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Risky Driving Attitudes and Behaviours among Commercial Drivers and the Rate of

Accidents on Nigerian Roads: A Case Study of Abuja and Lagos State

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Risky Driving Attitudes and Behaviours among Commercial Drivers and the Rate of Accidents on Nigerian Roads: A Case Study of Abuja and Lagos State

By

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A dissertation submitted in partial fulfilment of the requirements for the degree of
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Dedication

To my lovely kids, Ayo, Dotun and Deji

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Abstract

Introduction: Every year, 1.3 million people are killed by road accidents, with 90% of these deaths and injuries recorded in low-and middle-income countries. Wherein Africa is documented as the highest proportion of vulnerable road users with an alarming death rate, the impact of these damages is inexhaustible and avoidable. Until lately, Nigeria has witnessed unprecedented, horrible road crashes from its length and breadth as featured in documented sources, and the fatalities affect the loss of individuals resources and economic burden of the nation. This is partly due to the fact that Nigeria as the most populous, heterogeneous, and second-largest road network country in Africa, has the highest estimated number of commercial vehicles, driven by more users with less regard for road-worthiness, than those with strict adherence to road traffic rules. This becomes appalling as these road users operate in a poorly regulated traffic environment as revealed by several studies with dearth of information on the risky driving attitudes and behaviours of commercial drivers and the implication for road accidents which necessitated this study.

 Aim/Objectives: The study examines the details of a driver's demographic and cognitive characteristics with driving history and its effect on crash risk fatalities. It seeks to analyse strategic interventions in reducing carnage on the roads. This study aims to provide a practical framework for an effective and efficient measuring technique, to assess the individual´s driving description vis description vis-a-vis the differences in accident involvement.

Materials and Methods: This study applied a comparative research design to evaluate Nigeria's new and old capital cities; hence, two survey locations with geographical and economic differences was chosen. This study administered quantitative and qualitative methods with the Participant Observation data collecting technique to complement the investigation's four phases. Direct self - report respondent´s cognitive and socio-demographic characteristics via the newly adapted and tested five-in-one behaviour measuring instrument called LOMICS-DBQ with the constructs of Theory of Planned Behaviour (TPB). The study is completed with qualitative responses of the stakeholders and field study tour of London and Bangkok bus driver. Data collection was done through primary sources with cognitive questions responded to by the participants using 6-point Likert scale analysis.

Other related secondary data is facilitated by the FRSC- the federal road safety corporation and the National Bureau of Statistics in Nigeria. Simple Random sampling was used to select 600 drivers, out of which 471 gave their consent and subsequently investigated. This study survey ethical clearance was obtained from the motor parks union leaders, and participants are registered bus drivers in Abuja and Lagos within their local government authorities. The survey data was analysed using various statistical inferences, including SPSS 20 and 25, Excel 2013 and NVivo 11, regression analysis, line charts, cross-tabulation which are tools for descriptive statistics, Chi-square and Multiple Regression which are inferential statistics tools to show the relationship between the socio-demographic variables of the drivers, driving license status and the rate of accidents in the two survey locations.

Results: The study result showed that socio-demographic characteristics such as age, religion, ethnicity, wages status, and license status offer a more significant relation to driver´s actual task performance and accident likelihood. Besides, 61% of the variation in an accident (and 50% in Lagos) is explained jointly by drivers' attitudes such as over-speeding, mobile use, fatigue driving, blurred vision, and alcohol or intoxicants before driving with statistically significant between 1 and 5 % level. The study recommends an urgent commencement of a genuine nationwide driving theory test in English and local languages followed by intensive practical training, the introduction of driving and safety education in both the primary and secondary schools curriculums, and the introduction of high visibility enforcement, surveillance, and awareness campaigns of traffic rules and regulations.

Conclusions: This study has filled a significant gap - no single behaviour measuring research tool has considered socio-cultural and religious beliefs variables as possible factors that influences driving attitudes and behaviours in low-and middle-income countries. The study emphasizes enforcement, behavioural change, and learning intervention to minimize risky driving behaviour.

Keywords: Driving behaviour, risk driving attitude, commercial drivers, accident rate, low- and middle-income countries.

Resumen

Introducción: Cada año 1.3 millones de personas mueren por accidentes de tráfico, y el 90% de estas muertes y lesiones se producen en los países de ingresos bajos y medios. África está documentada como proporción más alta de usuarios de carreteras vulnerables con una tasa de mortalidad alarmante, impacto de estos daños es inagotable y evitable. Hasta hace poco, Nigeria ha sido testigo de accidentes de tránsito horribles y sin precedentes a lo largo y ancho, como se muestra en fuentes documentadas, y las muertes afectan la perdida de recursos individuales y la carga económica del país. Esto se debe en parte al hecho de que Nigeria, como el país más poblado, heterogéneo y con la segunda red de carreteras más grande de África, tiene el número estimado más alto de vehículos comerciales, conducidos por más usuarios con menos consideración por la viabilidad vial, que aquellos con estricto cumplimiento de las normas de tráfico. Esto se vuelve espantoso ya que estos usuarios de la carretera operan en entorno de tráfico mal regulado, como lo revelan varios estudios con escasez de información sobre las actitudes y comportamientos de conducción riesgosos de los conductores comerciales y las implicaciones para los accidentes de tráfico que requirieron este estudio.

Objetivo/Objetivos: El estudio examina los detalles de las características demográficas, y cognitivas de un conductor con el historial de manejo y el efecto de estos en las muertes por riesgo de accidentes. El estudio también busca una intervención estratégica para reducir la extrema mortalidad en las carreteras. Este estudio tiene como objetivo, proporcionar un marco práctico para una descripción efectiva, y eficiente del instrumento de medición de las diferencias individuales en la participación de accidentes.

Materiales y métodos: este estudio aplicó un diseño de investigación comparativa, para evaluar las dos ubicaciones de la encuesta de las capitales nuevas y antiguas de Nigeria, con diferencias y similitudes geográficas y económicas. Se utilizaron métodos cuantitativos y cualitativos, con la técnica de recolección de datos de observación participante para complementar las cuatro fases de la investigación. Autoinforme directo de los factores cognitivos y las características sociodemográficas de los encuestados, a través del instrumento de medición del comportamiento cinco en uno recientemente adaptado y probado llamado LOMICS-DBQ con los constructos de la Teoría del Comportamiento Planificado (TPB). El estudio se completa con respuestas cualitativas de las partes interesadas, y un recorrido de estudio - observatorio de los conductores de autobuses de Londres y Bangkok. La recopilación de datos se realiza a través, de fuentes primarias con preguntas cognitivas respondidas por los

participantes a través de escala Likert de 5 puntos. Otros datos secundarios relacionados fueron facilitados por el FRSC- la corporación del servicio de carreteras y la Oficina Nacional de Estadística en Nigeria. El muestreo aleatorio simple se utiliza para seleccionar un total de 600 conductores, de los cuales 471 dieron su consentimiento y posteriormente se investigaron. Esta encuesta de estudio obtuvo la aprobación ética de los líderes sindicales de los parques de automóviles, y los participantes son conductores de autobuses registrados en Abuja y Lagos dentro de las autoridades de su gobierno local. Los datos de la encuesta han sido analizados usando varias inferencias estadísticas, incluyendo SPSS 20 y 25, Excel 2013 y NVivo 11, análisis de regresión, gráficos de líneas, tabulación cruzada, que es una herramienta para estadísticas descriptivas, chi-cuadrado y regresión múltiple que son herramientas de estadísticas inferenciales, para mostrar la relación entre las variables sociodemográficas de los conductores, el estado del permiso de conducir y la tasa de accidentes en las dos lugares de la encuesta.

Resultados: El resultado del estudio mostró que las características sociodemográficas como la edad, la religión, el origen étnico, el estado salarial y el estado de la licencia, ofrecen una relación más significativa con el desempeño real de la tarea del conductor y la probabilidad de accidente. Además, el 61% de la variación en un accidente (el 50% en Lagos) se explican conjuntamente por las actitudes de sus conductores, como exceso de velocidad, uso móvil, fatiga, visión borrosa y alcohol o sustancias tóxicas tomadas antes de conducir con nivel estadísticamente significativo entre 1 y 5 %. El estudio recomienda, un comienzo urgente de un examen genuino de la teoría de la conducción a nivel nacional en inglés, y en los idiomas locales después de una capacitación práctica intensiva; introducir la conducción y la seguridad en los planes de estudio de las escuelas primarias y secundarias. La introducción de campañas de aplicación, vigilancia y sensibilización de alta visibilidad sobre las normas y reglamentos de tráfico.

Conclusiones: Este estudio ha llenado un vacío significativo: ninguna herramienta de investigación de medición de comportamiento ha tenido en cuenta las variables de creencias socioculturales y religiosas como posibles factores que influyen en las actitudes y los comportamientos de conducción en los países de ingresos bajos y medianos. El estudio básicamente hace hincapié en la aplicación de la ley, el cambio de comportamiento y la intervención de aprendizaje que podrían minimizar el comportamiento de conducción riesgo.

Palabras clave: Conducta, actitud ante el riesgo de conducir, conductores comerciales, tasa de accidentes, países de ingresos bajos y medianos.

List of Abbreviations

ACOMORAN: Amalgamated Commercial Motorcycle Owners and Riders Association of Nigeria

AVL: Automatic Vehicle Location

BB: Behavioural Belief

BMTA: Bangkok Mass Transport Authority

CB: Control Beliefs

CNN: Cable News Network

CPC: Certificate of Professional Competency

CTA: Community Transport Association

DBQ: Driver Behaviour Questionnaire

DAQ: Driver Attitude Questionnaire

DAS: Driver Anger Scale

DIT: Diffusion of Innovation Theory

DN: Descriptive Norm

DSA: Driving Standards Agency

DSI: Driver Skill Inventory

DVLA: Driver Vehicle Licensing Agency

DVSA: Driver Vehicle Standards Agency

EU: European Union

FCT: Federal Capital Territory

FRSC: Federal Roads Service Corps

GDL: Graduated Driving License

GDP: Gross Domestic Product

GPS: Global Positioning System

HOS: Hours of Service

ICP: Incident Control Personnel

IMB: Information-Motivation-Behaviour Skills Model

IPT: Information Processing Theory

LOMICS: Low-and Middle-Income Countries

MDAs: Ministries Departments and Agencies

MIDAS: Australian Minibus Driver Awareness Scheme

NARTO: National Association of Road Transport Owners

NB: Normative Belief

NGOs: Non-Governmental Organizations

NMCC: Network Management Control Centre

NPCN: National Population Census of Nigeria

NUPENG: Nigeria Union of Petroleum and Natural Gas Workers

NURTW: Nigeria Union of Road Transport Workers

OTP: Office of Transport and Traffic Policy and Planning

PAWA: Passengers Watch

PB: Past Behaviour

PBT: Problem Behaviour Theory

PEC: Programme of Education for Conductors

RHT: Risk Homeostatic Theory

RLT: Reinforcement Learning Theory

RTA: Road Traffic Accidents

RTCs: Road Traffic Crashes

RTS: Road Traffic Safety

SCT: Social Cognitive Theory

SNT: Social Norms Theory

SPT: Social Practice Theory

TfL: Transport for London

TPB: Theory of Planned Behaviour

TRA: Theory of Reasoned Action

TTM: Trans-Theoretical Model

UN: United Nation

UNESCO: United Nations Educational Scientific and Cultural Organization

UN-WUP: United Nations – World Urbanization Prospects

VOSA: Vehicle and Operator Services Agency

WHO: World Health Organization

WHO-GSRRS: World Health Organization- Global Status Report on Road Safety

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Chapter 1: Introduction
1.1. An overview

Every year, 1.3 million people are killed by road accidents, with 90% of these deaths and injuries recorded in low-and middle-income countries. Wherein Africa is documented as the highest proportion of vulnerable road users with an alarming death rate, the impact of these damages is inexhaustible and avoidable. Road traffic injuries are the eighth leading cause of death for all age groups in the world, and by 2030, it is assumed that road traffic injury is expected to be the fifth-largest cause of death worldwide (WHO-GSRRS, 2018). Risky driving behaviour has contributed to an enormous health burden of injury management and wealth loss (WHO, 2003). This is the trend now in low-and-medium income countries (LOMICS), where 90 percent of the world road accidents occur with 54 percent of the world vehicles. Africa region continues to have the highest road traffic death rates (WHO Report, 2015), which make it a question of urgency in finding proactive solutions to human errors that researched, accepted, and considered as the primary critical phenomenon in the road traffic safety psychology (Lopez de Cozar et al., 2006).

Road traffic safety research began in 1972 because of requests for help from developing countries. It was explicitly based on the quantity and the nature of the crash problems and then finding appropriate low-cost countermeasures (Downing et al., 1991). Some researchers summarized the magnitude of the road accident problem that almost ten percent of deaths reported in the 05-44-year age group (Jacobs & Bardsley, 1977). Road accidents are assumed to be a waste of scarce resources costing at least one percent of a country's GNP per annum (Fouracre & Jacobs, 1976). It witnessed a vital problem in fatality rates, which higher than those in industrialized countries (Jacobs, 1986). A relatively high proportion of fatalities rate was among pedestrians and under 16 years old children on fatal accidents that involved trucks, buses, and other public service vehicles (Downing, 1991).

Meanwhile, this period was characterized by the "On-the-Spot" accident scene investigation by the police investigation team instead of road engineers and road traffic safety professionals. In a write-up published by the World Bank (1990), it was estimated that 500, 000 are killed in road accidents each year which the total cost for countries with a GNP of less than 3,500 US dollars per capital (approx. of 25 billion US dollars per annum) and 350, 000 of these people killed are from developing countries (Downing et al., 1991). Peden, et al (2004) confirmed that

85% of the road deaths occur in low-middle-income-countries (LOMICS) with no improved and sustainable road traffic safety.

1.2. Road transportation service and development in Nigeria

The federal ministry of works in Nigeria has four-hold mandate responsibilities, which include planning, construction, rehabilitation, and maintenance of federal roads. This include maintenance of bridges along federal highways; provision of road infrastructures such as streetlights, road signs, and markings on federal roads; and providing professional services to other MDAs. Transportation is a vital part of human activity that forms the all social-economic development in a nation (Nwafor & Onya, 2019). Transport is assumed to be an essential part of human activity as it facilitates economic development. Nigerian road sector's transformation agenda seeks "to deliver better and safer roads to Nigerians and link the six geo-political zones in the country with dual carriageways." (FMW. Abuja, 2013. p.1).

The country is ranked higher than other countries in sub-Saharan Africa in terms of the road network and the second largest south of the Saharan, with an estimated 200,000 kilometres of the road network connecting villages to cities (FMW. Abuja, 2013).

Nigeria is ranked 32nd by its total area of 923,768km, comprising 910,768km of landmass delimited by international boundaries and coastlines and 13,000km of water. In Nigeria, 95% of both passenger and freight movements are by road due to the inadequacy of other forms of transportation. The federal roads account for 17 % of the entire national road network but accommodate more than 80% of the national vehicular and freight traffic. A Public-Private Partnership (PPP) was set up years ago to provide the right roads for strategic routes with very high return equity potentials. The pervasive increasing carnage on Nigeria's roads stimulated the government to establish Federal Road Safety Corps by Decree 35 of February 1988 and later by the National Assembly as The Federal Road Safety Commission (established) Act 2007. This gives the lead agency (FRSC) the mandate to ensure the safety of lives and property on the country roads with more functions to regulate, enforce, and coordinate all road traffic and safety management activities through sustained public enlightenment and effective patrol operation, which entails surveillance of the nation's highway to ensure compliance with the rules and regulations for safe road transportation (Olagunju, 2015). With the oil boom in the 70s, the construction of more roads for the increasing population took a new turn. Nigeria's road network constitutes over 80 percent in the movement of persons, goods, and services.

As the most populous and heterogeneous country in Africa. The country also has more estimated highest numbers of commercial vehicles driven by more unprepared drivers than prepared ones. Until lately, Nigeria has witnessed unprecedented, horrible road crashes from its length and breadth, as featured in almost all mass media.

There were an estimated 11.7 million registered motor vehicles on the Nigerian roads in the fourth quarter of 2018, with a 2% difference from 11.6 million in 2017. Out of this, total registered vehicles of 11,653,871, commercial vehicles recorded the highest number of registered vehicles with 6,768.756 representing 58.08% of the number while private cars estimated 4,739,939 (40.67%) and government vehicles followed with 139,264 (1.19%) and diplomatic vehicles estimated for 5,912 (0.05%) (NBS, 2018). In 2019, there were a precarious moment of daily reported crashes on all the media regarding road traffic accidents, bringing attention to the policymakers and road traffic safety personals. The figure explains the trends in road accidents in the five years between 2015 and 2019. In the first quarter of 2018, 2,189 vehicle accidents were recorded across the country, 1220 were killed out of 16,603 involved, 7,848 were seriously injured, 1232 were severe, and 296 were minor cases. In Abuja, the federal capital territory (FCT), 274 traffic crashes were recorded with 1,513 persons. This made it the highest number of road crashes in Nigeria.

1.3. Research background statement

As the injuries and fatalities rising globally due to road traffic accidents, more behavioural science researchers have extensively discussed the phenomenon of risk driving attitudes, behaviour, and its causal effect on road accidents. (Nnatulya & Reich, 2003 & Sharma, 2008) state that poor people and countries with low socio-economic status have been at greater risk of traffic crashes and fatalities than developed nations. The increasing population growth has it tolls on the road users' facilities. A study defines risk driving behaviours that do not intend to cause others danger for not taking adequate precautions (Ge et al. 2015). Other studies moved beyond this assumption to explain that cultural, fatalism, and religious beliefs moderate and mediate low-and medium-income countries drivers perceived crash risk (Teye-Kwadjo et al., 2013; Kouabenan, 1998). The developing countries in sub-Saharan Africa had the highest frequency of various accidents worldwide (Peden et al., 2004) with the complexity of the road safety issues in developing countries (Wang & Zheng, 2014). These crashes effect make the

economic, social, and public health costs of road traffic injuries and fatalities the most significant setback for less-developed nations.

Nigeria ranks as the country with the second largest road network in Africa (Sumaila, 2013). According to the Federal Road Safety Corps boss, Chidoka (2011), between 2007 and 2010, 5,583 people were killed in bus crashes with significant that 1,396 people were losing their lives every year in that four-year estimation. Most passenger-buses such as mini-buses called "Danfo" and other passenger- trucks are commonly involved in road crashes in Nigeria. This type of bus is called in different names in low-middle-income countries the of the world as "Tro-Tro" in Ghana, "Kamunye" in Uganda, "Dala Dala" in Tanzania, "Matatus" in Kenya, "Jeepneys" of Manila, "Colt" of Jarkata, "Dolmus-minibus" in Istanbul, "Tap-Tap" in Haiti (Nantulya & Reich, 2002) other names include "Gele-geleh" in Gambia, "Djaga Ndiaye" in Senegal, "Poda poda" in Sierra Leone, "Sogatra" in Gabon, "Gbaka" in Cote d Ivoire, "Kamunye" in Uganda, "Carñas" in Guinea Conakry, "Esprit de vie" in Congo, "Mini-bus" in Algiers, "Tobus" in Morrocco and "Lootu in Thailand. Lagos state is a high-risk region with an average of thirty-two traffic deaths per 1,000 people (Filani & Gbadamosi, 2007). Nigeria leads other African nations like Ethiopia, Malawi, and Ghana with 219, 183, and 178 deaths per 1.000 vehicles, respectively (Daramola, 2003).

Road crashes have been recognized as a significant public health problem in Nigeria (Asogwa, 1992). This study is interested in the underlying effect of socio-economic, cultural, and religious beliefs on road accidents and its implication on less developed countries´ road safety complexity in finding sustainable interventions to the long-age carnage. Quantitative and qualitative methods were explored in understanding the sequence of decision making and the development of approaches that could improve driving behaviour to avert unusual and hazardous driving situations. This study adopts a new measuring instrument and approach, which might overcome the research limitations of earlier researcher tools that could not measure a driver from low-and middle-income countries. The adopted instrument called LOMICS-DBQ is an important research tool who is its applications will reduce crashes on the roads.

The empirical studies have attested that road traffic accidents and injuries in Nigeria have increased due to the high rate of motorization and the increasing risky motorists' driving attitude that put those vulnerable roads users' lives in danger. In the last ten years, the annual

road traffic crashes have increased tremendously from 9,000 in 2010 and 14,000 in 2018 and dropped down in 2019 to 977, the contrary to other foreign international organization data. The rate of accidents has reached the highest and most significant number of deaths per 10,000 vehicles (Sheriff, 2009), and this trend and incidence of carnage will likely continue if proactive measures are not taken to address it (Eze, 2010). Abuja, the current federal capital of Nigeria, and Lagos, the old federal capital city of Nigeria, was chosen for this investigation. The two chosen survey sites, Abuja, and Lagos are the two cities in Nigeria with the fastest-growing economy. These two survey sites with cross-section of the country will be the most adequate for population sampling.

1.4.   Research gap

This year (2020) ends the ten-year Decade for Action for Road Safety (2011-2020) by the UN General Assembly in March 2010 that seeks to save millions of lives by "enhancing the behaviour of road user" (UNRSC, 2010. p.1) among other reasons, form the bases of this investigation on driver's behaviour. This popularized road safety vision mission has not been given more priorities by the most affected continents of low-and middle-income countries.
A recent study proves that drivers play a significant role in road traffic accidents in Africa (Deme, 2019).

