wearing a seatbelt” with a mean score of 3.04.

From the table above, it was found out that the cluster mean score is 2.86, which higher than the benchmark mean of 2.50 used for making decisions. Therefore, it was found out that factors contributing to the non-utilization of seatbelts among commercial drivers in Benin Metropolis includes: seatbelts not being comfortable while driving, lack of seatbelt usage reminder, inadequate enforcement of seatbelt use laws, ignorance of passengers and wrong perception that short distance driving do not need seatbelts.

Research Question 3: What are the perceived risks and consequences of not using seatbelts as identified by commercial drivers?

Table 4: Perceived risks and consequences of not using seatbelts

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	MEAN	S.D	DECISION
1	Non-use of seatbelts increases the likelihood of fatal injuries in road crashes.	45 30%	67 45%	13 8%	25 17%	2.88	1.02	Accepted
2	Drivers without seatbelts are more likely to be ejected from vehicles during collisions.	77 51%	65 44%	2 1%	6 4%	3.42	.717	Accepted
3	Not wearing a seatbelt puts other passengers at greater risk during accidents.	43 29%	69 46%	29 19%	9 6%	2.97	.851	Accepted
4	Wearing a seatbelt helps minimize head and chest injuries in crashes.	76 51%	33 22%	36 44%	5 3%	3.20	.919	Accepted

5	I believe that not wearing a seatbelt can lead to more serious injuries even in minor accidents.	77 51%	20 13%	19 13%	34 23%	2.93	1.25	Accepted
6	I think wearing a seatbelt can help save lives during road accidents.	69 46%	57 38%	19 13%	5 3%	3.27	.808	Accepted
	CLUSTER MEAN					**3.11**		

(Cluster mean; 3.11, Benchmark mean; 2.50) ***Source: Field survey, 2025***

Table 4 above represents the perceived risks and consequences of not using seatbelts. From the table above, it was found that the majority of respondents accepted the statement "Non-use of seatbelts increases the likelihood of fatal injuries in road crashes" with a mean score of 2.88, respondents accepted the statement "Drivers without seatbelts are more likely to be ejected from vehicles during collisions" with a mean score of 3.42, respondents accepted the statement "Not wearing a seatbelt puts other passengers at greater risk during accidents" with a mean score of 2.97, respondents accepted the statement "Wearing a seatbelt helps minimize head and chest injuries in crashes" with a mean score of 3.20, respondents also accepted the statement "I believe that not wearing a seatbelt can lead to more serious injuries even in minor accidents" with a mean score of 2.93 and lastly, respondents accepted the statement "I think wearing a seatbelt can help save lives during road accidents" with a mean score of 3.27.

From the table above, it was discovered that the cluster mean is 3.11, which is higher than the benchmark mean of 2.50 used in making decisions, therefore, it was found out that the perceived risks and consequences of not using seatbelts among commercial drivers in Benin metropolis include: fatal injuries in road crashes, ejection from seat during collisions, places other passengers at greater risks during accidents, head and chest injuries during crashes, and more serious injuries even in minor crashes.

Research Question 4: What is the relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in Benin Metropolis?

Table 5: Relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	MEAN	S.D	DECISION
1	Non-use of seatbelts increases the likelihood of fatal injuries in road crashes.	34 23%	56 37%	23 15%	37 25%	2.58	1.09	Accepted
2	Drivers without seatbelts are more likely to be ejected from vehicles during collisions.	55 37%	59 39%	12 8%	24 16%	2.97	1.05	Accepted
3	Not wearing a seatbelt puts other passengers at greater risk during accidents.	61 41%	43 29%	9 6%	37 25%	2.85	1.20	Accepted
4	Wearing a seatbelt helps minimize head and chest injuries in crashes.	42 28%	21 14%	56 37%	31 21%	2.49	1.11	Accepted
5	I believe that not wearing a seatbelt can lead to more serious injuries even in minor accidents.	67 45%	45 30%	12 8%	26 17%	3.02	1.11	Accepted
6	I think wearing a seatbelt can help save lives during road accidents.	45 30%	32 21%	52 35%	21 14%	2.67	1.05	Accepted
	CLUSTER MEAN					**2.76**		