This study aims to fill this gap by considering the intricacies of the socio-economic demographic and cognitive variables faced by drivers of less-developed countries. Ninety-three percent of the world's fatalities on the road occur in low-and middle-income countries, and these countries make up approximately 60% of the world's vehicles (WHO, 2020). Road traffic accidents are to become the 7th leading cause of death by 2030 (WHO Factsheets, 2018). The United Nations World Population Prospects in 2017 had predicted that the world's population would hit a staggering 9.8 billion by 2050 and that Nigeria will overtake the United States to become the third most populous country in the world and surpass 300 million people mark by 2050 (CNN- Inside Africa, 2017). This has huge implication for the proportion of crash to anticipate considering what is already evident.

Until recent times, the carnage on Nigerian roads increasingly, defy interventions introduced earlier. There is a need to know the background causes of the riskiest driving behaviour prone to crashes in the traditional context of less developed nations. Drivers´ behaviour is an essential subject of road safety research. Human error plays a vital role in many crashes, as established by past research in Nigeria. The study's primary purpose is to provide sustainable intervention or measures to be adopted and reduce this increasingly preventable carnage. Risky driving behaviour contributes significantly to the enormous burden of injury and death worldwide (WHO, 2004). The road carnage in Nigeria, as some researchers posit, should be blamed on the absence of good driving culture (Balogun, 2006; Oyeyemi, 2003). Road safety's principal objective is to transform risk behaviour in the conduct of beliefs, habits, and emotions favourable to safe and practical mobility (Montane & Sabates, 2010).

Besides the most popularized Manchester, Driver Behaviour Questionnaire (Reason et al. 1990) tool which is 30 years (in 2020) has not single-handedly given a valid, complete behavioural measurement and evaluation of drivers in the less developed world. This inspired the adoption of a complete measuring tool of long-term and sustainability for driver self-reports of behaviour. This tool is a combination of five tested and valid behavioural measuring instruments which include; include: Driver Behaviour Questionnaire **DBQ** (Reason et al., 1990), Driver Attitude Questionnaire **DAQ** (Parker et al., 1996), Driver Skill Inventory **DSI** (Lajunen & Summala, 1997), Driver Anger Scale **DAS** (Deffenbacher, Oetting & Lynch, 1994) and Safety Climate Questionnaire **SCQMD** (Glendon & Litherland, 2001).
This is a newly adopted tool with most of the frameworks familiar with old instruments, with internal consistency except it puts all cognitive variables in one place called LOMICS-DBQ (low -and middle-income countries - driver behaviour questionnaire).

1.5.   The motivation for the research

Most old and recent researches have extensively posited that human factors are the potential predictors of road traffic accidents with other empirical indicators, including lack of driving experience and incompetent handling of motor-vehicle (Afolabi & Gbadamosi, 2017). Driving involves cognitive and emotional intelligence in driving for improved safety.

Meanwhile, another reason that calls for motivation in this research is a clarion call and prediction that road traffic accidents may become the 7th leading cause of death by the year 2030 (WHO Factsheets, 2018). The United Nations World Population Prospects in 2017 had predicted that the world's population would hit a staggering 9.8 billion by 2050 and that Nigeria will overtake the United States to become the third most populous country in the world and surpassess 300 million people mark by 2050 (CNN- Inside Africa, 2017). This study's findings will help policymakers, safety professionals, and all other health care workers and stakeholders.

1.6.   Objectives of the study
1.6.1 General objective

To study, examine and understand the empirical phenomenon of behaviour, investigate its conceptual and theoretical framework formulation, and adopt a tool capable of giving an adequate and valid behavioural measurement of a typical driver from low-and middle-income countries.

1.6.2. Specific objectives

The specific objectives of the study are to:

1. understand the trends, roles, and characteristics of passenger transport drivers.
2. understand the effect of demographics and cognitive characteristics in risky driving.
3. investigate the extend of enforcement, attitude formation and change intervention in minimizing risk driving behaviour.
4. adopt, unify, and apply other widely used driver behavioural instruments that include socio-eco-cultural and religious beliefs construct in individual decision making.

1.7.   Research questions

This study investigates the remarkable impact of socio-demographic variables, traits, and cognitive background of commercial drivers in Nigeria on their driving attitudes and risky driving behaviours. The research questions addressed an empirical inquiry on topical social issues as related to road accidents guided by literature review, inquiry methods, and investigation results.

The research questions for the study are:

1. What are the relationships between driver´s demographic characteristics, a self-reported background to driving history, and road accidents?

2. Is there a link between attitudes, beliefs, and behaviours of drivers and the rate of accidents?

3. Is driver's educational model a useful tool for attitude formation and change to reduce aberrant driving behaviours?

4. What are the necessary correlations and significant differences between the risk-driving factors and the rate of accidents among commercial motor vehicle drivers in Abuja and Lagos State?

1.8.   Scope of the thesis

A road traffic safety has three components or parameters for intervention: human, vehicle, and environment, but human error is given priority in this investigation to recent advances in research methods for investigating drivers' behaviour. This is done with bus drivers' behaviour, management, and evaluation (Porcu et al., 2020); (Cafiso et al., 2012). The human error accounts for up to 90% of accidents, while the mechanical and environmental factors contribute 10% (FRSC, 2009). This research focuses on driver's behaviour and attitudes, which is the human factor as a predictor of traffic accident occurrence (Bucsuchazy et al., 2020; Ojo, 2015; Agbonkhese et al., 2013; Pakgohar et al., 2011). The study gives more attention to conceptual issues dealing with the word's "behaviour" and "attitudes" in almost all the chapters of this thesis. Road traffic safety research began very late in developing countries in 1972, when research and interventions directed towards planning, designing, constructing, and maintaining the roads (Downing, Baguley & Hills, 1991). (Afolabi & Gbadamosi, 2017) regard human factor as top-list of the causes of accidents in Nigeria with some verification indicators which include; lack of proper training of drivers, inexperience and incompetent drivers, over-speeding, dangerous driving, drink-driving/drugs with herbal concoctions, impatience and

negligence, fatigue, poor vision and disregard of road signs. Based on these problems indicated above, there is a wide gap between low-and-medium-income countries and without sustainable solutions and interventions. This study on bus drivers' risky driving behaviours and attitudes provided an important measuring self-reports instrument for reliable evaluation of a typical driver from low-middle-income countries (LOMICS).

1.9.   Brief description of the research design

The study involves testing a survey questionnaire to explore information from respondents' cognitive abilities and characteristics. These cross-sectional self-reports study among drivers in four bus stations in Abuja and Lagos used to generalize investigation results to Nigeria's sample population. It explains the research structure and designs used include the case study, the quasi-experiment, and the longitudinal observational study. The evidence obtained from these survey sites enable us to answer the stated research questions (Leeuw & Schmeets, 2016).

1.10.   Phases of the study

This study was divided into four phases. A brief explanation of the phases includes:

Phase 1 is the Participant Observation, which was divided into two units A and B. Phase 1A is a Direct Participant Observation of commercial drivers with the FRSC Patrol Team on Special patrol. The Phase 1B is Inside Vehicle Participant Observation Trips. The motive is to observe the driver's vehicle handling, relationship with the passengers, and his immediate traffic environment.

Phase 2 consists of a Questionnaire that divides into two concepts. Phase 2 concepts A and B. Concept A is Socio-Demographic Characteristics Questions. Concept B is the Self-Report Cognitive Variables Questionnaires (LOMICS-DBQ)

Phase 3 explores the experiences of Stakeholders in road traffic issues by facilitating semi-structured interview questions and answers via electronic mail correspondence.

Phase 4 rounds up the investigation by making a Commercial Drivers` Behaviour Management Observation Trips to the United Kingdom in October 2019 and Thailand in February 2020. The rationale for selecting the United Kingdom is that Nigeria got her independence from the British, and the road transport policy was started in Nigeria by the colonialists with traffic laws. Bangkok was the second choice because of the high Bangkok teeming population and bus transit management. The study consequently presents a comparative analysis on the driving behaviour in the three continents: Europe, Africa, and Asia.

Phases of this Research Study

Phase 1 (Participant observation)
-Phase 1A: Direct Participant Observation with FRSC Special Patrol Team and drivers
-Phase 1B: Inside-Vehicle Participant Observation Trips to observe the driver´s driving ability/control, relationship with the passengers, and the traffic conflicts environment

Phase 2 (Questionnaire)
Concept 1: Socio-Demographic Traits Questions
Concept 2: Self-Report Cognitive Questionnaire (LOMICS-DBQ)

Phase 3
-Semi-structured Question-Interview for Stakeholders on road traffic safety sector via electronic media correspondence (email)

Phase 4
Commercial Bus Drivers´ Behaviour Management Observation Journey to London (Transport for London & DVSA) and Bangkok (BMTA & Department of Land Transport)

FIGURE 1: HIGHLIGHT OF THE FOUR PHASES OF THIS RESEARCH STUDY

1.11. Outline of the thesis

Chapter 1: This study contains eight chapters; the first chapter introduces an overview of the global trends of the global road traffic, extends it to brief historical road traffic safety development in Nigeria and less-developed nations, the research background and gap for this study explained, the outline of the research questions is made explicable, motivation for the research given, the scope of the thesis which does not go beyond human factor discussed, the four phases of the study elaborated, and outline of the thesis done in chapters presentation.

Chapter 2: Chapter two is the literature review, termed as the database of this investigation. This chapter serves as a survey of scholarly sources that compiles and evaluates overview and gives a critical analytical account of research most concerned, compares with this research findings, and available behavioural science concepts and theories of attitudes and behaviour. Those theoretical and conceptual framework helps to define the path and constructs of this study investigation.

Chapter 3: This chapter explains and gives details about the methodology used in the investigation. This is done with procedures used to identify, select, process, and analyse this study for overall validity and reliability. The chapter explains the research method, research design and rationale, site selection and population sampling, instrumentation for the research, data collection method, data analysis, ethical procedure, considerations, and participants' confidentiality.

Chapter 4: This part of the study presents the results of the analyses. It is the presentation of all data obtained from primary and secondary sources.

Chapter 5: This chapter presents the results of the field study. It discusses the descriptive field notes of the detailed empirical processes of this study´s observational sites and rationale for the academic research experience tour to London and Bangkok road transport agencies to examine and understand how drivers' behaviours are managed and regulated to have a safe trip.

Chapter 6: This chapter presents a detailed discussion of relevance to the research hypothesis, research objectives, and other relevant literature. This chapter explains the findings´ understanding of the attitudes and behaviour relations with individual crash risks.

Chapter 7: This chapter explains the study´s implications with synthesis, a summary statement of the results related to previous studies, and existing knowledge in behavioural change, and learning framework.

Chapter 8: This part of the study presents the limitations of this investigation. It also explains a few limitations in the study and the generalizability of the results.

Chapter 9: This last chapter is the study´s conclusion and recommendations for future research. The recommendations are based on the conclusion, the scope, and the purpose of this study. The stakeholders´ suggestions and safety ideas are given by the Stakeholders in their responses to the semi-structured interview-questions were enumerated and analysed. (details in Appendix G)**.**

1.12. Summary

This chapter introduces a study of the global trends in road traffic safety and extends it to brief historical road traffic safety development in Nigeria, and less-developed nations, the research objectives and gap for this study are explained. The outline of the research questions is made explicable, motivation for the research given, the thesis´s scope which does not go beyond human factor discussed, the four phases of the study elaborated, and outline of the thesis done in chapters presentation.

Chapter 2: Literature Review

2.1. Introduction

This chapter serves to focus on the complete literature review of the conceptual framework and comprehensive theoretical framework. This addresses the different vital aspects of the research topic as a survey of scholarly sources that compiles and evaluates overview and gives a critical analytical account of the most concerned researches, compared with this research findings, and to available behavioural science concepts and theories of attitudes behaviour. The theoretical framework is a blueprint that is often "borrowed" by the researcher to build his/her own house or research inquiry (Adom et al., 2018).

2.2. The framework on expectations and relationship among used variables

The study is interested in the drivers' behaviour and its relationship to the social and physical environment in which it has taken place. Traditionalists see risky attitudes as problems of lack of skills as a function of risk-taking while the modern Behaviorists researchers continue to search the relationship of that problem with an individual´s skill, social motivation, and attitudes. That is why it is assumed that "object" and "environment" have become active or unit in human behavior. There is consistency among behavioural, social researchers and most published studies on road traffic accidents, and this has shown a correlation between road traffic fatalities and identifying human factors as a primary determinant of most road crashes. The theory of behaviour tends to be linear, showing the relationships between influencing factors as a series of arrows describe specific behaviors (Darnton, 2008). It is imperative to note that an individual´s perceived risk by evaluating the probability and consequences of a negative outcome (Sjoberg et al, 2004).

Most of the studies to date have recognised and incorporated risky behaviour as an essential phenomenon. This study is to establish a sufficient theoretical framework for the study of human errors and the usefulness of different types of theoretical approaches in targeting those risky variables as a way of reducing the alarming rate of road crashes in Nigeria and possibly adapted (these models) in other low-and middle-income countries (LOMICS) of the world. The aim is to highlight common strategies across this sea of research and integrate various theories that capture different aspects of the phenomenon (Bilic, 2005). Fig. 5 explains the study´s construct and explores how concerned variable factors relate to each other and causal influence (cause-effect relationship) and connection (correlation).
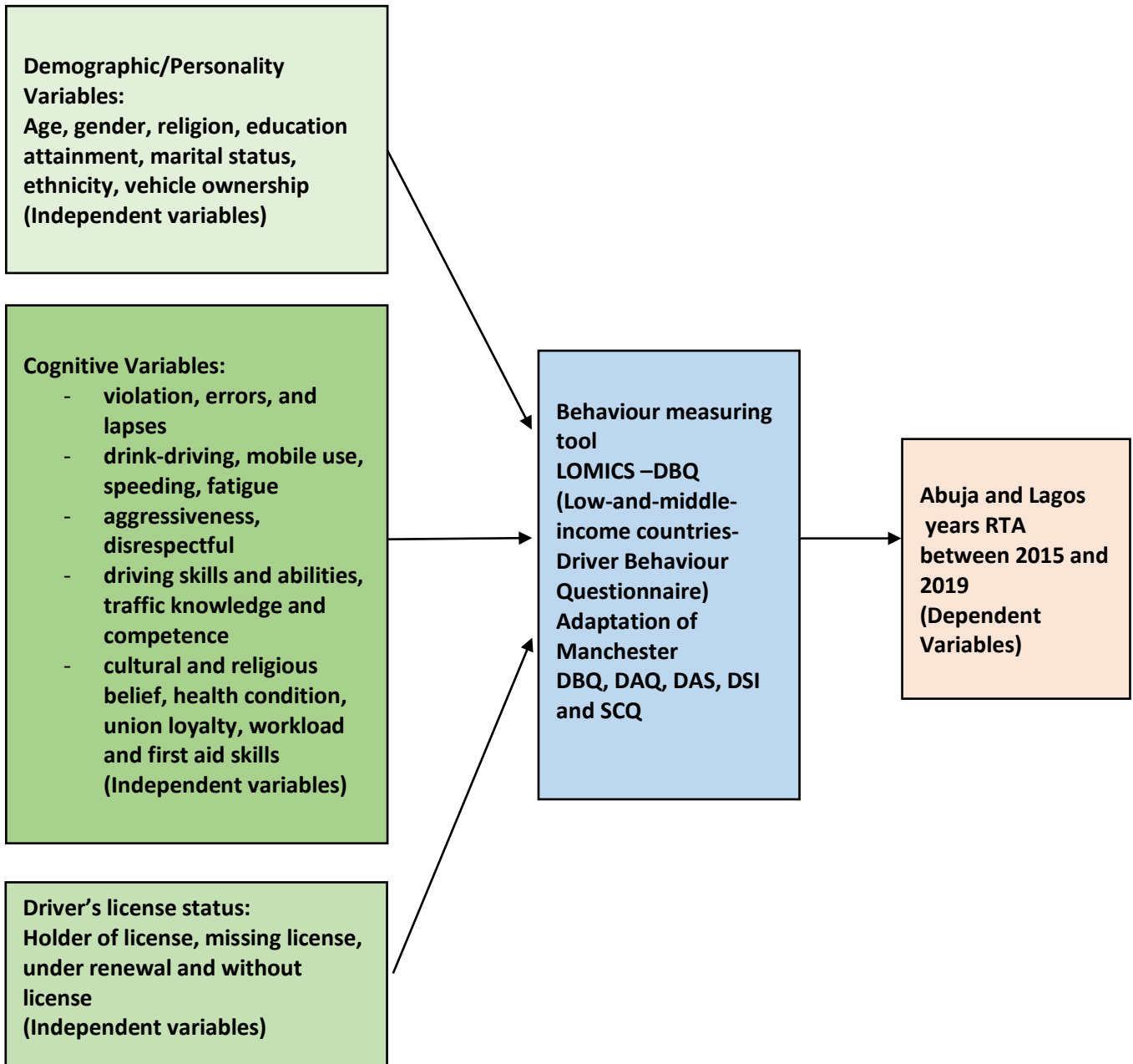
FIGURE 2: THE CONCEPTUAL FRAMEWORK EXPECTATIONS OF DRIVER'S BEHAVIOUR EVALUATION

This section provides conceptual and theoretical frameworks on expectations and relationships among the variables used in this research in Fig: 5 and fig. 6.
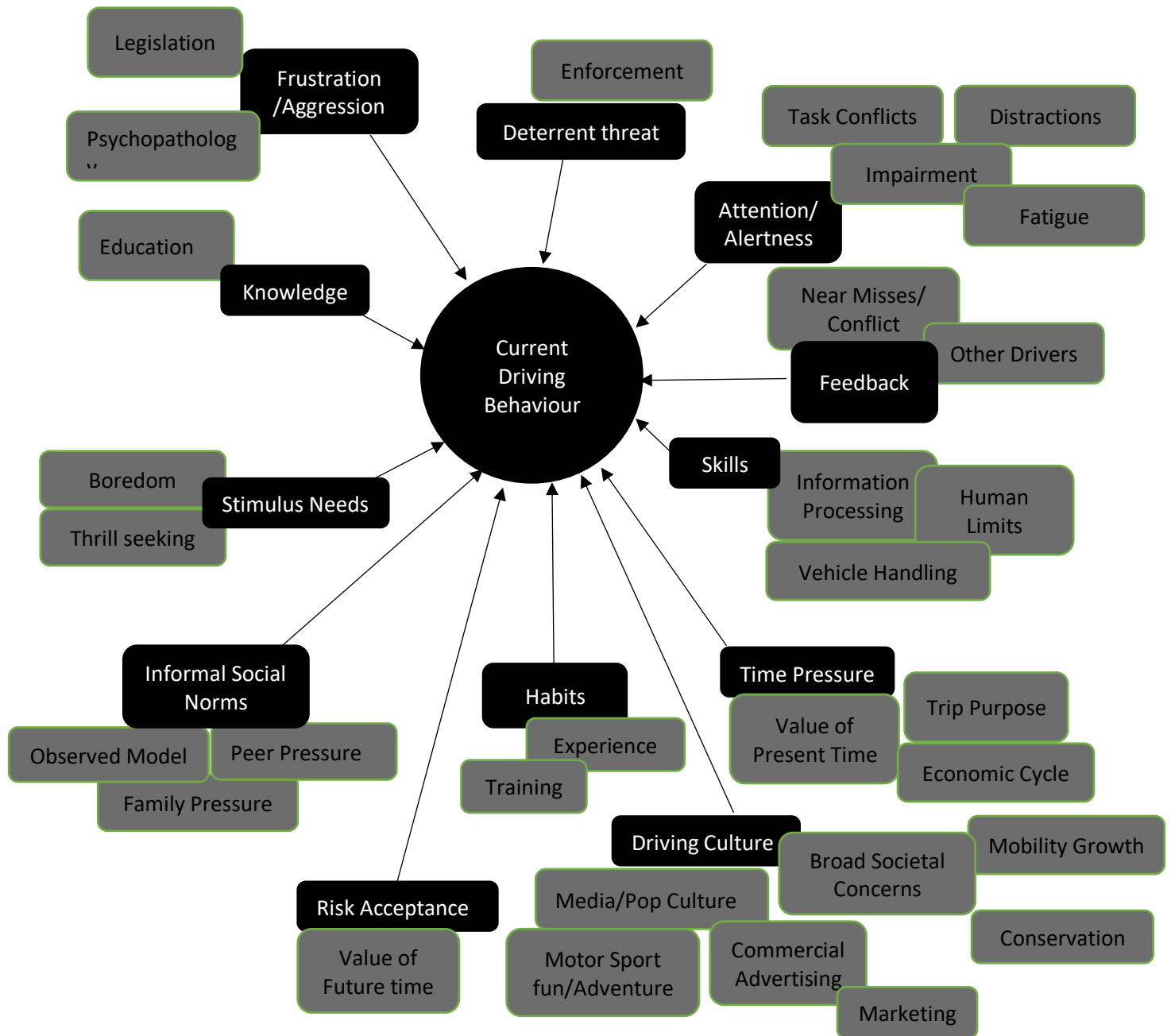
FIGURE 3: SITUATIONAL FACTORS INFLUENCING AGGRESSIVE DRIVING
(LONERO & CLINTON, 1998)

The effect of demographic characteristics with variables like age, educational attainment, marital status, and license status or characteristic with variables like new licensed certification, medical standard (visual acuity and ear test), driving in different weather and other expanding variables which include behavioural beliefs, normative beliefs, control beliefs, past behaviour, intention and descriptive norm from Planned Behaviour theory (Ajzen, 1991) are classified with the statements of question expressed in the questionnaire. The basis of a cause-effect relationship has been proven in this study. This study´s relevant variables include socio-demographic characteristics and cognitive variables that are independent variables for this study. The rate of accident data for five years (2015 and 2019) is a dependable variable.

2.3. The Nigerian road transport system in perspective

This section aims to examine the role of transportation in Nigeria´s socio-economic development in the road sector. Transportation is assumed as a link to all other production factors that promote distribution and personal mobility, hence the movement of goods and services from one place to another. An efficient and effective transport system provides socio-economic opportunities and benefits to the population, while a deficiency in transportation development takes its toll on citizens to reduced opportunity and lower quality of life. Infrastructures are synonymous with socio-economic development, and the specific tool for development is the transport sector. The economic effects of transportation explain significant impacts of transportation on community economic development in the areas of "productivity, employment, business activity, property values, investment, and tax revenues" (Rodriguez, 2020).

Transportation is assumed to be a significant driving force for socio-economic development, especially in low-middle-income countries (LOMICS). For sustainable development to take place, infrastructures must take place with effective operation and maintenance. Since Nigeria got her independence in 1960, the transportation sector has not been given much priority as a economic development component. The oil boom of the 70s in Nigeria started the beginning of investment in road infrastructures on constructions of national highways, state, and local roads.

This study is focused on the relevance of this transportation system in terms of economy and safe society, especially on the motor vehicle driving sector and the rate of accidents. Transport

focus is specifically interested in how driver behaviour and attitudes inform two new performance indicators of road user satisfaction and reduced people killed or seriously injured figures (Parkhust, et al., 2017). Passenger transportation systems and vehicles in the most low-and-middle-income-countries are mostly privately owned and poorly regulated and coordinated (Nantulya & Reich, 2002).

Most African countries that fall within the middle-income category are worse hit by fatal road accidents (Ukoji, 2014). Road transport in Nigeria is viewed as not too efficient for national development due to the high rate of road crashes and injuries, traffic congestion, heavy freight-traffic, and other factors (Ladan, 2007). It is high time professionalism is brought into the road transport industry to promote and develop a rapid, safe, efficient and convenient fleet transportation system in Nigeria as stipulated in Road Transport Safety Standardization Scheme created by law in the National Road Traffic Regulations (NRTR) (2004) Section 115 as featured in FRSC (Establishment Act 2007) Sections 5 and 10 (10) (Alharahsheh et al., 2018).

Nigeria is the most populous and heterogeneous country in Africa. This diversity has offered her the advantage of a diversified economic resource base and aided by the post-1973 booming oil economy, and this has exercised strong transport demand. The response to the transport demand for infrastructural facilities and services is clearly shown by the commitment of over 20% of total public capital expenditure to the transport development programmes embarked upon between 1960 and 1980 (NBS, 2018). The United Nations World Population Prospects in 2017 had predicted the world´s population would hit a staggering 9.8 billion by 2050 and that Nigeria will overtake the United States to become the third most populous country in the world and surpass the 300 million people mark by 2050 (CNN- Inside Africa, 2017). Afolabi & Gbadamosi, 2017, regard human factor as the top list of the causes of accidents in Nigeria with some verifiable indicators that include lack of proper training of drivers, inexperience, and incompetent divers, among other reasons. In his 46 years (1960-2006) review of urban transportation in Nigeria, Ogunbodede (2008) suggests constructing more motorable roads within Nigeria´s cities to increase the network and public and private partnerships in the provision and transport services.

2.4. History of road traffic safety in Nigeria

Many researchers in low-middle-income countries have written extensively and have researched on road traffic accidents without much-desired results. This is evident with the increasing rate of accidents in less-developed countries. The most subsequent interventions, or countermeasures given, always seem alien to the context of socioeconomic and cultural beliefs and background. The deaths from RTAs in Nigeria were ranked among the highest in the world (Adeniyi, 1985).

Recent academic studies have revealed a positive correlation between the increased numbers of vehicles and a higher rate of accidents, most especially in developing countries (Maqbool et al, 2019; OECD, 2018; Afolabi & Gbadamosi, 2017; and Osime et al, 2006). According to the National Bureau of Statistics (NBS) data of the third quarter of 2017, there is rapid growth in the number of vehicles in Nigeria with 11,547,236 motor vehicles on the roads from a population of 193.3 million Nigerians. This NBS data suggests that the total number of Nigerians available to one vehicle is 16.75. This presents excellent opportunities for automobile production and assembly in Nigeria while also of great importance for transport sector authority. This will make motor vehicle inspection administration easy as state policy in combating road traffic accidents with roadworthy vehicles on Nigerian roads. Its execution will generate employment and revenue for the State.

In addition to the number of registered vehicles in Nigeria, the National Bureau of Statistics (NBS) also recently disclosed that 2,598 Nigerians died in road accidents between October 2017 and March 2018. Over 15,800 people sustained various injuries during the six months of data. Also, the WHO published the number of casualties as 37,562 deaths on Nigerian roads in 2017. Different reasons were attributed to the significant causes, including speed limit violation, dangerous driving, loss of vehicle control, and tyre bursts. A Corp Marshal of the Federal Road Safety Corps (FRSC), official Oyeyemi, reveals in a paper titled; Road Safety Management Policy and Strategy Development: The Nigeria Experience (2014-2018) that a loss of 3 % of Nigeria´s GDP due to road traffic casualties from 1960 to 2017 (Oyeyemi, 2018). There are still many fatalities and injuries in the last five-year road traffic accident compilation (2015-2019). With increasing motorization and population in Nigeria, there is a need for a proactive solution to reducing carnage on the roads.

2.5. Road traffic accidents in Nigeria: past, present, and future projections

Africa, Nigeria, and South Africa have the highest road traffic rate of 33,7 and 31,9 of 100,000 people (Okafor et al., 2014). Road traffic accidents are regarded as a multifactorial phenomenon with victims of various stages of severity (Arthur, 2016). Federal Road Traffic Safety report in 2011 reveals that a total of 5,828 road crashes were reported and recorded between 2007 and 2010 (3 years). Moreover, between these three years (2007-2010), there was a yearly average of 1,457 cases and a monthly average of 121 road crashes involving buses on Nigeria roads. A total of 33,374 persons were killed in three years (2007-2010), in road crashes involving Buses (FRSC, 2011). The reasons for this road carnage in Nigeria are not far-fetched as some researchers blame it on the absence of good driving culture (Balogun, 2006; Oyeyemi, 2003). There are also inexperienced cases, drunk and over-confidence, and unconcern drivers (Yakassai,1998), which results in a considerable loss of about three billion nairas, which is 13 percent of her Gross National Product every year (Idoko, 2010).

The increasing rate of accidents on the highway roads in Nigeria has a severe adverse effect on its socio-economic development (Oyeyemi, 2003). A report from the lead-traffic agency in Nigeria explains a yearly average of 1,457 cases and a monthly average of 121 crashes involving mini-buses with passengers and trucks on Nigerian roads, and other low-income countries increasing the morbidity and mortality rates (Mock et al., 1999). Road traffic accidents have become everyday affairs in which lives are lost every day in Nigeria (Ovuwori et al., 2010). Besides, 65 billion dollars that are more than the total amount of all foreign aids and donations to developing countries were calculated lost due to pervasive road traffic crashes and injuries (Nantulya et al., 2003) while 518 billion dollars was wasted on a global estimate of the direct economic cost in crashes and injuries (Penden, et al., 2004).

2.6. Human factor as a predictor of road traffic accident

Driving is a complex and task demanding activity which occurs in a complex environment that requires the right skills, attitude, and behaviour (Stephens & Ukpere, 2011). It is also regarded as a psychomotor activity that requires a combination of concentration and reliable visual and auditory functions (Kagashe & Seleman, 2009). A good driver needs responsibility, concentration, anticipation, patience, and confidence (DSA, 2012/2013). A motor driver needs knowledge, attitude, and skills to drive safely. There are empirical evidence and findings that

TABLE 1: NUMBER OF PEOPLE INVOLVED IN ROAD TRAFFIC ACCIDENTS (RTA) IN ABUJA AND LAGOS BETWEEN 2015 AND 2019.

Number of People Involved in Road Traffic Accidents in Abuja and Lagos Between 2015 and 2019								
No.	State	2015	2016	2017	2018	2019	5 years Total Summation Per State	%	Mean Average
1	Abuja FCT	3,009	6,965	5,827	6,069	4,036	25,906	68%	5181.20
2	Lagos State	876	3,244	3,020	2,859	2,457	12,456	32%	2491.20
3		3,885	10,209	8,847	8,928	6,493	38,362	14%	7672.40
4		33,121	65,469	66,998	71,198	44,238	281,024		56204.80

Note: Only the first three-quarters of 2019 RTA available and calculated

Source: Author adaptation from FRSC Statistical Digest (2015-2019)

agreed that human error plays a vital role in many roads' crashes in Nigeria (Bucsuhazy, et al 2020; Nkosi, et al, 2020; Haghi et al 2014).   This makes it vital that a person shall not drive a vehicle on any road unless he or she has a valid driver's permit. Road traffic accidents in Nigeria are varied but related to three essential predators' human error, vehicle conditions, and road factors.

Meanwhile, according to the FRSC Report (2008), eighty percent (80%) of all crashes on Nigerian roads have been attributed to the human factor. Three-quarters of all road crashes on Nigeria roads involve fatalities (Oladepo & Brieger, 2006). For this study, interest is based on the human aspect as predators of risky driving behaviour. Ninety-five percent of the global accidents result from human factors (Sabey & Taylor, 1980). Explaining further in their study, Afolabi & Gbadamosi (2017), regard human factor as top-list of the causes of accidents in

Nigeria with some verification indicators include; lack of proper training of drivers, inexperience and incompetent drivers, over-speeding, dangerous driving, drink-driving/drugs with herbal concoctions, impatience and negligence, fatigue, low vision and disregard of road signs. The consequences of the road usually crash leading to the family breadwinner or financer´s demise, considering the funeral gathering costs and medical bills turning most families in less developed nations to penury and poverty (Nantulya & Reich, 2003).

In the first quarter of 2018, 2,189 vehicle accidents were recorded across the country, 1,220 people were killed out of 16,603 involved, 7,848 were seriously injured 1,232 were serious, and 296 were minor cases. In Abuja, the federal capacity territory (FCT), 274 crashes were recorded with 1,513 persons making it the highest number of road crashes in Nigeria. In Kaduna, 198 crashes cases involving 1,487 were recorded and in Nasarawa, 131 crash cases involving 877 persons were also recorded. The highest number of 2,330 crash cases (60.3%), recorded, were associated with commercial vehicles, while 1,480 crashes representing 38.30% were associated with private vehicles (NBS, 2018).

The high road crash rate in Nigeria has its toll on the productive population and decreases the National Gross Domestic Product (GDP) by 3% per annum (Oyeyemi, 2018). Nigeria loses about 100 billion Naira annually to road traffic accidents (FRSC, 2012) and is ranked second highest among 123 countries globally with higher road fatalities (Agbonkhese, et al 2013). Nigeria loses $6.2 billion yearly to road crashes (Yushau, 2010). Their previous study
with extracted exploratory data from Nigeria, (Labinjo et al, 2010) explain the road traffic accidents victim's dilemma as 29.1% of them suffer disability and 13.5% are unable to return to their respective jobs.

The high rate of fatalities in Nigeria in the last two decades despite the efforts of the lead agency-'Federal Road Safety Corps' makes it a burden not to be taken lightly, especially with crashes on the Nigerian roads and the high population of with 7.7 million registered drivers (Chidoka, 2011). These alarming high rates of road crashes has been considered as one of the highest killers in Nigeria, with an average of not less than 20 people per day (Braimah et al, 2014). Nigeria has been claimed to have the highest road accidents, and the largest number of deaths per 10,000 vehicles on the roads (Sheriff, 2009) and these trends and incidences of carnage is increasing (Eze, 2010) with the use of cheap transportation system of commercial buses and mini-buses as a characteristic feature of low and middle-income countries

implication of road traffic injuries (Nantulya & Reich, 2002). A recent estimate revealed that by the year 2030, the rate of deaths from traffic accidents will surpass cerebrovascular disease, tuberculosis, and HIV/AIDS in Nigeria (Iyanda, 2019).

2.7. Attitude and behaviour in social psychology
2.7.1. Introduction

This section explains the concepts of attitudes and behaviour as perceived by the psychologists and behaviouralists to understand of individuals making risky decisions. Some same salient concepts must be contextualized, categorized and defined in this study. The three components of attitudes; cognitive, (thoughts and beliefs) affective (feeling) and behavioural (attitude influences behaviour) are the best guide to fully understand the meaning and concepts of attitude. The concept of behavior gets its roots from an overview of economic theory which then move to more complex 'behavioral economic principles' and models from ´social psychology´ both of which build upon ´economic theory´ (Darnton, 2008).

2.7.2. Conceptualization of attitude and behaviour
2.7.2.1. Attitude concept

Cacioppo et al., (1994) indicate that Herbert Spenser and Alexander Bain introduced attitude into psychology in 1860 as an initial state of an action. Allport, (1935, p. 784) stated that "an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related). Eagly & Chaiken, 1993, p.1) defines attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of ´favour´ or ´disfavour´. Allport (1937, p. 198) regards an attitude as "probably the most distinctive and indispensable concept in American social psychology". In his analysis of attitudes, he explains the distinction of attitude from other concepts of "needs" and "habits" and identifies the four "conditions for the formation of attitudes" through which include integration, differentiated with experience, traumatic experience and imitation (Allport, 1968, p. 9-10). Attitude is defined by Bandura (2006) as individual intellectual and neutral characterizations gained by experience influences behaviour.

Moreover, the concept of Attitude has been linked with social psychology and it includes cognitive, affective, motivational, and behavioural components (Schwarz & Bohner, 2001). Nelson, 1939 explains the link in the meaning of attitudes with other concepts such as "habit", "disposition" and an "opinion" while DeFleur & Westie, (1963) in doubt to qualify attitude as a scientific concept and call for more research development and clarification. Attitude is acquired through learning and interaction with one´s environment (Eiser, 1994). Shook & Bratianu, (2010) state that an individual forms his or her attitude based on his or her beliefs in the possible outcomes. The more favourable the possibility is, the stronger the intention to do the behaviour will be and vice versa: the less favourable the outcome possibility is, the weaker the intention to do the behaviour will be. In the position of attitude in measurement, Thurstone, (1931, p. 255) summarized it "attitude to describe potential action towards the object with regard only to the question whether the potential action will be favourable or unfavourable toward the object".

Meanwhile, also reading through their article on concept, structure, models and development of attitudes, Sabaté & Montane, (2010) argue for two constructs on educational view on attitudinal change; attitude as a part of competency, and that both (attitude and competency) must be treated jointly. These authors incorporate attitude and competence with the three critical factors of human behaviour: cognitive, affective, and behaviour.

Attitude is acquired through learning and interaction with our environment while the intention is defined as a person´s subjective probability dimension that connects that person to a behaviour (Fishbein & Ajzen (1975). The individual differences in attitude-cognitive-effect correlations established by Chaiken, et al. (1995) are demonstrated above in Fig. 7.

Attitude-effect correlation

Attitude-effect correlation

	High	Low
Dual-Consistent	**Thinkers**	**High**
Feelers	**Dual-Inconsistent**	**Low**

(Vertical label: **Attitude-cognition correlation**)
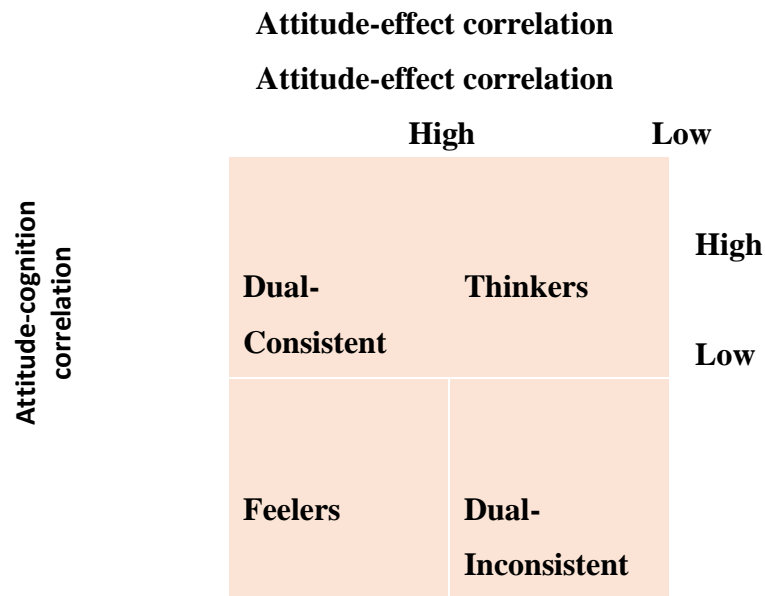
FIGURE 4: TYPOLOGY OF INDIVIDUAL DIFFERENCES IN ATTITUDE-COGNITIVE-EFFECT CORRELATIONS ADAPTED FROM CHAIKEN ET AL. (1995)

Moreover, Akinyemi, Adeyemi & Jinadu (2016), in their study on the automotive active safety system (ASS), concluded that both the passive safety (seat belt) and active safety (air-bag and Antilock Braking System -ABS) in use of vehicles designed with Automotive Safety System (ASS) had decreased the proportion of vehicles involved in accidents, injuries, and deaths in Nigeria

2.7.2.2. Behavioural concept

Behaviour is a vital concept in transport safety modelling and road safety policy. Driver behaviour is an essential subject of road safety research. Risky driving behaviour contributes significantly to the enormous burden of injury and death worldwide (WHO, 2004). Human error plays a vital role in a large percentage of crashes as established by past research in Nigeria, and that should be the main target of the intervention or measures to be adopted.

Behaviour has been defined to affect a change from one situation to another or maintain an existing one (Ossorio, 2006). Behaviour is defined as how an individual behaves or acts (UNESCO, 2000). Bergner, (2011) 's typified the definition of behaviour after reviewed of 26 psychology dictionaries and textual glossaries definitions are "as an observable overt movement of the organism generally taken to include verbal behaviour as well as physical

movements". The use of multiple behavioural criteria to observe attitude-behaviour (Fishbein & Ajzen, 1974).

Behaviour reflects nervous system activity but depends on multiple vital factors, including external stimuli and past experiences. Ivancevich et al., (2005) clarified the diverse personality factors of drivers concerning their differences. These researchers clarified those personality factors as age, ethnicity, gender, physical attributes, race, and sexual/affectional orientation as those belong to primary dimensions that are stable. Educational background, marital status, religious beliefs, health, and work experience belong to changeable secondary dimensions. It has been established that drivers that are exposed to formal driving training have lower crash rates than their informally trained counterparts (Beirsness, 1996; Fisher & Shapiro, 2005).

2.8. Risk concept

Risks are assumed to be part of every day-to-day human endeavor. Humans are beings exposed to risks of different degrees. The concept of ´risk´ has a wide range of meanings and connotations. Risk is having been defined as "the potential for unwanted negative consequences of an event or activity" (Rowe, 1977), and another author explains that "Risk is the chancing of a negative outcome. To measure risk, we must accordingly measure its defining components, the chance, and the negativity" (Rescher, 1983).

However, this study relates to aberrant human attitudes while on the wheel. Risk driving, according to Ge et al, (2014), refers to driving behaviours without the intention of causing harm to other road users but with negative results if precautions are not taken. A risk driving attitude explains behaviours that increase road crash risk because of traffic rules violations (Yilmaz & Celik, 2006). The theory of risk homeostasis predicts that as safety features are added to vehicles and roads, drivers tend to increase their exposure to collision risk they feel better protected (Wilde, 2004).

Holton (2004) explains the two factors that must exist before we can talk of risk. These factors include uncertainty about our action´s potential outcome, and the other one is that outcome recognition should provide a specific utility (benefit). Chavas (2004), in his book titled "Risk Analysis in Theory and Practice", defined a risky event to be "any event that is not known for sure ahead of time". Chavas further gives three vital factors that contribute to the existence of risky events. They include our "inability to control and measure" precisely some causal factors

of events; our "limited ability to process information"; and finally, that the "cost of information" can take many forms such as financial or monetary cost. There are two fundamental characteristics of risk; these include the event that is not known and the issue of learning time, while the two types of risks are perceived and actual risk. It is imperative to note that an individual´s perceived risk means evaluating the probability and consequences of a negative outcome (Sjoberg et al, 2004). Most of the studies to date have recognized and incorporated risky behaviour as an essential phenomenon.

2.8.1. Risk, risk perception, and intention

Risk, according to Carlo et al., (2001, p.17), means "a situation or event in which something of human value (including humans themselves) has been put at stake and where the outcome is uncertain". It makes us to know that the concept of Risk entails two indispensable elements: possibility and uncertainty. Risk is significant when humans have a stake in outcomes or consequences of an action. DeJoy, (1989) describes the concepts of risk in road exposure as the probability of a crash, probability of the injury, and the injury´s outcome. Ulleberg, (2003) regards personality traits, attitudes, and risk perception as predictors of risky driving behaviour.

Meanwhile, a risky event, then, is "any event that is not known for sure ahead of time" (Chavas, 2004). Risky driving refers to behaviour that does not intend to harm others but potentially has adverse outcomes because precautions are not taken (Ge et al., 2015). The factors that have been put forth to have influence on risky driving behaviors include; age, gender, life state, education, misinformation, low levels of personal responsibility (marital status), driving skills, and lack of severe concentration or acknowledgment of the potential negative impacts of risky driving (over and above financial penalties and loss of license) (Kellard & Fishman, 2013). Risk, attitudes, and behaviour are significant concepts of concern for this research. The study will explore the conceptual framework and hypothesized (research questions) and relationships among the five-basic risk-driving violations.