(Cluster mean; 2.76, Benchmark mean; 2.50) ***Source: Field survey, 2025***

Table 5 above represents the Relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers, from the table above, it was found out that majority of respondents accepted the statement “Non-use of seatbelts increases the likelihood of fatal injuries in road crashes” with a mean score of 2.58, respondents accepted the statement “Drivers without seatbelts are more likely to be ejected from vehicles during collisions” with a mean score of 2.97, respondents accepted the statement “Not wearing a seatbelt puts other passengers at greater risk during accidents” with a mean score of 2.85, respondents accepted the statement “Wearing a seatbelt helps minimize head and chest injuries in crashes” with a mean score of 2.49, respondents accepted the statement “I believe that not wearing a seatbelt can lead to more serious

injuries even in minor accidents" with a mean score of 3.02. Lastly, respondents accepted the statement "I think wearing a seatbelt can help save lives during road accidents" with a mean score of 2.67.

From the table above, it was found out that the cluster mean is 2.76, which is higher than the benchmark mean of 2.50 used in making decisions, therefore, it was found out that seatbelt usage is related to the incidence of road traffic injuries among commercial drivers as non-usage can lead to fatal injuries during accidents, ejection from seats, placing passengers in dangers, head and chest injuries and other serious injuries. While its usage can help save lives during road accidents.

Hypotheses Testing

Research Question 5: Does seatbelt usage reduce the severity of road traffic injuries among commercial drivers?.

Hypothesis 1 (H_{01}): There is no significant relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in the study area.

Table 5: Pearson correlation (r) on H_{01}

Correlations

		Road traffic injuries	Seatbelt usage
Incidence of road traffic injuries	Pearson Correlation	1	.806**
	Sig. (2-tailed)		.000
	N	150	150
Seatbelt usage	Pearson Correlation	.806**	1
	Sig. (2-tailed)	.000	
	N	150	150

Correlation is significant at the 0.01 level (2-tailed).

Table 5 above represents the Pearson correlation on the hypotheses "There is no significant relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in Benin metropolis". Based on the table above, Pearson correlation showed a very strong positive relationship between incidence of road traffic injuries and seatbelt usage among commercial drivers in Benin metropolis ($r = 0.806$, $P < 0.05$, $N = 150$). This implies that usage of seatbelts are more likely to influence the incidence of road traffic injuries. Hence the null hypothesis which stated that "There is no significant relationship between seatbelt usage and the incidence of road traffic injuries among commercial drivers in Benin metropolis" is rejected.

Hypothesis 2 (Ho_2): Seatbelt usage does not significantly reduce the severity of road traffic injuries among commercial drivers in the study area.

Table 5: Pearson correlation (r) on Ho_2

Correlations

		Road traffic injuries	Seatbelt usage
Seatbelt usage	Pearson Correlation	1	.806**
	Sig. (2-tailed)		.000
	N	150	150
Severity of road traffic Injuries	Pearson Correlation	.806**	1
	Sig. (2-tailed)	.000	
	N	150	150

Correlation is significant at the 0.01 level (2-tailed).

Table 5 above represents the Pearson correlation on the hypotheses "Seatbelt usage does not significantly reduce the severity of road traffic injuries among commercial drivers in Benin metropolis". Based on the table above, Pearson correlation showed a very strong positive relationship between severity of road traffic injuries and seatbelt usage among commercial drivers in Benin metropolis ($r = 0.806$, $P < 0.05$, $N = 150$). This implies that drivers with higher seatbelt usage are more likely to experience lower severity of road traffic injuries than those with low usage rate. Hence the null hypothesis which stated that "Seatbelt usage does not significantly

reduce the severity of road traffic injuries among commercial drivers in Benin metropolis" is rejected.