This study reviewed, categorised, and contextualised risk-taking behaviour concerning vehicle driving and related research theories in social behaviour, decisions, and the interactions among beliefs and norms. Klauter, Sudweeks, Hickman, & Neale, (2006) described the four riskiest driving behaviours: excessive speed, safety belt use, driver distraction or inattention, and driver

drowsiness. The variable factors were investigated in Nigeria´s realm, while characteristics such as poverty and low-income among motorists help exhibit a higher risk tolerance behaviour in traffic systems (Rundmo, Oltedal, Moen, & Klempe, 2004).

The pair of Ajzen & Fishbein (1980) give what is being regarded as a successful solution. They postulate that the effect of attitude is restored by "intention" and how intention predicts our attitudes and behaviour. Jariot & Montane (2009), in an application study on road safety, emphasize that any meaningful change on individual attitude will much depend on three essential components that include the way people think, act, and feel.

2.9. The factsheets of road traffic safety trends and patterns in Abuja and Lagos

ABUJA: In Abuja, both Peace Mass Transit and Utako motor parks were used to investigate the first survey site. Abuja is presently federal, the capital city of Nigeria. It has an increasing population estimated as 3,277,740 in 2020, with a density of 1853 km2, a growth rate of 6.07%, and a land area is of 1,769 km2. Seventy years ago (1950), the Abuja population was estimated at 18,977. This capital city is one of the fastest-growing cities in the world. Abuja is projected to be 5,119,340, with a 3.99% growth in 2030 (UN-WUP,2020). At the 2006 census, the city had a population of 776,298 (NPCN, 2006). Abuja is located within the Federal Capital Territory and replaces Lagos as Nigeria´s new capital on 12 December 1991.

LAGOS: The popular Oshodi and Mile 2 motor parks are also used for Lagos´s second location, which doubles as a port and "business" city, was Nigeria´s capital since its amalgamation in 1914 until 1991 when it was replaced by Abuja as planned to bring all of the various tribes, religions and ethnic groups together. Lagos State generates 25% of Nigeria´s total Gross Domestic Product (GDP). Lagos is estimated to have now 14,368,332 populations, with a density of 12,267 km2, a growth rate of 3.34%, and a land area of 1,171.28km2 (452,23 square miles). In 1950, Lagos, which is now the most populous city in Nigeria, had 325,218 population in 1950 - seventy years ago. The eight fastest-growing cities globally are expected to be 20,600,156 populations, with a 3.73% growth rate double its population by 2050 (UN-WUP, 2020).

2.10.   Beliefs: The construct of human thoughts on culture and religion

This section of the thesis explores how individual action can be influenced in the risky decisions made because of cultural and religious beliefs and affiliation. The word ´belief´ can mean different types of meanings and definitions depending on the situation. This study specifically relates to one of the constructs of human thoughts concerning culture and religion. Several researchers have argued that unsafe behaviours among drivers in developing nations can be prevented by understanding the socio-political, cultural systems (Hess & McKinney, 2007; Forjuoh & Li, 1996).

Studies have generally failed to take much cognizance account of the effect of beliefs (e.g. customs, religion, fatalism, and superstition) on road traffic safety (RTA) in low- and medium-income countries (LOMICS). In their study in Pakistan, Kayani, King, & Fleiter (2012) conclude that fatalistic beliefs are a potential barrier to road safety and enhance risky road use among road users. Past research has shown that when individuals are challenged to information challenges, they often strengthen their original belief (Batson, 1975; Burris, Harmon-Jones, & Tarpley, 1997). To achieve safer road for all road users, it is very essential to take cognizance of some cultural values and religious beliefs in understanding or risk-taking phenomena and explaining road crashes.

Traditions, customs, and religion have been viewed to impede developing nations on rapid motorization and safety (Kayani et al, 2016). The cultural dimension definition of belief comes from Abelson (1979) as a concept of knowledge if all group members have a specific belief. According to Dawkins, (1989, p.3), "… among animals, man is uniquely dominated by culture, by influences learned and handed down". Fishbein (1961), explains that an individual attitude towards any object is a function of his beliefs about the object. He explains further on the critical role plays by beliefs of attitude change theories and concludes that a person who holds the strongest beliefs is expected to influence his attitude. That shows us empirically how beliefs (customs, culture, religion, and fatalism) indirectly affect our daily lives.

Moreover, in the function-structure model of attitudes: motivations moderate beliefs, feelings, and experiences on attitudes. Beliefs are acquired through the approximate probability of knowledge acquired with understanding being correct or coming by as an event (Wyer & Albarracin, 2004). Meanwhile, (Weinstein, 1980) claims that that perception of risk is a social

and cultural construct that involves values, history, symbols, and ideology beyond individual control. Adams (1995) claims that the concept or theory of risk is that individual tends to take risks and Brun (1994) concludes and links risk to an "insufficient controllability".

Personal beliefs and cultural sentiment have been used to discuss risk perception and risk interpretation as it affects individual social learning and perception, and significant that behaviour is mould upon the world around them (Mary Douglas, 1978; Douglas & Wildavsky, 1982). Wildavsky & Dake (1990, p.42) conclude that cultural theory of risk could help predict, notice, determine, and explain people´s different behaviours. Another school of thought is the theory of Risk Homeostasis, also called Risk Compensation which has gained universal recognition in the road safety sector. Another researcher sees that beliefs are not emotional in themselves but are essential when attitudes and emotional reactions occur (McLeod, 1992). Kouabenan (1997), in his study on the beliefs and perception of risks and accidents in Cote de Ivoire (Ivory Coast, West Africa) explains that fatalistic beliefs and mystical practices influence the perception of roar traffic accidents as drivers take risks and neglect required safety measures.

Drivers´ beliefs and survival needs appear to moderate and meditate crash risk. Many people in the (third world continent) do not believe that road traffic accidents are preventable (Krug, 2002). The belief that individual is destined to die through road accidents no matter what and the preaching of sermons on moving passengers' vehicles as a sign of protection for the occupants (Teye-Kwadjo et al., 2013). Furinghetti & Pehkonen (2002) lament that enough research consensus on the concept of beliefs on a cognitive-affective scale, do not exist while Rashid & Ibrahim (2008) explain that research has shown that this religion and cultural beliefs have a significant influence on the people's behavior. Another set of researchers conclude on the differentiation between belief and knowledge that "knowledge" has a relatively more substantial affective component than belief (Abelson, 1979; Speer, 2005).

Individual attitudes are believed to form in response to acquiring certain beliefs about various objects, actions, and events with life experiences (Holdershaw & Gendall, 2008). Other schools of thought explain that people may hold both positive and negative beliefs about an object (East, 1990), and other people acquire belief based on direct observation or information received from outside sources or various inferences (Fishbein & Ajzen,1975).

2.11. The measurement of attitudes

The first known and most influential attitude research originated from the social psychology specialty known as "psychophysics". This was supported by the famous "Weber- Fechner law", which explains the measurement of different kinds of sensation and discovering quantitative laws relating differences in the magnitude, objectives, and physical attributes of a set of stimuli (Eiser, 1994).

Thurstone (1928), another school of thought on psychophysical laws which supports the legitimacy of measuring attitudes but was much concerned about the continuity of the individual or group of people attitude "attitude continuum", which may be favorable or unfavorable. Osgood, Suci & Tannenbaum (1957) come out with a real measurement technique tagged "semantic differential" that explains multiple objects and multiple descriptive ratings as frequent in research questionnaires.

Attitude is regarded as "a complex affair which cannot be easily described by a single numerical index…but …used to describe potential action toward the object with regard only to the question whether the potential action will be favourable or unfavourable toward the object" Thurstone (1931, p. 255). Attitudes are measured directly and indirectly, but the most important is that the instrument used must be valid (measure consistently) and reliable (measure the real designated object) (Vogel & Wanke, 2016).

2.12. Attitudes can be changed and sometimes predict behaviour

Modern scientists have agreed on the three cardinal factors that determine driving attitudes, and risky driving behavior is personal attitude and behaviour: cognitive variables, situational cultural factors, and socio-economic demographic factors.

Changes in attitudes can be evident if it is measured. Attitudes predict many aspects of our social behavior. Attitude is regarded as a simple unitary concept with a complex of classical components: affect (emotions and feelings towards the target); cognition (beliefs or stereotypes about the target), and behavior (overt actions – the past and future behavioral intentions concerning the target) Rosenberg & Hovland (1960). But his theory was regarded as too vague with the idea of different psychological subsystems intervening between stimuli and measurable output (dependent variables).

Ajzen & Fishbein (1980) give what is being regarded as a successful solution as they postulate that the effect of attitude is restored by "intention". It merely explains that intention predicts

attitude (for example, the aberrant driving attitudes). Furthermore, they explain further that attitudes and "subjective norm influence this "intention". Subjective norms refer to actions somebody wishes to please or obey another person.

2.13. Theories and models of behavioural change and learning
2.13.1. Introduction

The section aims to study the modification of road user behavior. It also highlights common strategies across this sea of research and the integration of various theories that capture different aspects of the phenomenon (Bilic, 2005). This study´s theoretical framework will take cognizance to discuss issues, themes, and debates relevant to the research area of socio-psychological-beliefs aspects of human behaviour.

2.13.2. An overview of the first three old cognitive theories

Cognitive development and research have a long-time history that is more important for this study to briefly discuss what is assumed to be the origin of cognitive development research. Piaget´s cognitive development theory focuses on learner´s capabilities (Baken, 2014) ,while Lev Vygotsky (1896-1934)´s social-cultural cognitive theory that focuses on the relationship between individual´s psycho-socio-cultural transformation of cognitive mental functions (Zubaidi, (2015) and the information processes theory of storing, recalling and processing of information (Lutz & Huitt, 2003).

Jean Piaget (1896-1980), a Swiss, develops the cognitive theory that children go through four stages of cognitive development to understand the world they live in. He believes that children can discover themselves physically and independently by undergoing four stages of life development which are: sensorimotor stage (0 age to 2 years); the preoperational stage (2 years to 7 years); the concrete operational stage (7 years to 11 years) and formal operational stage (11 years to 15 years). Piaget concludes that cognitive development is a process that occurs due to biological maturation and interaction with the environment (McLeod, 2018; Khalid, 2015).

Lev Vygotsky (1896-1934) is another known educational psychologist who develops the social-cultural cognitive theory. His argument focuses on culture and social interaction as predictors of cognitive development. He emphasizes that children´s environment location and

the kind of person (knowledgeable or non-knowledgeable) influence how they think and act. Vygotsky gives three tools for a cultural construct that affect children`s development. These constructs imitate or copy the other; self-regulated learning and development of skills and learning with peer groups. Vygotsky claims that individual higher cognitive function is a construct of socio-cultural and historical development (Min, 2006).

The third is the Information Processing Theory (IPT), which views the human mind as a system that processes information to function. Sayood, (2018) views the IPT as the process of transforming perceptions into information. According to Riquelme, (1994), information processing theory develops a theoretical framework from communication science that enhances thinking, creating behaviour.

2.13.3. The theories of behaviour

Behaviour is a phenomenon with different constructs and concepts. On the issue of attitudinal change, Jariot & Montane (2009), in an application study on road safety, emphasize that any meaningful change in individual attitude will much depend on three essential components that include the way people think, act and feel with special consideration to preventive actions, educational actions or re-educational actions. Arnau & Montane (2010), in another study on the concept, structure, models, and development of attitudes, argue about two constructs effect of educational change on attitudinal change; that attitude is a part of competency; and that attitude and competency can be treated jointly. They backed up their argument by incorporating attitude and competency with the three factors of human behaviour: cognitive, affective and behaviour.

However, another Learning School of Thought led by Insko (1967) explains that learning takes place on the formation of attitudes and O´Keefe (1990) supports Insko´s argument that the effect of new stimuli (event) creates an emotional response to individual learning processes. The Theory of Change concept helps steer the complications of social change (Serrat, 2017). It explains the standard generic processes of change in a phenomenon. The theory of change tends to be circling processes, incorporating feedback loops (Darnton, 2008). The main objective of road safety is to transform risk behavior in the conduct of beliefs, habits, and emotions favorable for safe, effective, and practical mobility (Montane, 2010).

Meanwhile, as a result of this, the study is constructed and aimed at aberrant driving decisions under risk that will make the investigation exact in the complimentary analysis (why there is a need to understand human behavior) and also in the normative analysis (why there is a need to make practical and sustained recommendations about road safety policy decisions) (Chavas, 2004). Some general theories have explained in detail as it relates to this investigation. Among those theories include; Theory of Cognitive Dissonance, Theory of Reasoned Action, Theory of Planned Behaviour, Social Cognitive Theory, Social Practice Theory, Reinforcement Learning Theory, Social Norms Theory, Diffusion of Information Theory, Problem-Behaviour Theory, Beliefs and Heider´s Causality Theory to effect changes of attitude in analysing variable factors in this study.

2.13.4. Theory of reasoned action (TRA)

This theory from Ajzen & Fishbein (1980) explains the attitude-behavior relationships as a product of rational will and that human behavior can be predicted from behavioral intentions. These intentions are predicted by two main factors or variables: attitude towards such behavior and subjective norms (which is what you think others want you to do). The first variable explains the expectancy-value framework (outcome desirability), and the second variable is the subjective norms that are predicted by the perceived expectations of significant others valued by motivation (Taylor et al., 2003). The theory explains that an individual`s intentions are determined by attitudes and subjective norms (such as beliefs, customs, ideas), while beliefs determine attitudes. Hence, the Theory of Reasoned Action has proven to be a viable tool for road traffic safety intervention.

2.13.5.   Theory of planned behaviour (TPB)

Theory of Planned Behaviour (TPB) is accredited as one of the best-studied and applied theories on human behaviours. This theory takes its origin from the Theory of Reasoned Action (Ajzen & Fishbein, 1980). This planned behavior theory is regarded as the most effective and most influential for explaining and predicting different behavior (Armitage & Conner, 2001). It had the component of perceived control that does not exist in the Theory of Reasoned Action (TRA). The evidence suggests that the theory can predict 20-30 percent of the variance in behavior about interventions and a more significant proportion of the subject intention. This theory is seen as valuable for intervention strategy and identifying cognitive targets for change than offering change suggestions (Hardeman et al., 2002).

The study aimed to determine the effect of attitudes, subjective norms, and control behaviour on driver´s intentions on the wheel. The determining factor for individual behaviour is the amount of intention of an individual, while exerting that behaviour (Fishbein & Ajzen, 1975). The Planned Behaviour theory states perceived behavioural control has the characteristics to strengthen and weaken intentions. The relevance of these cognitive questions and statements were developed and constructed within the 30 item-questionnaire of constructs of the Theory of Planned Behaviour (TPB), Behavioural Belief (BB), Normative Beliefs (NB), Control Beliefs (CB), Past Behaviour (PB), Intention (INT) and Descriptive Norm (DN).

Moreover, comparing the Theory of Planned Behaviour (TPB) (Ajzen, 1991) with other models such as Health Belief Model (Rosenstock, 1996) and Transtheoretical Model (Prochaska & DiClemente, 1983) is not the major concern of this research. The theory of planned behaviour associates human behaviour with attitude and intention, considers the impact of social norms when predicting behaviour. The theory is based on the principle that a person´s attitude, subjective norms, and perceived behavioural control. The more construct added to the independent variables, the higher the predictability was. The construct that most affects behaviour is an intention, whereas the rest of the constructs have a lower impact on behaviour. Behavioural beliefs, normative beliefs, and descriptive norms are significant parameters for predicting intention according to the TPB (Adamos & Nathanail, 2016).

This theory has its shortcoming but Bilic, (2005) in his study concludes that this is the best useful model because it explains the significant percentage of differences in both individual intention and behaviour. There are several criticisms and limitations that the theory does not consider other behavioral intention variables and motivation such as fear, threat, mood, or experience.

Meanwhile, the theory does not consider environmental or economic factors that may influence a person´s intends to perform a behavior. This is a slightly different theory from the Theory of Reasoned Action in which Ajzen in 1991 explains in collaborations of the effects or elements before deciding or acting without little confidence of gain or success. Ajzen emphasizes individual´s specific beliefs on personal and social results of his presumed actions or decisions. Ajzen and Fishbein (1977) confirmed that a considerable measure of attitudes could be correlated with behavior measures at different levels of a general or specific term.

2.13.6. Theory of cognitive dissonance versus affective-cognitive consistency

Festinger´s Dissonance Theory by Leon Festinger in 1957 is a uniquely different theory that dedicates on cognitive elements, which are knowledge, beliefs, attitudes, and opinions. The author explains further that those cognitive elements are having relevant or irrelevant relations between themselves. The theory of Cognitive Dissonance has two types of dissonant and consonant relation, and he describes it as two elements in a dissonant relation that is popularly called "action-opinion theories". It precisely placed on three fundamental assumptions that; humans are sensitive to inconsistencies between actions and beliefs; recognition of this inconsistencies; and dissonance; that dissonance will be resolved by changing beliefs, changing action and changing perception of action (Festinger, 1957). Cognitive theorists use abstract ideas (such as beliefs, emotions, intention, attitude, and expectations) that operate inside people to control their behavior while the behavioralists focus their attention on the two kinds of events that influence its environment and consequences.

Meanwhile, the Cognitive Consistency Principle explains individuals' preferences for consistent incoming information for understanding the social world. Goldenberg, Leveit & Heidstra (2000) offer three broad classes of the motivation of driver´s behaviour, which include reason or planned behaviour which explains that change is possible through influence of attitudes or social norms emotional reaction, and habitual behaviour. It´s accident prevention strategy has been effective in many sectors (Wilde, 1998). Risk homeostasis is also called "expectationist" intervention that makes people to be alert and cautious about their personal safety.

2.13.7. The cognitive dissonance theory

The Cognitive Consistency Theory is assumed to be one of the most influential theories in psychology. It explains merely as the changing of individual attitude to conform more with the real established behaviour. The theory of Cognitive Dissonance emphasizes the commitment and consequence of the decision taken. It further explains that dissonance (inconsistency) is aroused when one possesses two cognitive elements to decide on (Festinger, 1957), as explained in Figure 7. Cognitive Dissonance Theory is concerned with how perception and cognition influence is enhanced by motivation and emotion (Harmon-Jones & Harmon-Jones, 2003).
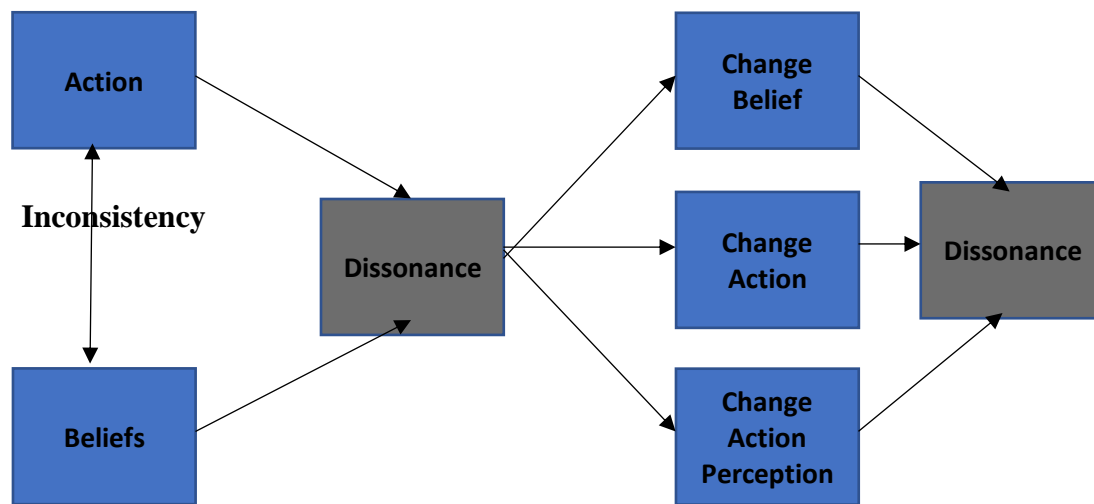
FIGURE 5: THE COGNITIVE DISSONANCE THEORY BASED ON FESTINGER, L. (1957)

That attitude can be re-adjusted to favor how we have already behaved. Stephen & Ukpere, (2011), discovered in their study on accidents and intelligence level that formal education has nothing to do with the driver´s behaviors on the road. The most crucial driving behavior is the driver´s training of needed skills and driving capabilities before acquiring a driver´s license. Affective-Cognitive Consistency recognizes the relationship between attitudes and beliefs. Rosenberg, (1956) and Abelson et al., (1980) posit that an individual effect (feelings) guides behavior irrespective of that individual´s cognitions (beliefs). They gave an empirical example of the voting preferences that we must have all witnessed in our political systems, especially when democracy is in crisis. Noman (1975) defends the last assertion by demonstrating that attitude with high affective-cognitive consistency predicts behavior rather than attitude low in affective –cognitive consistency. Kinders & Sears (1981) suggest that attitudes evaluation is primarily on affective association with symbolic connections to the attitude object in all ramifications. The notion of active-cognitive "close" relationships could be an effective intervention for some illiterate commercial-vehicle drivers of the low-and medium-income countries. The affective aspect could be well managed in having close contact with accident victims to see and listen to their tragic story.

2.13.8. Risk homeostasis theory (RHT)

Every person has a set of cells in the body to maintain the entire body system equilibrium. Homeostasis refers to the stability of equilibrium of a phenomenon, while homeostatic defines it as adjusting the body´s physiological system. This theory is also called the Theory of Risk Compensation.
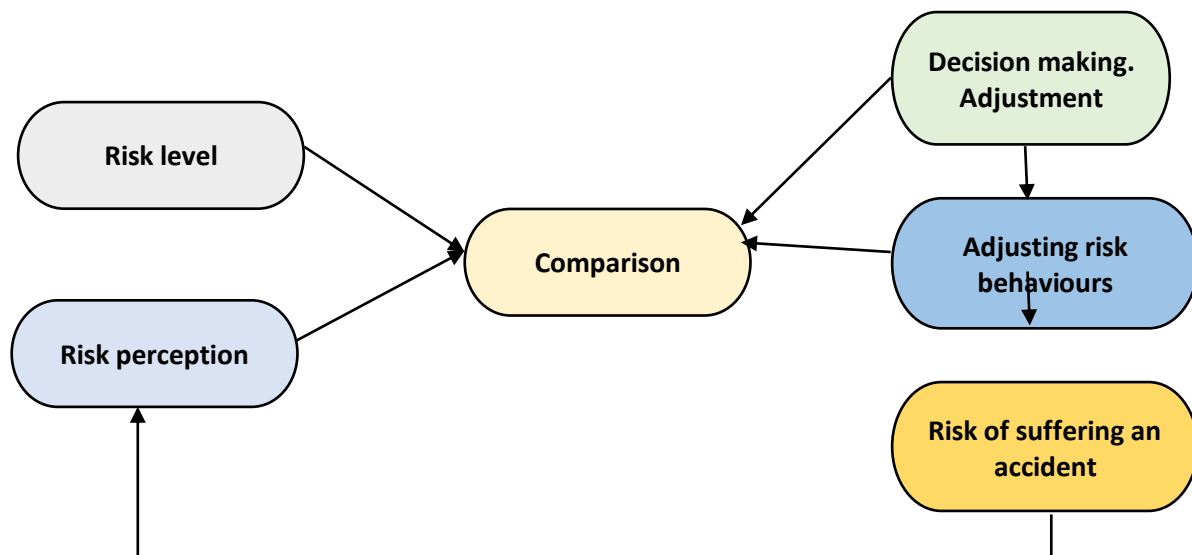
FIGURE 6: HOMEOSTATIC MECHANISM PROCESSES. INSPIRED BY GERALD J.S. WILDE, (1982)

The psychology theory of human behaviour called Risk Homeostasis was propagated by a Canadian by the name of Gerald J.S Wilde to explain risks in road traffic safety. The theory emphasizes the individual benefits –expected costs relations in which they seek a stimulus to achieve a targeted risk. Wilde suggests four components to individual calculations relating to risk; expected benefits of risky behaviour; expected costs of risky behaviour; expected benefits of safe behaviour; and expected costs of safe behaviour (Wilde, 1982). The theory posits three mechanisms: the receptor; the control centre (integration-where information is received and processed); and the effectors'(that responds to the order of the centre by either enhancing or opposing the stimuli). Relating the above explanation assumes that the theory seeks to improve traffic safety by removing the risky behaviour. The theory offers forgiveness for wrongdoing and carelessness with the assumption that; everybody belongs to the same unit.

2.13.9. Social cognitive theory (SCT)

Historically, Social Cognitive Theory (SCT) started as Social Learning Theory (SLT) in the 1960s by Albert Bandura. Social Cognitive Theory (SCT) develops in 1986. The theory explains the concept of learning as a dynamic and reciprocal interaction of "person", "behavior" and "environment". These three components interact in all ramifications. Firstly, the SCT theory states that any interaction between the "person" and the "environment" involves human beliefs and cognitive competencies developed within his environment´s social and structural influences. Secondly, SCT states that the interaction between the "person" and

behavior involves the influences of a "person´s" thoughts and actions. Finally, the interaction between the "environment" and "behavior", involves a person´s behavior influencing the aspects of that environment (Taylor, 2003).

The theory of SCT posits six constructs which include; reciprocal determinism (individual with set of learned experiences); behavioral capability (ability to know what to do and how to do it-knowledge and skills); observational learning (successful ability to witness, perform and reproduce actions-modelling of behaviors); reinforcements (internal and external responses between behavior and environment); expectations (anticipated consequences of a person´s behavior/action-expectation derive from previous experience); lastly, self-efficacy (person´s specific capabilities and other (barriers and facilitators) environmental factors.

2.13.10. Social practice theory (SPT)

Social practice theory is a concept in terms of individual actions. For example, a risky or aberrant action taken by a driver might put both his life and the lives of other road users at serious risk. The Social Practice Theory´s conceptualization is on how social beings understand and transform the world they live in and better the dynamics of health and the well-being of the people who constitute a society. The theory provides alternative ways of understanding human action about health, well-being, and changing individual behaviors to produce positive outcomes and to reconcile structure and agency in the lived experience of everyday life (Maller, 2012). Empirically, it seems that social practice theory has much to contribute to the context of low- and medium-income countries (LOMICS) in the understanding of health and wellbeing and understand the tremendous socio-economic costs of road traffic crashes. This theory is said to incorporate careful attention to tension, conflict, relations, and participation in cultural activities and beliefs (Holland & Lave, 2009).

2.13.11. Re-enforcement learning theory (RLT)

The re-enforcement learning machine is popularized by Hovland and his research mates at the Yale Communication Research Program center. The theory is based upon learning principles produced through reinforcement with the interaction of learners with their environment. The two characteristic features of Reinforcement learning are trial and error search and delayed reward. It specifically learns new opinions and various verbal and motor skills (Hovland et al., 1953). The Theory of Reinforcement provides and reinforces acceptable social approval in the persistence of opinions, the reward for counter-attitudinal advocacy, and verbal reinforcement.

"Opinion" and "Attitude" is regarded as intervening variables with a high degree of mutual interaction (Insko, 1967).

Reinforcement theory is considered well suited for individuals with no information beyond the payoff they receive and may not even know of the strategic situation (Duffy, 2005; Camerer, 2003). This will be advantageous for the large chunk of commercial drivers in Nigeria and low- and middle-income countries with low educational status levels. The theory reveals a critical aspect of the real problem facing a learning person interacting with his environment to achieve a desired goal or objective (Sutton & Barto, 2012).

The theory provides learning by small steps (slow adaptation) and learning by more significant steps (fast adaptation) concerning area space and locality. This makes it more advantageous for learners' subjects with easy adaptation in their locality. Reinforcement theory is said to be successfully used in tasks like riding a bicycle (Randlov & Alstrom,1998), and making taxi fares (Dietterich, 2000).

2.13.12. Social norms theory (SNT)

Social Norms Theory is an evidence-based approach used to address health issues (alcohol and tobacco) among school students. The theory was first used by Perkina & Berkowitz in 1986 to address the issue mentioned. This theory describes a situation called "pluralistic ignorance" (Miller & McFarland, 1991; Toch & Klofas, 1984), where individuals incorrectly perceive the attitude and behaviors of other peer groups and other people as different when in real sense they are not. The theory explains that individuals change their behavior to misperceived norms due to ignorance regarding problem or risk, healthy or protective behaviours.

In his article, Berkowitz also explains that this theory has been documented for alcohol, smoking, illegal drug use, and various other public health behaviors and attitudes. He posits further that the theory's goal is to "reveal and enhance already existing healthy norms that have been underestimated and weakened".   Perkins (1997) coined those individuals who misperceive to facilitate behavior problems as "carriers of the misperception".

Researchers on driving behaviour explained the increasing effect of young drivers in road crashes. Peer groups influences affect more by "perceived norms" (what they see as standard or typical in a group) rather than on the "actual norms" (the real beliefs and actions of the group). The two norms form a gap called "misperception" which is the essence of the theory (LaMorte, 2016). Most interventions for SNT are social norms in media campaigns. The theory

has its limitation on the issue of data collection and false representation of the targeted population.

2.13.13. Diffusion of innovation theory (DIT)

Presently, the low and medium-income countries are catching up with the social media revolution, this is an excellent opportunity for the scholarly and scientific "Diffusion of Innovations" (1995) study of Everett Rogers to be adopted in finding a solution to the epidemic of road traffic accidents in developing countries of the world. Most empirical researchers have reminded us of the significant gap of information and communication among the drivers, the vehicles, the environment, and all the stakeholders of road traffic safety sectors.

To put it precisely as Rogers (the creator of the theory) posits that: "There is a gap in many fields, between what is known and what is not put into use". and also, to add a classical quotation he used to begin his article from Benjamin Franklin (1706-1790): "To get a bad customs of a country change for new ones, though better, introduced, it is necessary first to remove the prejudices of the people, enlighten their ignorance, and convince them that the proposed changes will be promoting their interests: and this is not the work of a day". This theory of innovations diffusion will serve as "tipping point" to revolutionize the most populous nation in Africa on the issue of road traffic crashes that have become a threatening phenomenon to the people of the country.

Diffusion of Innovation Theory is an excellent concept for the processes where information is communicated through specific channels (like social media, mass media etc.) over time among the members of a social change (Orr, 2003). This helps make the innovation spread quickly and successfully among peer-group conversations and peer-group networks and understand different segments' needs. The five main factors that influence the adoption of innovation include awareness of the need for innovation, decision to adopt (or reject); the innovation; initial use of innovation, and the continued use of the innovation.

In the concluding part of Rogers, (1983)'s study, he explained thus; "One of the diffusion programs is to raise the level of **good** in a system…and one important role for diffusion research in the future is to explore more effective strategies for creating a greater degree of equality among the members of social systems". The theory is highly criticized because it does not

facilitate a participatory approach to adopting a public health program and that it does not take account of individual resources or social support to adopt a new behavior / innovation. The diffusion of innovation theory explains how some fundamental innovations (specific for a problem or problems) are taken up in a specific population. These innovations could be an idea, behavior, or object perceived as new by its audience (Robinson, 2009).

2.13.14. Problem-behaviour theory (PBT)

Problem-Behavior Theory is a multivariate, social-psychological conceptual framework with the unique notion that all behavior results in the subject or individual environment interaction with the legal norms of conventional society and its authority institutions. This explains an integral theory of risky driving accredited to Jessor & Jessor, (1977). The theory proposes three significant systems of explanatory variables that are: interactions of the personality system (includes social cognitions, individual values, expectations, beliefs, and attitudes); the perceived environment system (includes proximal and distal social influence factors such as family peer's orientation and expectations). The behavior system (includes the problem and conventional behavioral structures that work in opposition to one another) (Zamboanga, et al., 2004). This theory has been widely used in cross-sectional and longitudinal research studies, especially on various behaviors such as driving and other risky driving behaviors. The theory is also useful in the areas of health-compromising and health-enhancing behavior respective. There are re-formulation and extension of the theory into protective factors and risk factors (Jessor, 1991).

2.14. Models of learning and education for drivers (applied approaches to change behaviour)

An accident has become a threat and challenge for the society because we are all involved every day, moving from point to point. It has been regarded as an intricate problem that needs multiple and complex solutions, especially human factors. This calls for practical approaches in the context of the society to issues of long-standing concern. Besides, also included are some tested and applicable Models that can work in the Nigerian context and other low-and middle-income countries. Those Model include Montane and Ferrer´s Programme of Education for Conductors (PEC), The Trans-Theoretical Model (Stages of Change), Information-Motivational Behaviour Skill Model (IMB), Australian Minibus Drivers Awareness Scheme (MIDAS) and so on. Interestingly, social researchers investigate some models to achieve the

realism necessary to reduce road traffic injuries. Both models of behavior and theories of change have distinct purposes, but they are highly complementary to each other, and those two models are meant to develop effective interventions (Darnton, 2008).

2.14.1. Conceptual frameworks: Linking theory with empirical modelling

The best features of empirical research model are that empirical circle includes both quantitative research and qualitative research in nature as it starts with a phenomenon of finding an answer to a "problem" or finding an answer to a "question" (research question), then bring us to data collection and analysis and formulating answers to particular problem- all goes in "cyclical nature" (Reigeluth,1999). This study promotes an important behaviour measuring tool that is meaningful and generalizable to create firm structure for the investigation (Akintoye, 2015). The new measuring tool called LOMICS explores complete cognitive and psychometric variables summation before a typical commercial driver from low-medium-income countries. This research links the relationship between participants' demographic variables and their driving license status. Besides, it is also to test the relationship between participants driving license status and the rate of accidents in both the two survey sites (Abuja and Lagos). All the variables cause-effect relationships and correlation are explained to demonstrate the natural progression of the phenomenon investigated (Camp, 2001).

2.14.2. Introduction of standardized instructional-design theories and models

This section introduces the new changes and needs in the educational and training environment because of advances in information technology. The standardized instructional design helps to make learning and a new method of instruction more possible and necessary. The present age instructional curriculum of modelling or changing individual behaviour assume to address all the three domains of cognitive (thinking), psychomotor (doing), and affective (feeling) should be integrated or consolidated. The two theories below are of both psychomotor and cognitive constructs that have a general illustrative that helps learners analyse and understand those theories and "think outside the box" and meet their needs in all learning contexts. Learning, according to (Reigeluth, 1999), are "ways of fostering development (i.e., instructional methods) are often quite different for the cognitive aspects of development than for the affective aspects. It is important to understand both the differences and the interrelatedness of these domains of human learning and development".
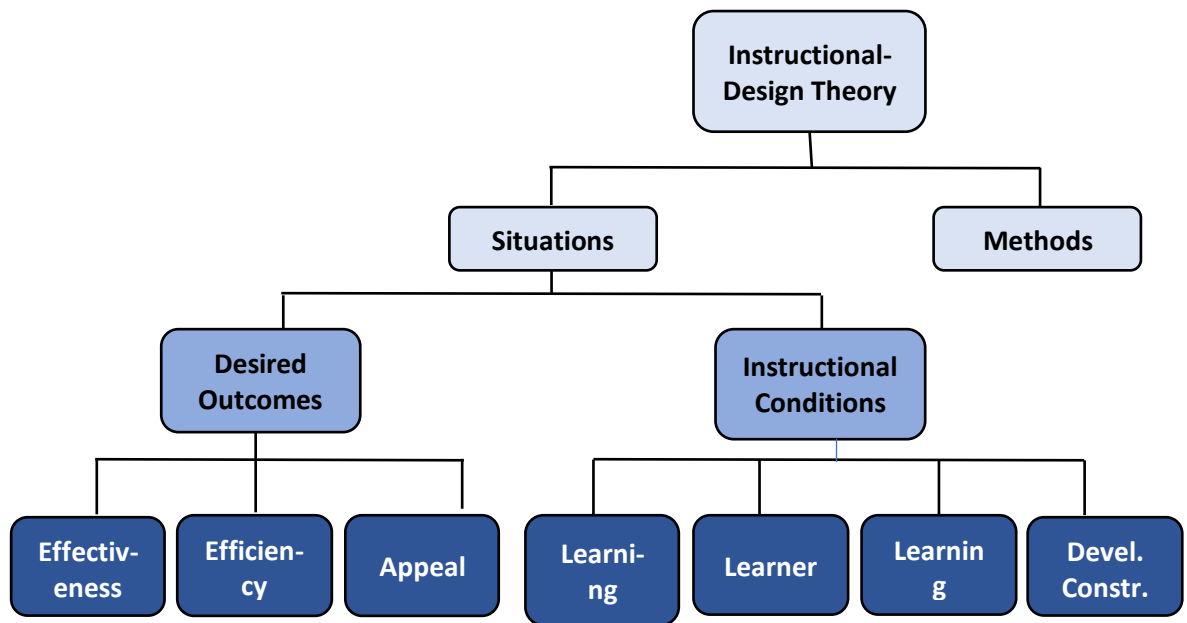
FIGURE 7: THE COMPONENTS OF INSTRUCTIONAL-DESIGN THEORIES (REIGELUTH, C. M.1999)

2.14.3. Cognitive education and the cognitive domain

This section explains the branch of learning skills mainly related to cognitive thinking and processes, which involves processing mental skills development and acquiring knowledge. There are three essential domains of learning, which include cognitive (knowledge), psychomotor (skills), and affective (attitudes) (Hoque, 2017). These three domains are the construct of a particular driver, which form vital parts of behavioural change and modification variables. Cognitive education seeks to improve individual mental skills to lead productive and satisfying lives (Sternberg, 2013). It is how ideas are connected and the solution to different problems. Cognitive learning improves and develops long-term learning confidence and comprehension. The five cognitive processes of education include thinking, knowing, remembering, judging, and problem-solving.

Meanwhile, affective education is an individual understanding of their emotional and social behaviour. Hyland, (2014) in his study concluded that mindfulness-based interventions and the affective domain of education could provide a foundation for more general cognitive development. Cognitive education and the cognitive domain (Reigeluth & Moore, 2013) explain the essential purpose of cognitive learning and higher learning levels are becoming more important in this information age. This is very important with the special consideration of the parts to be played by the teacher (instructor), the learner, and the technology that is not

static.   They assess various instructional cognitive domain kinds of learning taxonomy of various categories from different international theorists that can meet those needs.

2.14.4. The development of physical skills (psychomotor domain)

This involves the physical characteristics of learning to build psychomotor skills (reflective skills and perceptual abilities). Alexander Romiszowski writes extensively on the importance and value of physical skills to perform practical activities in competent conduct. Romiszowsk, (1999) explains a cycle of stages for physical skilled activity tagged "The skills schema".

TABLE 2: THE SKILLS SCHEMA (BASED ON ROMISZOWSKI, A, CHAPTER, 19 IN: REIGELUTH, (ED.) 1999)

THE SKILLS CONTINUUM

	REPRODUCTIVE SKILLS	PRODUCTIVE SKILLS
DOMAIN OR CATEGORY OF SKILLED ACTIVITY	Knowledge content: applying standard procedures (algorithm)	Knowledge content: applying principles and strategies (heuristics)
COGNITIVE SKILLS • *Decision making* • *Problem solving* • *Logical thinking etc.*	Applying a known procedure to a known category of "problem" (e.g., dividing numbers, writing a grammatically correct sentence).	Solving "new" problems or inventing a new procedure (e.g., proving a theorem, writing creatively).
PSYCHOMOTOR SKILLS • *Physical action* • *Perception acuity, etc.*	Repetitive or automated skills (e.g., typewriting, changing gear, running fast).	"Strategy" or "planning" skills (e.g., painting, defensive driving, playing football).
REACTIVE SKILLS • *Dealing with oneself: (attitudes and feelings, habits, and self-control)*	Conditioned habits and attitudes: attend, respond (Krathwohl et al, 1964); approach and avoidance behaviours (Mager, 1968)	Personal control skills: developing a mental set or value system (Krathwohl et al, 1964); self-actualization (Rogers, 1969)
INTERACTIVE SKILLS • *Dealing with others: (social habits and skills)*	Conditioned social responses (e.g., good manners, pleasant tone of voice, socialized behaviours).	Interpersonal control skills (e.g., leadership, supervision, persuasion, salesmanship).

2.14.5. The general process of psychomotor skill learning and instruction

Romiszowski presents an adaptation model of five stages in developing psychomotor skills from Seymour (1954,1966) and Romiszowski (1974,19 (Based on Romiszowski, IN: Reigeluth, C.M. (Ed.) (1999). 81).

TABLE 3: INSTRUCTIONAL STRATEGIES FOR SKILLS DEVELOPMENT.

	REPRODUCTIVE SKILLS	PRODUCTIVE SKILLS
Step 1 **Imparting the essential knowledge content**	Expository or experiential methods may be used (dependent on the category of knowledge).	Exponential methods preferred (concept and/or principle learning is always involved).
Step 2 **Imparting the basic psychometric skills**	Expository methods (demonstration and prompted practice), by either the "whole task" or "progressive parts" methods. Note: Imparting the knowledge and skills content may in some cases be combined in one step.	Expository methods (demonstration and prompted practice), generally by the "whole task" method. Note: This step may sometimes be omitted when the learner starts with well-developed pre-requisite psychomotor skills.
Step 3 **Developing proficiency (speed, stamina, and accuracy) and generality (transferability to a range of situations or cases)**	Supervised practice of whole task or special simulation exercises. Continuing corrective feedback (Knowledge of results and/or knowledge of performance)	Experiential methods (guided problem solving) across a varying range of cases or examples. Continuing reflective feedback (debriefing; reflection-in-action).