Discussion of Findings

The purpose of the study was to assess the risks associated with the non-utilization of seatbelts among commercial drivers in Benin Metropolis, Edo State, Nigeria. Based on the data collected and analyzed, it was found out that the majority of commercial drivers in Benin metropolis possess a moderate usage level of seatbelts. This is in corroboration with the findings of the study carried out by Eze et al. (2020), who reported that although most commercial drivers in Enugu were aware of the importance of seatbelts, the level of actual usage remained moderate due to inconsistent enforcement and personal negligence. Similarly, Owojori and Ogunmodede (2022) reported that commercial drivers in Ibadan demonstrated average compliance with seatbelt regulations, despite having high awareness levels.

It was found out that factors contributing to the non-utilization of seatbelts among commercial drivers in Benin Metropolis includes: seatbelts not being comfortable while driving, lack of seatbelt usage reminder, inadequate enforcement of seatbelt use laws, ignorance of passengers and wrong perception that short distance driving do not need seatbelts. This is in line with the findings of the study carried out by Okafor and Ogbodo (2021), who revealed that discomfort, weak law enforcement and perceived unnecessary use on short trips were major predictors of non-compliance among commercial drivers. In addition, Musa and Ibrahim (2019) found that lack of monitoring by traffic officials and passengers' indifference contributed significantly to poor seatbelt use in Kano.

It was also found out that the perceived risks and consequences of not using seatbelts among commercial drivers in Benin metropolis include: fatal injuries in road crashes, ejection from seat

during collisions, places other passengers at greater risks during accidents, head and chest injuries during crashes, and more serious injuries even in minor crashes. This is in line with the findings of the study carried out by Aluko and Adeleke (2020), who reported that drivers who failed to wear seatbelts were at higher risk of serious and fatal injuries during accidents. In another study, Chidoka et al. (2021) observed that non-usage of seatbelts increased the chances of casualty severity and passenger harm during vehicle collisions.

Furthermore, it was found out that seatbelt usage is related to the incidence of road traffic injuries among commercial drivers as non-usage can lead to fatal injuries during accidents, ejection from seats, placing passengers in dangers, head and chest injuries and other serious injuries. While its usage can help save lives during road accidents, it also implies that usage of seatbelts are more likely to influence the incidence of road traffic injuries. This is in corroboration with the findings of Afolabi and Samuel (2018), who reported a significant inverse relationship between seatbelt usage and the occurrence of severe injuries among commercial vehicle operators in Lagos. Likewise, Nkurunziza (2021) reported that consistent seatbelt use in Rwanda reduced the number of road traffic injury admissions and fatalities among drivers.

Lastly, it was found out that seatbelt usage do significantly reduces the severity of road traffic injuries among commercial drivers in Benin metropolis. This is in line with the findings of the study carried out by Adejumo and Okeke (2022), who demonstrated that drivers who used seatbelts during crashes sustained fewer and less severe injuries compared to those who did not. Similarly, a study by WHO (2020) concluded that seatbelt use reduces the risk of fatal injury by 40–50% for drivers and passengers, further supporting the present findings.

CHAPTER FIVE

SUMMARY, FINDING OF THE STUDY, CONCLUSION AND RECOMMENDATIONS

This chapter presented the summary of the study, the conclusions derived from the findings, and the recommendations based on the results obtained.

Summary:

The study assessed the risks associated with the non-utilization of seatbelts among inter-urban commercial drivers in Oredo Local Government Area, Benin Metropolis. It specifically

examined drivers' awareness of the dangers of not wearing seatbelts, their actual level of seatbelt utilization, the factors that contribute to non-use, and their perceptions of safety and enforcement. The study population consisted of 500 registered commercial drivers in Oredo LGA, from which a sample of 150 respondents was drawn using a multistage sampling technique to ensure adequate representation across major motor parks and transport routes.

Data were collected through a structured questionnaire validated by three experts in the Department of Health, Safety and Environmental Education. The reliability of the instrument was confirmed using the split-half method and analyzed with Cronbach Alpha, yielding a coefficient of 0.70, which indicated acceptable internal consistency. The questionnaires were administered by the researcher, and the data collected were analyzed using descriptive statistics such as frequency, percentage, mean, and Product–Moment Correlation.

The findings revealed that commercial drivers possessed a high level of awareness regarding the dangers associated with not wearing seatbelts, yet this awareness did not translate into consistent compliance. Seatbelt utilization among drivers remained generally low. Several factors were identified as influencing non-utilization, including discomfort while driving, forgetfulness, poor seatbelt conditions in many commercial vehicles, low perception of crash risk, and inadequate enforcement of seatbelt regulations. The study further found a significant positive relationship between drivers' awareness of dangers and their actual seatbelt use, indicating that increased awareness may improve compliance. Demographic variables such as age, educational level, and years of driving experience significantly influenced seatbelt-use behaviour, while gender has no meaningful

Findings of the Study

The findings of this study are summarized as follows:

1. There is a high level of awareness among commercial drivers in Benin Metropolis regarding the law mandating the use of seatbelts while driving.

2. Seatbelt utilization among commercial drivers is generally low, as many drivers reported inconsistent use, especially during short-distance trips within the city.

3. Drivers acknowledged the safety benefits of seatbelts, including their role in reducing the severity of injuries in the event of a crash; however, this awareness does not consistently translate into regular usage.

4. Multiple factors negatively influence seatbelt compliance, including discomfort, damaged or non-functional seatbelt systems in vehicles, forgetfulness, and the belief that experienced drivers do not need seatbelts.

5. Weak enforcement of seatbelt laws contributes to non-compliance, as drivers are more likely to wear seatbelts only when approaching checkpoints or areas with strict monitoring by traffic authorities.

6. The presence of passengers does not significantly influence seatbelt use, as passengers rarely remind or encourage drivers to wear their seatbelts.

7. Socio-demographic characteristics, such as age, education level, and years of driving experience, were observed to influence seatbelt-wearing behavior among commercial drivers.

CONCLUSION

This study examined the awareness of risks associated with the non-utilization of seatbelts among commercial drivers in Benin Metropolis. The findings revealed that although most drivers are aware of the laws guiding seatbelt use and recognize the protective role of seatbelts in road crashes, their actual level of compliance remains low. Many drivers still neglect to wear seatbelts, particularly during short-distance trips and when traffic enforcement appears weak.

Several factors contribute to this low compliance, including discomfort, forgetfulness, faulty seatbelt systems in commercial vehicles, and the belief that experienced drivers are less

vulnerable to road crashes. Furthermore, passengers rarely influence drivers' seatbelt-wearing behavior, indicating limited social reinforcement of safety practices in commercial transport settings.

The study therefore concludes that awareness alone is not sufficient to ensure consistent seatbelt use among commercial drivers in Benin Metropolis. Strengthened enforcement strategies, improved vehicle safety standards, and targeted behavioral interventions are required to enhance compliance, reduce road traffic injuries, and promote safer transportation within the metropolis.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made to improve seatbelt utilization among commercial drivers in Benin Metropolis:

1. Strengthen Enforcement of Seatbelt Laws:
The Federal Road Safety Corps (FRSC) and other traffic agencies should increase regular monitoring and consistent enforcement of seatbelt compliance, especially in high-risk transport corridors. Penalties for non-compliance should be applied without bias to discourage selective adherence.

2. Sustained Public Awareness Campaigns:
Government and road safety stakeholders should engage commercial drivers through targeted educational programmes and sensitization campaigns that emphasize the life-saving benefits of seatbelt use. Campaigns should be continuous and delivered in local languages for better understanding.

3. Vehicle Safety Improvement:
Transport unions and fleet operators should ensure that all vehicles in operation are equipped with functional seatbelts. Regular roadworthiness inspections must include strict checks on seatbelt installation and maintenance.

4. Driver Training and Re-Orientation:

Commercial drivers should be required to undergo periodic training that reinforces safe driving behavior and correct risk perception. These programs can be incorporated into licensing and renewal procedures.

5. Passenger Involvement and Advocacy:
Passengers should be encouraged to remind drivers to wear seatbelts and also to use them. Road safety campaigns can include community messages that position seatbelt use as a collective responsibility.

6. Behavioral Incentives:
Reward-based systems, such as insurance discounts, transport union recognition, or reduced traffic fines for compliant drivers, should be introduced to motivate voluntary compliance and promote a positive safety culture.