The four-stage performance cycle helps individual to distinguish between the three types of skills: automated, reproductive, and more productive ones during the learning processes.
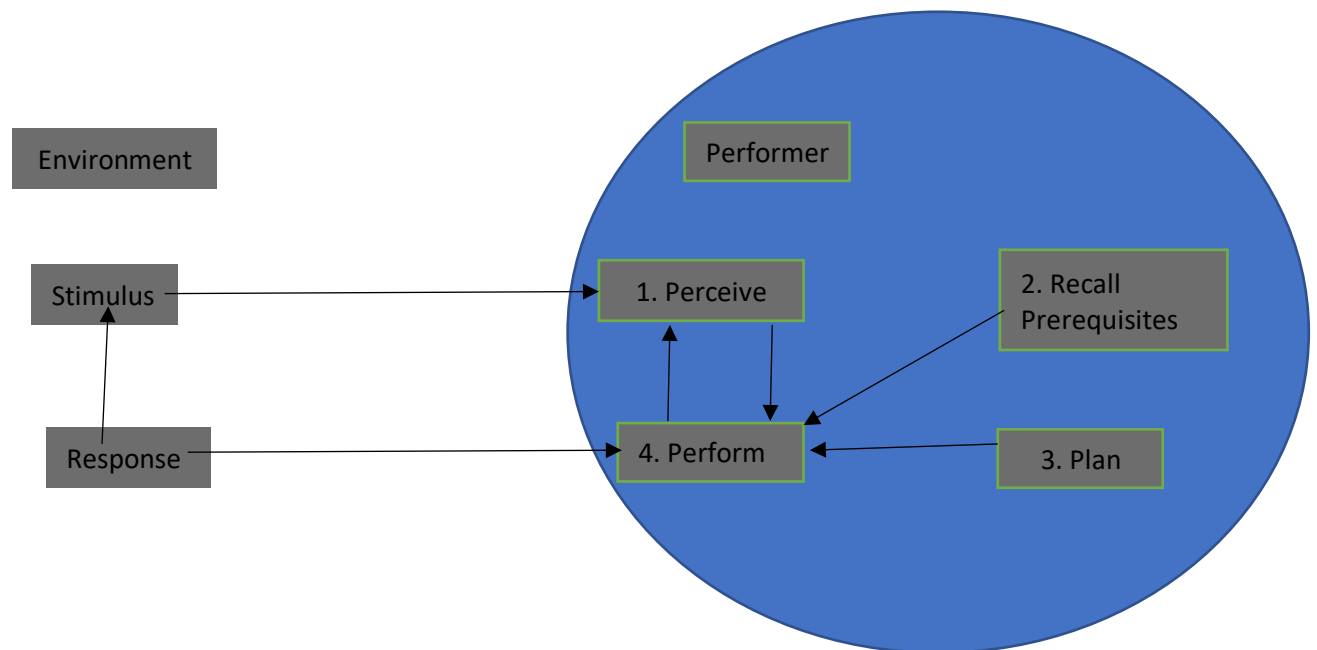
FIGURE 8: FOUR-STAGE PERFORMANCE CYCLE
Source: Romisezowski, A. J (1981).

2.15.   Educational Programs for vehicle driver´s instructor (cuaderno de formación de formadores del conductor)

This is an instructive educational programme practiced and used in Spain for driving training. It is called P.E.C. in Spain. The Spanish´s Driver Education Program applied the study for two groups: 134 new drivers with the improved level of safety of points sample; and 24 reckless drivers and produced an improved consistency of 75% safety driving attitudes and behaviours after six months (Arnau, & Montane, 2010). While discussing the application of a model in changing behavior, Montane et al., (2007) reminded us of that concept of attitude and its important cognitive, affection and interactive components. In their notebook for drivers training programs Montane & Ferrer, (1993), explained step by step how to change reckless driving attitude. The book is the approach of trainers hoping to reduce the cars and motorcycle rates of accidents among the youth. The two authors recognize three groups of drivers with accident risk phenomena. They include: (1) "Set of drivers that do not know or do not have the

required skills to drive… (2) Responsible drivers who are unaware of some preventive measures and…(3) Reckless drivers".

Montane & Ferrer (1993) explained the short-term and long-term models to educate drivers. They both mainly focus on "life-style conditions and driving style" (of the driver) and "the personality trait study". The P.E.C. model base on the three factors of behavior; cognitive, affective, and behavior. The authors confirm that by taken a typical reckless driver as a case study to find out more information from them on their feelings and styles of driving; their ideas concerning driving; their emotions and the behavior. The P.E.C. final objective model´s final objective is safety driving, making drivers drive very carefully to avert accidents and injury. This model has not left out the behavioral modification and showed direct and indirect interventions, and given a vivid description and application of P.E.C.
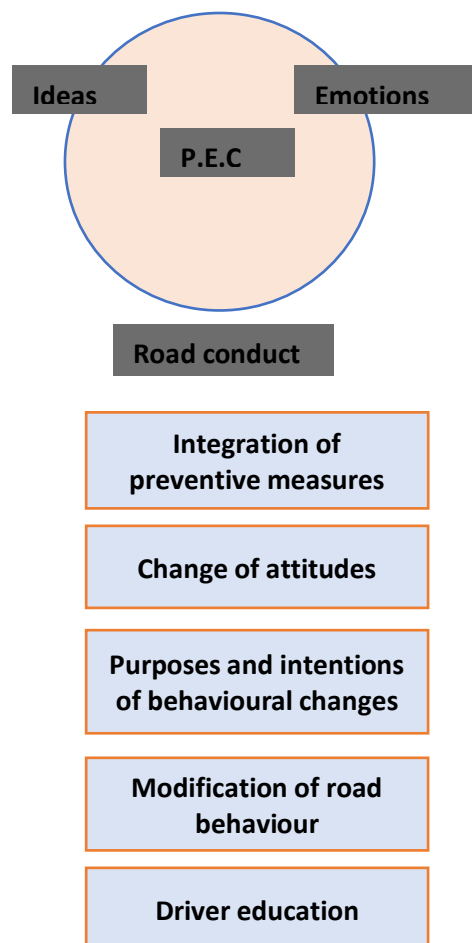
FIGURE 9: INFLUENCE OF P.E.C TO ACHIEVE DRIVER EDUCATION
(MONTANÉ & FERRER, 1993)
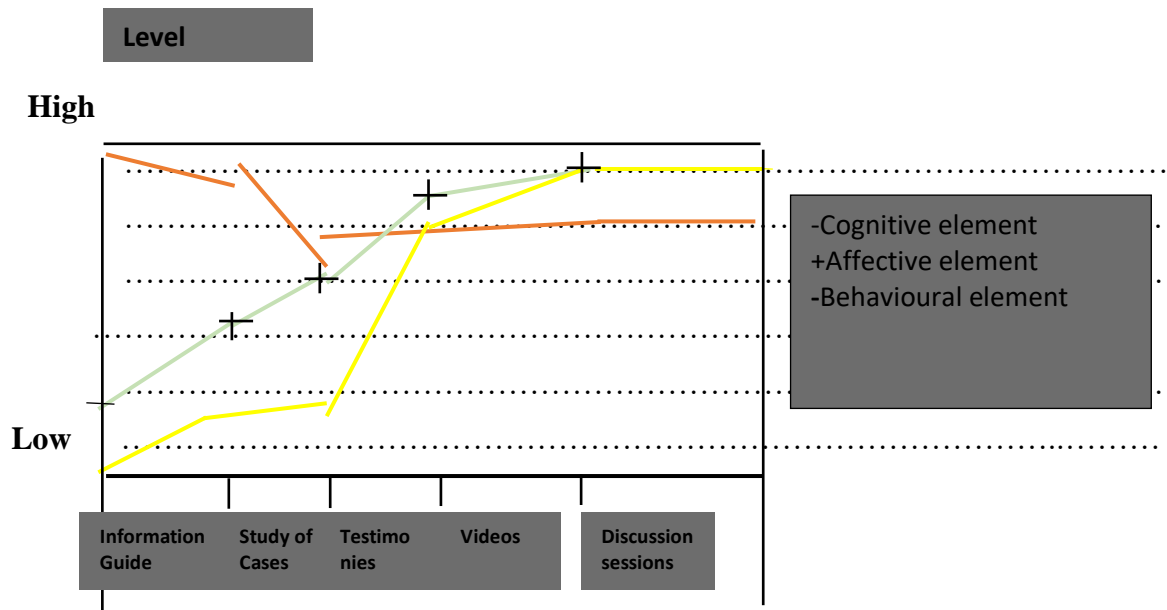
FIGURE 10: RELATIONSHIP BETWEEN LEVEL OF THE THREE FACTORS AND PROCESSES IN THE APPLICATION OF PEC.
(MONTANÉ & FERRER, 1993)

2.16. Safe driving programme for bus drivers and evaluation of its benefits (programa de condució segura per als conductores d´autobus i avaluacio del beneficis obtinguts)

This is another driving program in Spain specifically for bus drivers. A previous study from Jariot & Rodríguez, (2007) during the training of one hundred (100) driving instructors in Spain concluded a vital need for theoretical models of professional competencies on-road formation of driving schools' instructors/teachers.

This is a safe driving programme for bus drivers that extends to the evaluation of benefits. Montané, et al., (2012), jointly wrote this intervention model. The programme is done in respect of Spanish auto-buses drivers' law that stipulates the criteria of 280 hours of driving course or 149 courses of initial driving qualification. The program takes cognizance of individual drivers who are experienced car drivers to become professional bus drivers. The learning activities are said to be subjected to 10 hours of rigorous training.

This intervention educational programme activities facilitate the following:

   a. It helps to build morale and personal benefits on a safe and economical driving attitude.

   b. It enlightens the conductor on the issue of risk-driving behavior.

c. It reveals factors that trigger car accidents during training; evaluate the risk factors and work on it to lessen; maintain driving attitudes at every time; to engage and obey road traffic laws and be a good representative of his company.

General objectives for the programme include provision for safe driving and safety of the passengers; to reduce the rate of accidents; evaluate the economic benefits and safety; work on habits and modifying some attitudes for safe driving. The instruments to use in order to achieve those objectives include; -the evaluation of the first risk driving by the driver and elaborate the danger involve with this risk attitude; -informing the driver of those risks that prone to accidents and let him know the repercussion of those risks; -state those habits of risks of the driver that have to be changed in order to have safe driving; -integrate the concepts of emotions and sentiments as regards the result of accidents on the roads and finally, stale the promises and gains of good driving. The structure of the program has four phases that also include: initial evaluation; the best of information; to revise the risk habits; integration of emotions and valor, and lastly, evaluation of results (Montané et al, 2012).

1.17. The trans-theoretical model (TTM)

Trans-theoretical Model (TTM) is another behaviour modelling program called "The Stages of Change Model". Prochaska and DiClemente developed this model in the late 1970s by examining smokers' experiences who voluntarily quit smoking. It is a model of intentional change that occurs through a cyclical process. The Trans-theoretical model describes how individuals or people can modify problematic behavior or acquire positive behavior. It is a model of intentional change that focuses on the decision making of an individual. This model involves three vital factors, which are emotions, cognitions, and behavior. The model is designed to match the individual´s specific needs with sensitive progress measures and a more appropriate outcome assessment. A trans-theoretical model can have both high efficacy and recruitment rate with an appropriate impact on individuals with behavioral health risks and problems.

The use of a model for intervention in behavioral change will involve the development of reliable and **five stages** processes of change; **pre-contemplation** (when individual (or people) is not ready to take action to facilitate a change in nearest future-usually measured as the next

six month); **contemplation** (when an individual (or people) is intending or ready to change a behavior in the next six months); **preparation** (when people are intending to take action in the immediate future-measures as next month); **action** (when people have made modifications in their life-styles within the past six months). This is the critical stage of sufficient vigilance; **maintenance** (when people are less tempted to relapse) (Velicer et al., 1998). The model is being criticized that it does not meet up the three genuine "stage theory" defining properties, including: qualitative transformations across stages; invariant sequence of change; and no reversibility (Bandura, 1997).

1.18. Australia mini-bus driver awareness scheme (MIDAS)

The Minibus Driver Awareness Scheme is every four-year refresher cycle (including another on-road assessment with information on legal and safety issues) for mini-bus drivers to retain their entitlement. This scheme is organized by Community Transport Association (CTA) with a nationally recognized standard for drivers´ assessment and training. www.ctauk.org. The refresher cycle intensive classroom-based theory training session looks at defensive driving, passenger safety. Health and safety awareness, personal safety for drivers, collision and breakdown procedures, manual handling awareness, and drivers´ legal responsibilities. The MIDAS´s baseline is the responsibility of the concerned authority and right of the citizens to ensure that those who drive them are trained as written in the constitution and as a legal requirement to be a driver. The scheme is to enhance mini-bus driving standards and promote safer operational mini-buses through Australia (Wundersitz & Hutchinson, 2006).

2.19. Information-motivation-behavioural skills model (IMB)

The Information- Motivation-Behavioral Skills Model is a social psychological conceptualization for understanding and promoting health-related behavior. This model was originally developed for the psychological determinants of HIV risk and preventive behavior (Fisher & Fisher, 1992; Fisher, W & Fisher, 1993). The model assumes that health-related information, motivation, and behavioral skills are the fundamental determinants for health-related performance behaviors. The three components perform exclusive functions as "information" explain the knowledge to support the behavior change; "motivation" as an attitude towards behavior change; and "behaviour" refers to the skills acquired that are

necessary to maintain the behavior change. There is empirical evidence establishing the usefulness of the Model to the road traffic sector, which is also an endemic phenomenon on health catastrophe. It was highlighted in the article that apart from that, the model was successful in AIDS advocacy, breast self -examination awareness, and even on motorcycle safety gear use (Fisher et al., 2003).

2.20. Principle and Model of Community Psychology

This principle explains the need to integrate community psychology which is more victim-friendly than any other road traffic safety education, research, and intervention model in Ghana. The Community Psychology Approach emphasizes participatory actions among the poor and helps to solve larger social problems. It was said that this model involves collaboration with individuals and local community organizations in all programs and is viewed as a shared responsibility for long time changes in road traffic safety and behavior. This approach tackles the historical defects on the issue of road safety as a shared responsibility and "put in place projects that challenge cultural and religious myths about road traffic crashes" (Teye-Kwadjo et al., 2013). The Community Psychology Approach tends to use a bottom-up approach that accommodates the principle of citizen participation and desired changes in the social and physical living environment. Another great advantage of the Community Psychology model is that it understands the individuals´ natural setting and improves their social status, liberation, and well-being (Nelson & Prilleltensky, 2005).

2.21.   Summary

This chapter gives a general review of the literature, termed as the database of this investigation. It serves as a survey of scholarly sources that compiles and evaluates overview and gives a critical analytical account of research most concerned, compares with this research findings, and available behavioural science concepts and theories of attitudes and behaviour. Those theoretical and conceptual framework helps to define the path and constructs of this study investigation.

Chapter 3: Methodology
3.1. Introduction

This chapter describes and gives detail about the appropriate methodologies adopted in the study procedures, phases, and data collection stages in this study. This chapter describes the experimental data collected and the filtering, verification, and validation steps undertaken to achieve the objectives of the study. This experimentation includes methodological approaches, study location/survey site; study design; participants; instruments, characteristics of the sample; materials, procedures and direct self-report behavior measuring of the newly adapted instrument called low-and middle-income countries- Driving Behaviour Questionnaire (LOMICS-DBQ).

3.2. Research method

This study used mixed-method research to complement one method (qualitative and quantitative) with pragmatism. This domain evaluates theories in terms of successful practical application. Kaushik & Walsh, (2019), explained that pragmatist philosophy expresses that human actions can never be separated from the beliefs from past experiences which dictates their actions. Mixed method advances research concepts paradigms with empirical observations and develops a new valid instrument of measurement (Johnson & Onwuegbuzie, 2004).

This study uses a mixed method to provide a legitimation (Hall, 2013) in comparable models or patterns of this research epistemological stance. The stance facilitates knowledge in the theoretical perspectives of the old and new approaches and theories. Motivational features of driver behaviour and decision-making are influenced by their origin, environment, beliefs, and knowledge limit.

The study method explores in this research is both qualitative and quantitative to investigate the nature and preference for driving behavior. Qualitative and quantitative models will have a broader investigation of widespread social reactions and characteristics of risk-driving perception (Baker, 1999). The combination techniques (qualitative and quantitative) are sometimes called "triangulation" of data (Webb, et al., p.3).

The quantitative experimentation aspect embraces other empirical inferences of what (Yin, 2018) called "plausible of rival hypothesis" to validate more data. The qualitative aspect adopts ethnography inferences that explain actual and natural world understanding about human behavior social realities of attitude, cultures, and beliefs of the respondents as documented from the two survey sites (Limb & Dwyer, 2001). This study explores cross-sectional surveys using self-report measures on selected respondents in the four bus stations of two geographical locations. Abuja, the new capital city, and Lagos State is selected and regarded as the most accurate sample with a large population and motorization characteristics to draw valid conclusions.

3.3. Research design, rationale, and procedure

The research is both quantitative and qualitative methods with a research instrument of Participant Observation Template, Questionnaire, Field Study, Structured Interview-questions (for stakeholders by email responses), and Likert ordinary scale measurement. Participant Observation model was used to have different behaviors, attitudes, characteristics, styles of driving, and their interactions with their environment while on the wheel. The Quantitative Model used was based on psychometric and cognitive variables from five widely used individual measuring instruments. The qualitative model was used to analyze the road traffic safety stakeholders´ responses (through email correspondence).

Qualitative and quantitative models were used respectively in this study to have a broader investigation on widespread social reactions and characteristics issues of risk driving perception (Baker, 1999). The Semi-Structured Questionnaire was the quantitative tool used for this study because of the empirical evidence of low education level among commercial motor vehicles is evident in Nigeria. It is a cross-sectional design that involved two city survey sites (Abuja), Nigeria's present federal capital, and Lagos, the old federal capital city Nigeria. Meanwhile, Fig. 14 outlines the procedures followed in carrying out this study. The research motivation, objectives, research problem statement, research questions, participant observation, socio-demographic characteristics, cognitive variables, data collection methods, and data analysis based on previous literature. Different statistical analyses and codes used to explain and evaluate both the primary and secondary data obtained during the investigations. The rationale behind this design format is to give a vivid understanding.

Research Design analysing Steps and Phases of the Study

Research Design	**Introduction**
	Literature Review
	Research Questions and Problem Statements
	Methodology

1st Phase
-Phase 1A: Participant observation of drivers' with FRSC Patrol Team
- Phase 1B: Inside Vehicle Participant Observation Trip

2nd Phase
-Socio Demographic Characteristics Questions
- Self- Report Cognitive Vehicle Questionnaire (LOMIC – DBQ)

3rd Phase
-Stakeholders' semi structured questionnaire (VIA E-mail Correspondence)

4th Phase
-Bus Driver Management observation Trips to London and Bangkok Thailand (empirical Observation)

Data Analysis and Presentation of Results

Empirical Findings

Discussion of the Results

Implications of the Study

Limitations of the Study

Conclusion and Research Recommendation

FIGURE 11: RESEARCH DESIGN ANALYZING STEPS AND PHASES OF THE STUDY

3.4. Survey sites for the research study

This study measured the importance of potential locations as regards the cultural and population sample significant of the investigation and on a larger population. Besides, the selection of the two sites (Abuja and Lagos) aimed to provide the highest and best solutions to the area selected (Priyadarshani, 2018) and notable for accidents fatalities unless drivers are well cultured to safe driving style (Kareem et al., 2012). Besides, London and Bangkok were used as the observation field study.

ABUJA: Peace Mass Transit and Utako motor park were survey sites in Abuja. Abuja is the present federal capital city of Nigeria. Abuja's population is estimated of 3,277,740 in 2020. The city has a density of 1853 km2, growth rate of 6.07%, and land area of 1,769 km2. Seventy years ago (1950), the Abuja population was estimated 18,977. The city of Abuja is one of the fastest-growing cities in the world. Abuja is estimated to be 5,119,340, with a 3.99% growth in 2030 (UN-WUP,2020). From the 2006 census, the city had a population of 776,298 (NPCN, 2006). Abuja is located within the Federal Capital Territory. Abuja replaces Lagos as the capital of Nigeria on 12 December 1991.

LAGOS: The popular Oshodi bus station and Mile 2 bus stop were the site locations in Lagos. Lagos, which doubles as a port and "business" city, was Nigeria's capital since its amalgamation in 1914 and until 1991, when it was replaced by Abuja as planned to bring all of the various tribes, religions and ethnic groups together. Lagos State generates 25% of Nigeria's total Gross Domestic Product (GDP). Lagos is estimated to have now 14,368,332 populations, with a density of 12,267 km2, a growth rate of 3.34%, and land-area of 1,171.28km2 (452,23 square miles). In 1950, Lagos, which is now the most populous city in Nigeria, had a population of 325,218 in 1950 (seventy years ago). One of the eight fastest-growing cities globally to have a population of 20,600,156 with a 3.73% growth rate double its population in 2050 (UNO-WUP, 2020).

3.5. The rationale for survey sites selection

Abuja and Lagos States were chosen as a case study area to examine and relate the causal-risk violation factors with the real-life situation of drivers' behaviors on the wheels and an accurate sampling representation of the Nigerian population. This study explores the samples of the two most important economic areas- the new the old capital cities (Abuja and Lagos State- the two different geographical locations) in Nigeria. The reason for is the consideration given to the numbers and volume of motor vehicles especially where commercial buses are a model of transportation, the pattern of population and the increase in exposure to the risk in road traffic safety which was termed "societal benefit and societal cost" (WHO, 2006). A simple random sampling technique was used to select 600 bus drivers out of which 471 responded in the two different geographical locations.
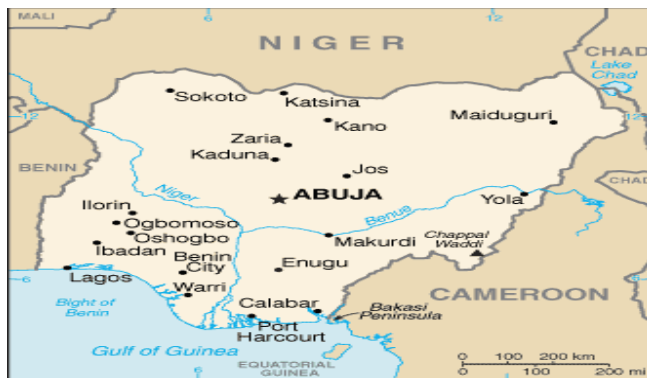
FIGURE 12: NIGERIA MAP SHOWING THE SURVEY LAYOUT OF THE STUDY (ABUJA AND LAGOS)

3.7. Population sampling

A simple random sampling is known as the target representation of a population (Taherdoost, 2016) with which its estimate based on the distinct units of an incredible invariance characteristics (Mitra & Pathak, 1984). This above assumption formed the bases of this study to randomly administered participants from Abuja and Lagos as credible research locations useful for intervention targeting to improve road traffic safety in Nigeria. Moreover, some advocates of mixed-methods research technique have shown that samples for qualitative or qualitative research methods are commonly assumed to be selected knowingly to produce "rich information" for effective use of limited resources (Patton, 2001) by the policy makers. Moreover, sampling exploits knowledge and experience (Cresswell & Plano Clark, 2011) and maximizes validity and efficiency (Morse & Niehaus, 2009). The simple random sampling was used to select the four Bus stations (motor parks), which were Oshodi Bus station, Mile 2 bus

station (both in Lagos) Utako bus station, and Peace Mass Transit bus station (both in Abuja). Abuja is the central location of Nigeria while Lagos is located at the South West of Nigeria. The initial aim was to survey 800 respondents (200 from each bus station). This later reduced to 600 because the investigation can be conducted on only those registered with the motor parks who were low in numbers. A simple random sampling technique used in selecting subjects consisting of 600 (150 participants from each park) commercial bus drivers from which samples drawn were from two most important economic areas (Abuja and Lagos State- the two different geographical locations) Nigeria. All selected drivers had registered in their motor parks and have affiliation with the National Union of Road Transport Workers.

The 600 participants chosen represented Nigeria´s targeted population with certain level of population statistical inference and association of interest (Martinez-Meza, et al 2014). Four hundred seventy-one respondents investigated out of 600 questionnaires printed at the rate of 150 respondents from each bus station respondents were given 20 minutes to fill in the survey-questionnaire without their identification data. Simple random sampling was used to select those participants as registered drivers in all the four bus stations, respectively.

Moreover, the observation was restricted to Abuja and Lagos on the survey sites for the Participant Observation studies, For the Abuja´s location: The observational journey is between the Utako Bus station to A-Y-A in Asokoro district of Abuja. Nigeria. The commercial buses were randomly selected were from the local bus station to give the significant representation or ratio estimator of registered bus volume in each site location. The number of randomly chosen vehicles of twenty –drivers were observed on different journey trips, making it twenty trips with different drivers to the same destinations. This observation lasted for three working days. The Lagos observation sites for indirect driver-participation took place from Oshodi Bus-stop to Ojota Bus stop, a 5 kilometers journey distance. Twenty drivers were observed in Lagos on different journey trips, making it twenty trips with different drivers to the same destinations.

TABLE 4: RESUME OF THE NUMBER OF SELF-REPORTED COGNITIVE QUESTIONNAIRE RESPONDENTS INVESTIGATED

Resume of the Number of Self-Reported Cognitive Questionnaire Respondents Investigated							
Data of Respondents	**Peace Motor Park**	**Utako Motor Park**	**Mile 2 Motor Park**	**Oshodi Motor Park**	**Total**	**%**	**Mean Average**
Total number of respondents randomly selected	150	150	150	150	**600**	50%	**150.00**
Total number of respondents finally investigated	115	103	131	122	**471**	39%	**117.25**
Total number of respondents not investigated	35	47	19	28	**129**	11%	**32.25**
					1200		

3.7. Participants

This survey ethical clearance was obtained from the motor parks union leaders and participants who were registered bus drivers in Abuja and Lagos within their local government authorities. A simple random sampling technique was used in selecting subjects consisting of 600 (150 participants from each park) commercial bus drivers from which samples drawn are from two most important economic areas (Abuja and Lagos State- the two different geographical locations) Nigeria. Those selected drivers have registered in their respective motor parks and have affiliation with the National Union of Road Transport Workers (NURTW). The 471 participant-drivers investigated from the four different bus stations in Abuja (Peace and Utako)

and Lagos (Mile 2 and Oshodi). 129 out of 600 prospective participants not investigated due to their absence and void questionnaire papers. The respondents administered the Semi-Structured Questionnaires (self-report) to measure their driving attitudes and past behaviors. Done with their consent, anonymity, and confidentiality of the data collected.

3.8. Period of research

The research investigation's practical session started in December 2016 to prepare for the participant observation exercise that come up between 11 January and 23 February 2017 at Abuja and Lagos. The completed table for the whole research investigation plan is included in Appendix E.

The second phase of the investigation came up on 7 January and 27th of February 2018. This second phase was the distribution and administration of the socio-demographic inquiring and cognitive questionnaire variables to the selected drivers, four motor-parks in Abuja and Lagos. The third phase was the administration of semi-structured questions-interview with the stakeholders via electronic media between mid-March and the end of August 2018. The fourth phase was of two observational trips to another part of Europe and Asia. The two countries were chosen to understand commercial bus driver's recruitment, monitoring, and organizational development.

The first trip was to London, the United Kingdom, with an appointment, the two notable transport companies (Transport for London and Driver and Vehicle Standards Agency (DVSA) in October 2019.

The second observational investigation took place in February 2020 in Bangkok, Thailand. Bangkok Mass Transit Authority, Office of the Transport and Traffic Policy and Planning and Department of the Land Transport were those transport agencies visited with all required ethical considerations observed.

3.9. Instrumentation

This study´s section explains the preparations and instruments used to predict drivers' differences in road crash involvement. It also explains the instrument´s questionnaire mode of formulation, administration, delivery and contact of the respondents in those four survey sites. These instruments include the questionnaire (cognitive / psychometric variables and socio-demographic questions), interview (semi-structured), observation (participant and non-

participant and field trip study), digital electronic devices and questions-template used to extract that information needed for the investigation. The cognitive and psychometric questions from the adapted joint use of five tested instruments were prepared to measure performance behaviour, driving skills capacity and driving background history.

The theory of planned behaviour (TPB) is a best-supported social theory that predicts human behaviour (Sommer, 2011). The constructs of the Theory of Planned Behaviour (TPB) was used for the item- questions include Behavioural Attitude (BA), Subjective Norms (SN), the Perceived Behavioural Control (PBC). Sommer also affirms that these mentioned constructs had influence on behaviour through the effect on behavioural intention. And Sheeran, (2002, p.l) states that "People do what they intend to do and do not do what they do not intend".

The survey questionnaire consisted of cognitive variables, which was divided into three sections. Section 1 featured the respondents' demographic characteristics with 10 items, the Section 2 deals with the Driving Background History of the drivers investigated with 20 items while the last Section 3 contains the drivers' cognitive variables of 30 items. It is a direct self-reported questionnaire model for data collection as the primary source with these cognitive questions answered with a 5-point Likert scale (0=Never; 1=Rarely; 2=Some of the time; 3=Most of the time; 4=All of the time).

3.9.1. Questionnaire template used in the survey

The question templates for this study are designed on strategic choices about questions to ask in a limited time (Omstein, 2013) with basic constructs for the instruments´ validity and reliability. In this investigation, question templates were used to retrieve some information about the observing drivers at the four investigated motor-parks. They are of three types: The first one meant for drivers' socio-demographic characteristics and self-reported background to each one of them their driving history. The second question template meant for self-reported psychometric and cognitive questionnaires. The third template is semi-structured questions for the stakeholders in the road traffic safety and transportation sector. See all templates in Appendices A, B, C and D.

The first two template-question focused on three factors:

1. Demographic characteristics (such as age, sex, social status, driving experience):
2. Personality traits and physical characteristics (such as physical comportment on the wheel, cognitive skills, control of the vehicle, etc.):
3. Attitudes and intentions towards safety environment, other road users, and technology.

The third template question was designed for stakeholders to answer, collaborate, and give vital advice and professional suggestions to reduce risky driving behavior and fewer crashes and injuries.

LOMICS-DBQ was the name given to the tool. It was the Self-Report Driving Measurement tool. This tool expanded behavioral investigations beyond "westernized" tool boundaries that were incapable of adequately measuring a driver´s the challenges and problems from low-and middle-income countries (LOMICS). This was because road crash frequency can be attributed to different cultural and psychological backgrounds (Wang & Zheng, 2014). LOMICS-DBQ gave insights on more factors than Manchester DBQ that concentrates only on measuring drivers´ errors and violations. Rundmo et al., (2004) in their study identify poverty and low-income nations exhibit a higher risk tolerance behaviour in a traffic system. The tool was designed to improve road safety by lowering the number of crashes and injuries. It predicted individual differences in accident involvement. LOMICS-DBQ instrument had three indicators of quality-validity, reliability, and replicability – are mutually independent. The correlations were substantial, large standard deviations, concept to operationalization so that anyone can make a replica of research and check results in quantitative data (Hancke, 2009).

3.9.2 Self - reported model

Self-Report model measurement is used in this research study. It is based on respondents' direct Self-reported evidence, which is also known as the primary data collection source in social sciences and psychology. Self-report helps in facilitate detailed contents on improved driving behaviour, risky driving behaviour, and self - assessment of the likelihood of being in crash risk (Molina et al. 2013). The self –report has been argued to "…help learn about individuals` thoughts, feelings, and behaviours and to monitor societal trends, from the nation's unemployment rate to the development behaviours" (Schwarz, 1999).

The research involves quantitative method 10 items that were adopted out of the structured cognitive and psychometric variables of 30 items and 28 questions on driving license status and socio-demographic characteristics.

3.9.3. Direct self-report measurement instrument: LOMICS-DBQ

The newly adapted and tested five-in one- optimize measuring tool is called LOMICS-DBQ for this study. This new instrument called LOMICS-DBQ is a combination of Driver Behavior Questionnaire **DBQ** (Reason et al., 1990), Driver Attitude Questionnaire **DAQ** (Parker et al., 1996), Driver Skill Inventory **DSI** (Lajunen & Summala, 1995), Driver Anger Scale **DAS** (Deffenbacher, Oetting & Lynch, 1994) and Safety Climate Questionnaire **SCQMD** (Glendon & Litherland, 2001). This adapted tool (LOMICS-DBQ) answers individual cognitive variables complexities for developing world nations.

3.9.4. Experimental design of the instrument

The adopted face-to-face LOMICS-DBQ contained 30-item psychometric and cognitive variables categorized in 6 items-factors known for each of the old five measuring instruments (DBQ, DAQ, DAS, DSI, and SCQ). The adopted LOMICS-DBQ contained 30-item psychometric and cognitive variables categorized in 6 items-factors known for each of the old five measuring instruments (DBQ, DAQ, DAS, DSI, and SCQ as explained in chapter 3, 9.5). All the items questions were from the constructs of the Theory of Planned Behaviour (TPB). The six questions evaluation construct for respondents to answer with a 5-point Likert Scale with never-rarely-some of the time-most of the time-and-all of the time, with ratio scales from one value to five levels of significance (Likert, 1932).

Low-and middle-income countries driver´s behaviour questionnaire (LOMICS-DBQ)
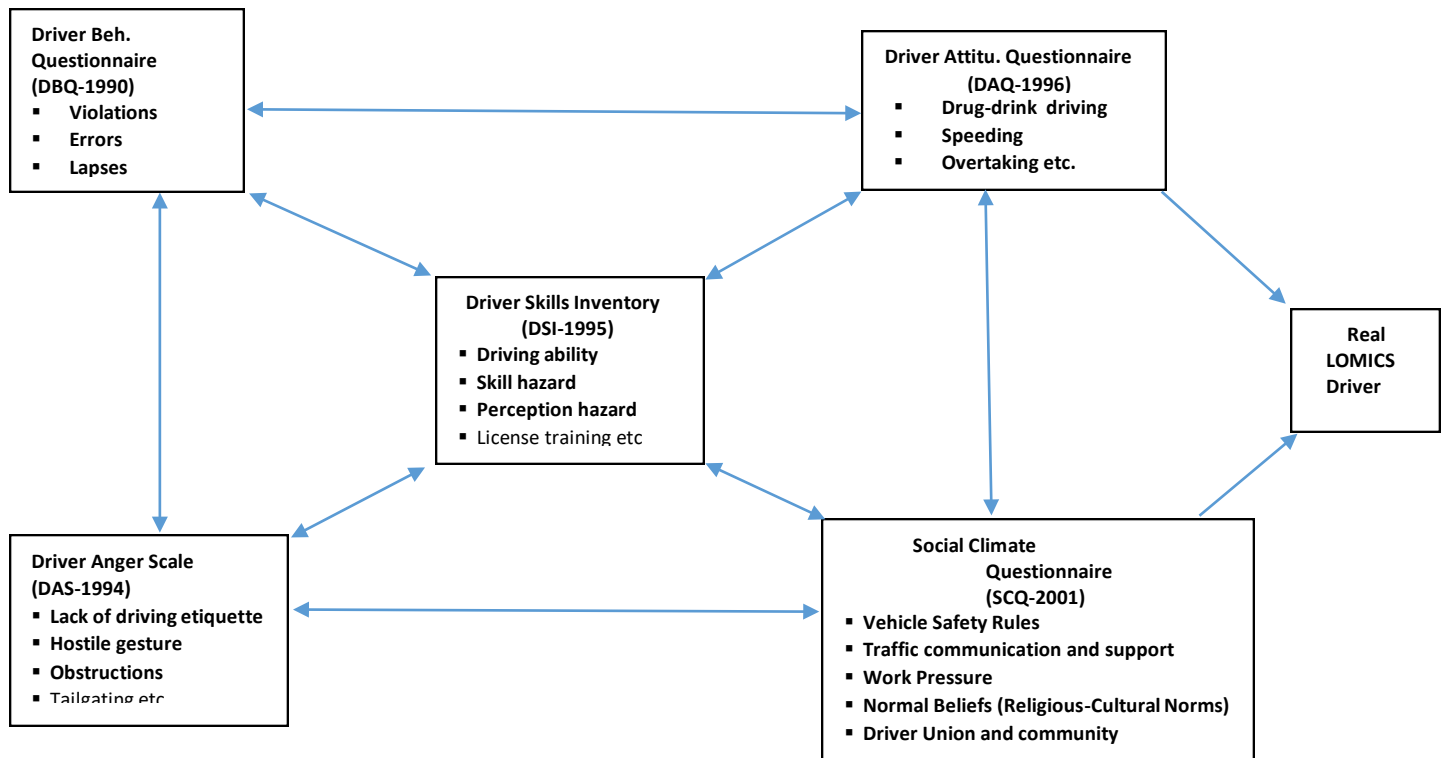
LOMICS-DBQ (2020) has 30 items of psychometric and cognitive characteristics construct of a driver from low-and middle-income countries (LOMICS).
Source: Akande, T.A (2020)

FIGURE 13: LOW-AND MIDDLE-INCOME COUNTRIES -DRIVER BEHAVIOR QUESTIONNAIRE (LOMICS-DBQ)

3.9.5. Previous cases of behavior measuring instrument adaptation (Spain and China)

Behavioral measuring instruments got adopted by researchers in some countries of the world. Xie, & Parker, (2002), rightly adapted this for a research study in China. The two researchers surprisingly discovered from their study result that demographic factors did not seem to affect Chinese drivers' aberrant driving behaviors when used the European measuring tool. The research also took a clue from Lopez-de-Cozar et al., (2006) 's study of the adaptation of the Driver Behaviour Questionnaire (DBQ) to suit Spanish population samples. The Spanish version is called Spanish Driver Behaviour Questionnaire (SDBQ). Another experience of self-

reported questionnaire adaptation featured in Davey et al., (2006) study. Davey et al, explored the Driver Attitude Questionnaire (DAQ), Driver Behavior Questionnaire (DBQ) and Safety Climate Questionnaire (SCQMD) instruments on 4,195 fleet motorists in predicting speeding and overtaking procedures as vital indicators in his voluminous study.

3.9.6. Adaptability and applicability of the new instrument (LOMICS-DBQ)

Thirty years ago, to be precise in 1990, some groups of researchers in Manchester came up with the Driver Behavior Questionnaire that only measure driver's "errors," "lapses" and "violations" Reason et al., (1990). This kind of "Europeanized or Westernized oriented" instrument could not provide a valid and accurate measure of attitudes and behaviors of low- and medium-income nation's driver's characteristics. That was why the researcher come up with adoption of a combination of instruments that will help establish a detailed empirical and theoretical framework and characteristics of an investigated driver. The adopted five instruments tagged LOMICS-DBQ (Low- and Middle-Income Countries-Driver Behavior Questionnaire). The use of Manchester DBQ could not take cognizance of the low- and middle-income countries' complex and unique socio-economic, political, and cultural environment Wang & Zheng, (2014). Besides, other behavioral instruments like DBQ could not be used one by one to give accurate and correct measurements of a driver from low-middle-income countries.

This study optimized measurements and came up with a conclusion to adopt a sustainable and valid instrument with special consideration low-middle-income countries (LOMICS) with complexities of socio-economic characteristics which included limited fund, the strength of religious beliefs, limited infrastructure, public corruption, cultural differences, implementation challenges, limited resources and no respect for road traffic rules and regulations. Early researchers presumed that attitudes and behavior could be accurately monitored and assessed using a broad set of questions selected via elaborate procedure (Likert, 1932). Likert Scale of "1" to "5" scores were used to validate percentages ratios in this study. The Likert concept explained that any query scored "1" on the Likert Scale signifies the least important level and "5" meant the most significant importance level.

In this study, psychometric (individual ability –of what a person can do & personality-of what a person is like) and cognitive (ability to observe process and process information) variables from available behavioral known instruments were tested, used, and valid. That gave the reason for the use of the combined and adapted five psychometric and cognitive known and validated behavior measurement instruments which include; the Manchester Driver Behavior Questionnaire **DBQ** (Reason et al., 1990), Driver Attitude Questionnaire **DAQ** (Parker et al., 1996), Driver Skill Inventory **DSI** (Lajunen & Summala, 1997), Driver Anger Scale **DAS** (Deffenbacher, Oetting & Lynch, 1994) and Safety Climate Questionnaire **SCQ** (Glendon & Litherland, 2001).

This study used the Psychometric and Cognitive Variables Questionnaire and was divided into three sections of simple self-reported investigation. Section 1 aimed to facilitate the personal characteristics features tagged in the template Driver's Demographic Characteristics of the respondents with ten items, and Section 2 deals aimed to have a full understanding of the Self-Reported Background Driving history of 20 items. In comparison, the last Section 3 contained the drivers' psychometric and cognitive variables of 30 items. (See Appendix A for LOMICS-DBQ template).

The relevant cognitive questions and statement were developed and constructed with the components of the Theory of Planned Behavior (TPB), Behavioral Belief (BB), Normative Beliefs (NB), Control Beliefs (CB), Past Behavior (PB), Intention (INT) and Descriptive Norm (DN) as featured on all the item-questions that explores the beliefs about the consequences of the behavior, normative expectations of other people, and other facilitating or impeding factors of the behavior (Sommer, 2011).

3.10. Data storage

To avoid unnecessary duplication and the loss of data, a separate database was established for the analysis of quantitative and qualitative data. Two hard disks were used for the investigation. The first one was Maxtor M3 Portable 4TB. With super speed 3.0, 5.0Gb/s, and is Black HDD with 2x112x17.5mm size. The second hard disk was Western Digital (WD) Elements 4TB. It could use USB 2.0 and 3.0 and very fast, simple, and handy. All devices served well throughout the investigation.

Raw databases were prepared to store visual and quantitative data collected from image recording devices and the sensors connected to the vehicle. Separation of databases was done for the analysis of the quantitative as well as quantitative data. All information was stored on external hard drives to comply with the prerequisites as stipulated by the ethics committee.

3.11. Procedure for selecting research assistants

The research assistants employed and used to serve as predictors to research outcomes that effectively to nurtured future academic researchers (Hutchinson & Moran, 2005). The research team for this study were of two groups. The first group was comprised of four experienced assistants for the Lagos survey sites. Moreover, the second group consists of five research assistants for the Abuja survey site. Practical training was conducted with each group on how to administer self-reported questionnaire research, especially regarding ethical consideration of confidentiality and communication among most of the semi-illiterate respondents. This one-day course objective was to develop further their understanding of how to work successfully on the qualitative aspect of the study which involved data collection through focus group (Eaton, 2017).

3.12. Method of data collection
3.12.1. Primary source

This study employed the cross-sectional surveys using self-report measures on selected respondents in the four bus stations. Abuja, the new capital city, and Lagos State were selected and regarded as the most accurate samples with large population and motorization characteristics to draw valid conclusions. The questionnaire survey was administered in the four motor parks (bus stations) between 11 January and 23 February 2017. Past research studies argued in favor that the prediction of behavior achieved with the measurement of cognitive variables (Holdershaw & Gendall, 2008). The initial aim is to conduct the survey with 800 respondents (200 from each bus station). 471 finally investigated out of 600 questionnaires printed at the rate of 150 resurvey bus station. These respondents were given 20 minutes to fill in the survey-questionnaire without their personal identification data.

3.12.2. Secondary source

The collection of secondary data for this study was categorized in two ways. The first was the road traffic data facilitated by the Federal Roads Safety Commission (FRSC) and the National Bureau of Statistics (NBS), which were both establishments of Nigeria's federal government. The second category was the data facilitated for the Fourth Phase of my investigation which happened to be under the title of Commercial Drivers' Management Observation Trips to London and Bangkok.

3.13. Data analysis plan

This study aimed to make inferences, and comparisons between this cross-sectional survey study and appropriate statistical equations used to test the research questions. The multiple regression analysis was to describe the relationship between the dependent and independent variable. The study's categorical and interval variables calculated using Linear Regression Analysis was to find the relationship between personality traits and risk awareness. Frequency distribution of variable and cross-tabulation of variables used to deduce to more inferences and Chi-square test used to test for the associate and variables related to some population.