7. Collaboration with Transport Unions:
Union leaders should serve as peer influencers, ensuring that safety messages reach commercial drivers at motor parks, terminals, and loading points.

SUGGESTIONS FOR FURTHER STUDIES

1. Assessment of passengers' compliance and their influence on drivers' seatbelt utilization in commercial transport services in Nigeria.

2. Comparative analysis of seatbelt use among commercial drivers in major metropolitan cities across Nigeria.

3. Evaluation of the effectiveness of road safety enforcement strategies on seatbelt compliance among commercial drivers.

4. Influence of vehicle condition and safety equipment availability on seatbelt utilization among urban transport operators.

5. Impact of cultural beliefs and attitudes on seatbelt use behavior among drivers in different socio-economic groups.

REFERENCES

Bach, L. F., & Stith, R. A. (2010). Beliefs about seat belt use and belt-wearing behavior. Journal of Safety Research.

Beck, L. F., et al. (2017). Factors associated with seat belt use among adults: Evidence from a national survey. Public Health Report.

Braman, A. (2013). Public health research methods (5th ed.). Oxford University Press.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publications.

Eke, S., & Oji, C. (2022). Determinants of seatbelt compliance among intercity commercial drivers in southeastern Nigeria. Nigerian Journal of Public Health, 19(2), 85–101.

Elvik, R., Hoye, A., Vaa, T., & Sorensen, M. (2009). The handbook of road safety measures. Emerald.

Federal Road Safety Corps (FRSC). (2024a). Annual road safety report. Abuja: FRSC Headquarters.

Federal Road Safety Corps (FRSC). (2024b). Annual road safety report. Abuja: FRSC.

Janz, N. K., & Becker, M. H. (1984). The Health Belief Model: A decade later. Health Education Quarterly, 11(1), 1–47.

John, E. E., & Okonkwu, A. (2020). Socioeconomic determinants of seatbelt use among commercial drivers in Lagos State, Nigeria. Journal of Safety and Transportation Studies, 5(1), 44–59.

Mokolaeyu, I. T. A., & Jumani, R. (2023). Seat belt use and perceptions among northern drivers in Ibadan: A behavioral observational report. International Journal of Injury Control and Safety Promotion.

National Bureau of Statistics (NBS). (2023). Transport sector data. Abuja: NBS.

NHTSA. (2012). Seat belt use in 2012—Use rates and effectiveness. National Highway Traffic Safety Review, 09(3), 44–47.

Oduro, G., & Akomposah, S. (2021). Seat belt use and associated factors among commercial drivers in Accra, Ghana. African Safety Review, 09(3), 44–47.

Peden, M., Scurfield, R., Sleet, D., Mohan, D., Hyder, A. A., Jarawan, E., & Mathers, C. (Eds.). (2004). World report on road traffic injury prevention. WHO.

Popoola, S., et al. (2013). Compliance with seat belt use in Makurdi, Nigeria: An observational study. Traffic Injury Prevention.

Rezampa, A., Aghamoleri, T., Maduan, A., Hossein, Z., & Zars, S. (2018). Prediction of safe driving behaviors based on the Health Belief Model. BMC Public Health, 18, 530.

Sangwaawa, A. O., Atugbi, T. E., Blomen, S. E. I., Jibonu, I. P., Jesrun, B., & Adekole, B. J. (2020). An observational study of seatbelt use among vehicle occupants in Nigeria. Injury Prevention, 16(2), 35–39.

Shinar, D. (1993). Demographic and socioeconomic correlates of safety belt use. Accident Analysis & Prevention, 25(6), 745–755.

Simşekoğlu, Ö., & Lajunen, T. (2008). Social psychology of seat belt use: A comparison of Theory of Planned Behavior and Health Belief Model. Transportation Research Part F: Traffic Psychology and Behaviour, 11(3), 181–191.

Usman, B. A., & Adebosin, T. (2024). Seat belt use and perceptions among inter-urban commercial vehicle drivers in Ilorin, Nigeria. Journal of Road Safety.

World Health Organization (WHO). (2018). Global status report on road safety 2018. WHO

UNIVERSITY OF BENIN

FACULTY OF EDUCATION
DEPARTMENT OF HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION

QUESTIONNAIRE ON THE LEVEL OF COMPLIANCE TO SEATBELTS UTILIZATION AMONG BUS DRIVERS IN OREDO LOCAL GOVERNMENT AREA

Dear Respondent,
I am Ohifo Princess Eunice, a final-year student in the Department of Health, Safety, and Environmental Education, Faculty of Education, University of Benin.

This questionnaire is designed to gather information on the level of compliance to seatbelts utilization among bus drivers in oredo local government area. The purpose of this research is purely academic, and your responses will be treated with the utmost confidentiality. Please tick (✓) the option that best represents your opinion.

Thank you for your cooperation.

Section A: Demographic Information

S/N Item Response Options

Gender ☐ Male ☐ Female Age group ☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ 56 and above Marital status ☐ Single ☐ Married ☐ Divorced ☐ Widowed

Highest level of Educational qualification ☐ Primary ☐ Secondary ☐ Tertiary ☐ None

Years of driving experience ☐ <5 years ☐ 5–10 ☐ 11–15 ☐ >15 years

Type of vehicle driven ☐ Taxi ☐ Minibus ☐ Shuttle Bus ☐ Long-distance Bus

Do you own the vehicle you drive? ☐ Yes ☐ No

S/N	STATEMENTS	YES	NO
	Section B:level of seatbelt utilization among commercial driver .		

1.	I am aware that seatbelts are designed to protect drivers and passengers during accidents		
2.	I am aware that wearing a seatbelt is mandatory for all vehicle occupants in Nigeria.		
3.	I am aware that drivers and front-seat passengers are required by law in Nigeria to wear seatbelts.		
4.	I am aware of the penalties for not wearing a seatbelt while driving in Nigeria		
5.	I ensure that all passengers wear their seatbelts before starting a trip. Yes		
6.	I am aware that not wearing a seatbelt can result in severe injury or death in an accident.		

Tick ✓ any option (SA=Strongly agree , A=Agree,D=Disagree, SD= Strongly disagree)

S/n	STATEMENTS	SA	A	D	SD
	Section C: factors contributing to the non-utilization of seatbelt among commercial driver				
7.	I find seatbelts uncomfortable to wear while driving.				
8.	I sometimes forget to wear a seatbelt when in a hurry.				
9.	Enforcement of seatbelt laws by traffic officers is weak in Benin Metropolis				
10	Passengers often ignore reminding drivers to wear seatbelts.				
11.	Some vehicles are not equipped with				

	functional seatbelts.				
12	I believe short-distance driving does not require wearing a seatbelt				
	Section D : Perceived Risks And consequences Associated with Non-Utilization of Seatbelts				
13	Non-use of seatbelts increases the likelihood of fatal injuries in road crashes.				
14	Drivers without seatbelts are more likely to be ejected from vehicles during collisions.				
15	Not wearing a seatbelt puts other passengers at greater risk during accidents.				

16	Wearing a seatbelt helps minimize head and chest injuries in crashes.				
17	I believe that not wearing a seatbelt can lead to more serious injuries even in minor accidents.				
18	I think wearing a seatbelt can help save lives during road accidents.				
	Section E: Relationship Between Seatbelt Usage and Road Traffic Injuries				
19	Wearing a seatbelt reduces the severity of injuries during road traffic accidents.				
20	Drivers who do not wear seatbelts are more likely				

	to be injured in a crash.				
21	Consistent seatbelt use can help prevent fatal injuries among commercial drivers.				
22	The incidence of road traffic injuries is higher among drivers who fail to use seatbelts.				
23.	Seatbelt usage is an effective safety measure for reducing road traffic injuries.				
24.	Commercial drivers who regularly wear seatbelts are safer on the road.				

Reliability

Scale: ALL VARIABLES

Case Processing Summary		N	%
Cases	Valid	24	100.0
	Excludeda	0	.0
	Total	24	100.0

Cronbach's Alpha	N of Items
.70	24