3.14. Ethical procedure and considerations

The Department of Applied Pedagogy, Road Safety Education, and Training, Autonomous University of Barcelona, at Bellatera, Spain, approved the research protocol ethic with letters of introduction and study investigation requests to all designated and concerned agencies and establishments for this investigation.

This study survey ethical clearance was obtained from the motor parks union leaders under the NURTW and participants are registered bus drivers in Abuja and Lagos within their local government authorities. Ethics approval obtained from the concerned local authority of the park's area and permission given by the President (also known as motor-park union) of drivers' union in the four motor parks used for the survey.

Anonymity and confidentiality of all the respondents were maintained and respected. From the beginning of investigation by the research assistants, the participants were encouraged and motivated to respond to all the questions and respond to the best of their knowledge, honestly and without any fear. The questionnaires replied by the respondents were collected back in person immediately.

Participation in the study was voluntary by all selected registered motor-park members investigated. None of the participants was disturbed while at work. The distribution, administering, and collection of the questionnaires were carried out during their break time and local languages were used to communicate the questions for proper comprehension, especially for those who were semi-illiterates. All information about the participants were kept confidential without their photograph or any image as part of their body except those that were informed.

3.15. Summary

This chapter has given much sufficient detail about the methodology used that the study could be reproduced for systematic and theoretical analyses. The chapter has discussed the adapted new instruments used, the procedure for analysis, and the educative and cultural-gap study tour to London and Bangkok to understand more about the effect of cultural and environmental on driving attitudes and behaviors.

TABLE 5: DEPENDENT VARIABLES (FIVE YEARS CASES OF ROAD TRAFFIC ACCIDENTS IN ABUJA AND LAGOS)

No	State	2015			2016			2017			2018			2019		
		Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed
1	Abuja	1,293	2,691	318	1,373	2,7	253	1106	2360	287	1,051	2347	281	663	1,432	156
2	Lagos	364	767	105	441	971	165	425	892	113	356	772	100	314	564	61
3	Total Summation of incidences per year	1,657	3,458	423	1,814	3,671	418	1,531	3,252	400	1,407	3.119	381	977	1,996	217
4	States Total Summation of each incidences per year	9,074	28,048	5,075	9,694	30,105	5,053	9,383	31,094	5,121	9,741	32,22	5,181	6,084	20,179	3,127

Source: Adaptation from the FRSC Statistical Digest. www.frsc.gov.

Chapter 4: Data Analysis and Presentation of Results
4.1. Introduction

This chapter contains the data analysis and presentation of results in sections and parts to answer the research questions and hypothesis in the first chapter. The variables were analysed with inferential statistics such as Chi-square, Multiple regression, Cross tabulation and graphics, percentages on SPSS 20 and 25, Excel 2013, NVivo 11. The sections, parts, and themes include: Section 1: Part A B and C: Driver´s demographical characteristics; Self-reported background to driving history; Driver´s cognitive questionnaire (LOMICS-DBQ-30 items). Section: 2. Participant observation (Part A: With Federal Roads Safety Commission (FRSC) patrol officers and Part B: Inside-vehicle driving observation). Section 3: Review of the research questions. Section 4: Analysis of Secondary data. Section 5: An overview of the stakeholders' responses (Qualitative Analysis).

For this study, factor analysis was involved for finding latent variables within the questionnaire variables. A total of four hundred and seventy-one (471) copies of a questionnaire was administered and retrieved. The Reliability and Validity of latent variables was analysed. The study used the secondary data obtained from Federal Roads Safety Commission (FRSC) officers specifically on rate of road traffic accidents in Lagos and Abuja.

4.2.1. Section 1. Part A: Driver's Demographic Characteristics

This section presents information on the socio-demographic characteristics of the drivers that constituted the respondents in this research. This tables show the demographic variables such as variables gender, age, religion, educational qualification, etc
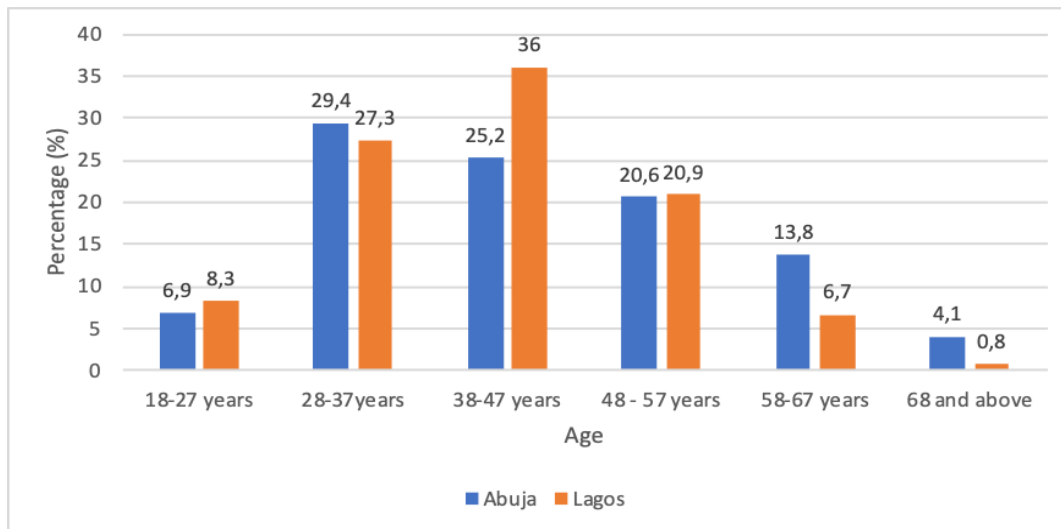
FIGURE 14: AGE STATUS OF DRIVERS OBSERVED

Fig. 17 shows that 29.4% of the drivers in Abuja are between the age of 28-37 while 36.0% of the drivers in Abuja are between the age of 38-47. Also, 4.1% and 0.80% of the drivers in Abuja and Lagos respectively, are 68 years and above. This implies that even though most commercial drives in Abuja and Lagos are young and adults, they still have few older drivers in both motor parks with more aged drivers in Abuja than Lagos.
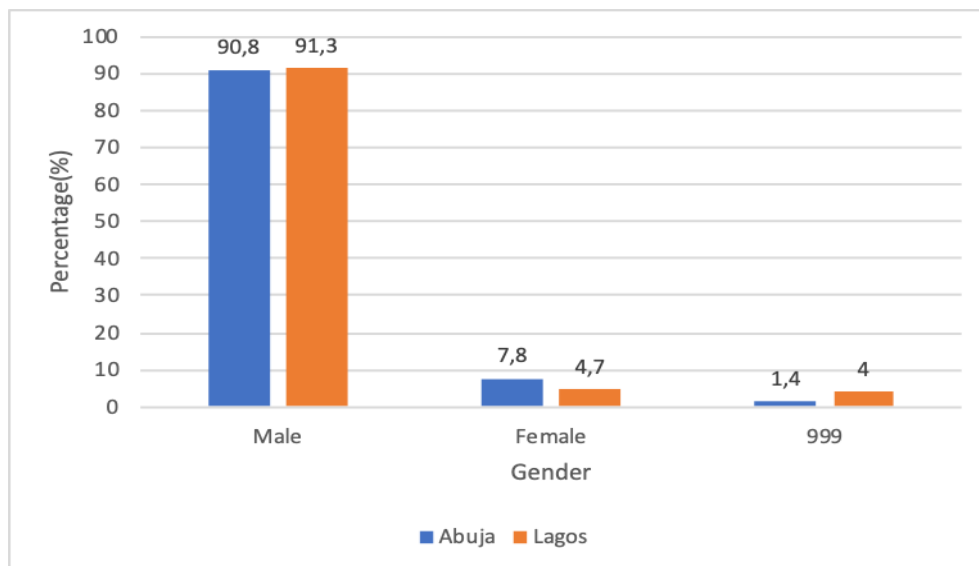
FIGURE 15 GENDER DISTRIBUTION OF RESPONDENTS

The result shows that 90.8% and 91.3% of the drivers in Abuja, and Lagos respectively. are males. Besides, only 7.8% and 4.7% of female-drivers in administered in Abuja and Lagos respectively, participated in the study.
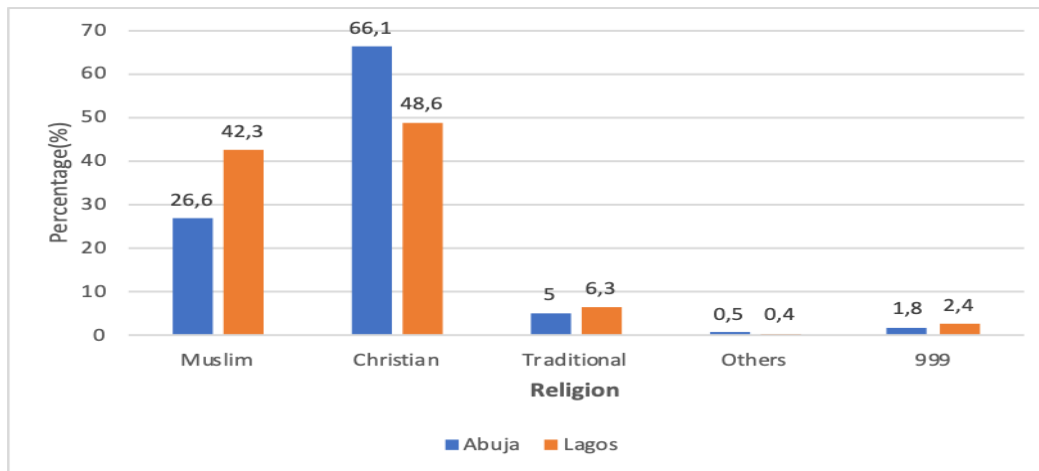
FIGURE 16. RELIGION DISTRIBUTION OF RESPONDENTS

Fig. 19 shows that 144 (66.1%) of the drivers in Abuja are Christians. On other hand, 123 (48.6%) of the commercial drivers in Lagos were Christians. Also, 1(0.5%) of the drivers in Abuja and Lagos practice other religions other than the three main religions in Nigeria. Therefore, this result shows that even though Christian drivers dominated the two locations (Abuja and Lagos), Abuja tended to have more Christian commercial drivers than Lagos.
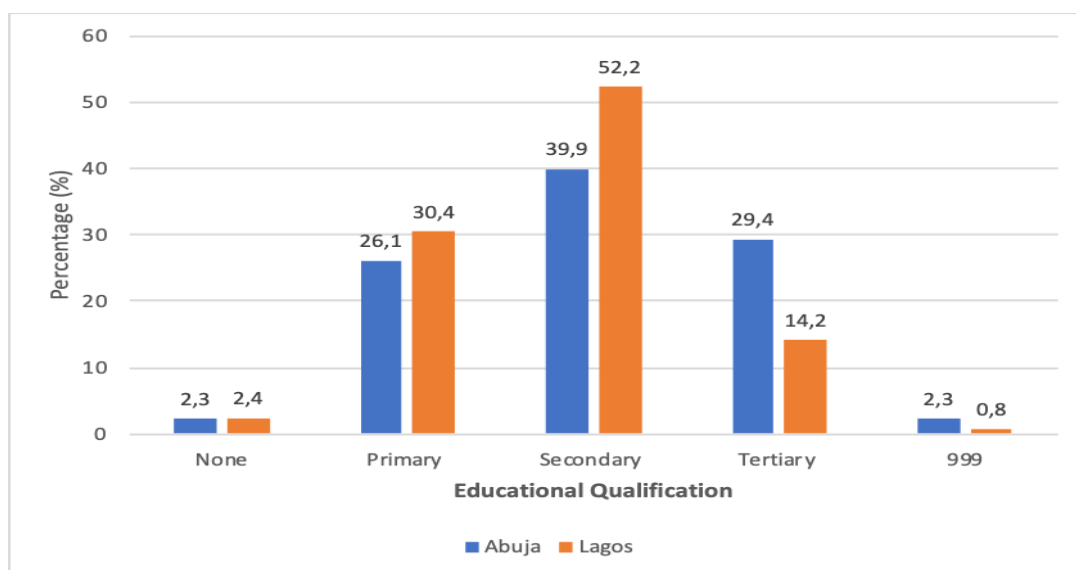
FIGURE 17: EDUCATIONAL QUALIFICATION DISTRIBUTION OF RESPONDENTS

Fig. 20 shows that 87 (39.9%) of Abuja respondents indicated that their highest educational qualification was secondary school certificate. On the other hand, 132 (52.2%) of the Lagos respondents indicated that their highest academic qualifications were also secondary school

certificate. However, 5 (2.3%) of the respondents in Abuja revealed that they do not have formal educational qualifications, while 6 (2.4%) of the Lagos respondents indicated that they also do not have any formal educational qualifications. This shows that secondary educational qualification is the highest among both survey sites drivers while the minimum educational qualification is no education. Also, Lagos has more secondary school level certificate drivers as well as non-educated drivers than Abuja.
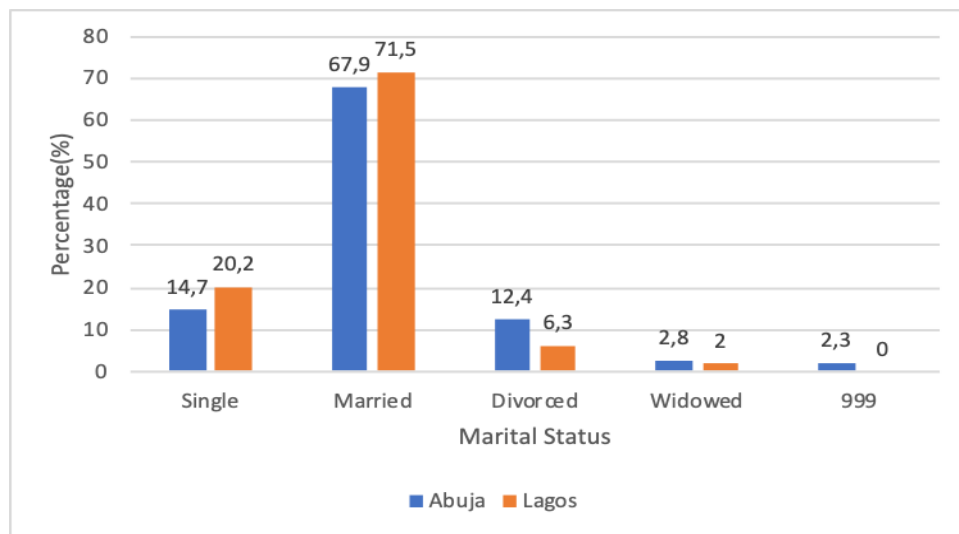
FIGURE 18: MARITAL STATUS OF RESPONDENTS

The respondents' marital status result indicated that 148 (67.9%) and, 181 (71.5%) of the respondents in Abuja and Lagos respectively, are married. Also, 6 (2.8%) of the respondents in Abuja are widowed, while 5 (2.0%) of the respondents in Lagos are widowed. This result shows that even though both states have married persons as a significant number of commercial drivers, yet Lagos has the highest number of married commercial drivers, while Abuja had the highest number of widowed commercial drivers.
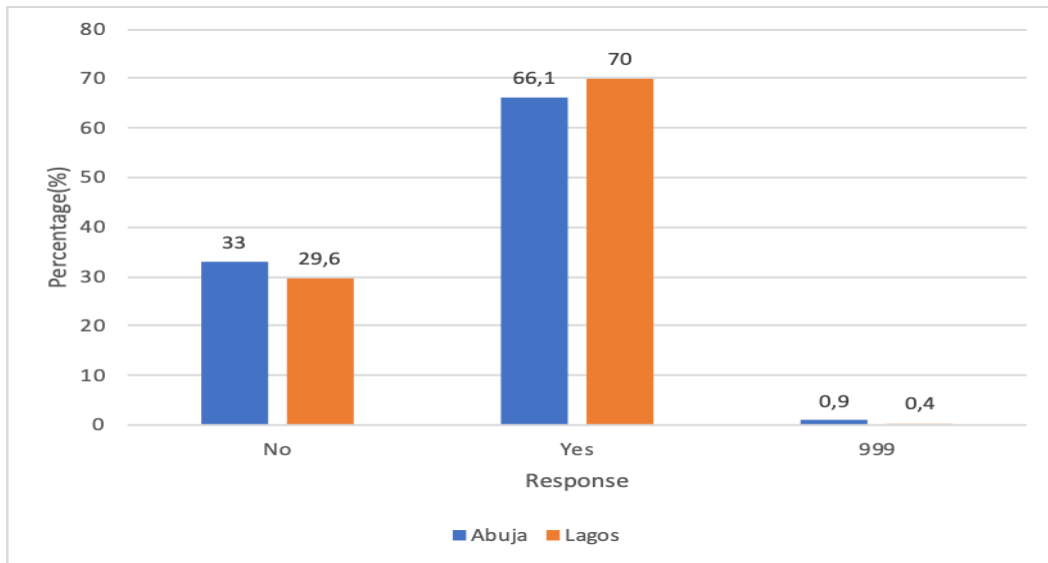
FIGURE 19: WHETHER RESPONDENT LIVE WITH THEIR KID AND/WITH WIFE

Fig. 22 shows that majority of the drivers in Abuja and Lagos live with their kids and wives with a proportion of 144 (66.1%) and 177 (70.0%) respectively. On the contrary, 72 (33.0%) and 75 (29.6%) of the respondents in Abuja and Lagos respectively indicated that they do not live with their wife and kids. This implies that even though most commercial drivers in the two states live with their kids and wives, Lagos drivers live more with their family than Abuja drivers. They may probably be because their wives are working elsewhere and live with the kids.
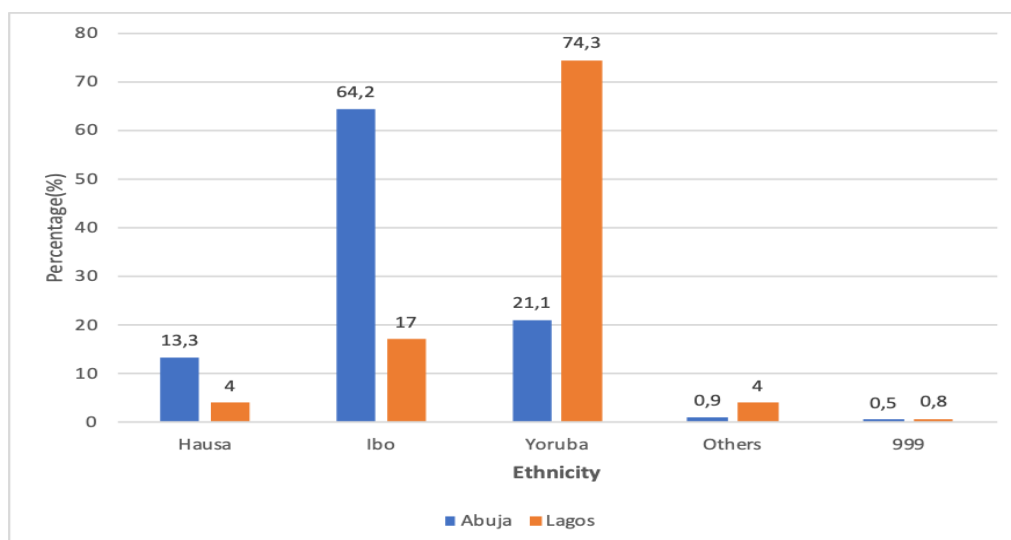
FIGURE 20: ETHNICITY OF RESPONDENTS

On respondents' ethnicity, fig. 23 shows that 140 (64.2%) of Abuja respondents indicate that they are Ibos. On the contrary, 188 (74.3%) of the respondents in Lagos indicates that they are Yorubas. This implies that Abuja's commercial drivers are predominantly Igbos, while commercial drivers in Lagos are mainly from the Yoruba speaking tribes.
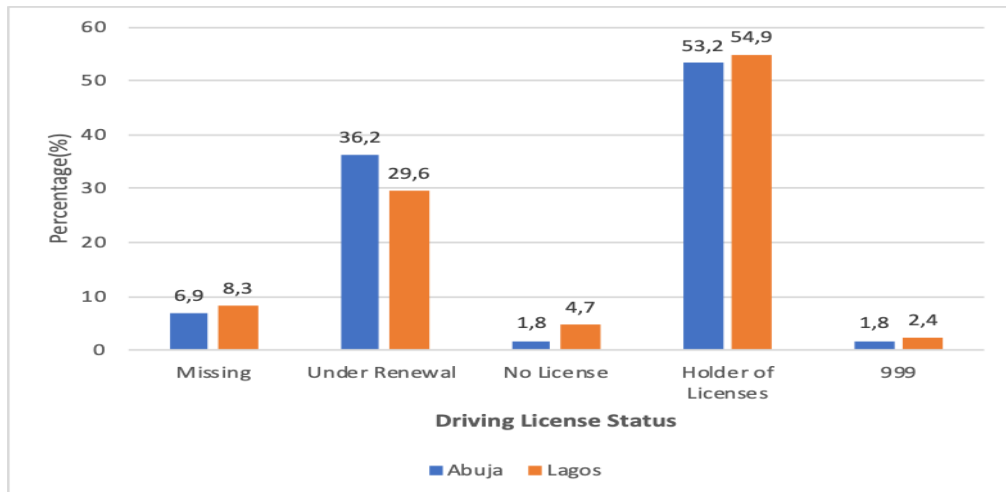
FIGURE 21: DRIVING LICENSE STATUS OF RESPONDENTS

The respondents' driving license status shows that 116 (53.2%) of Abuja respondents indicated that they hold driving licenses, while respondents indicated that they hold driving licenses in Lagos were 139 (54.9%). On the other hand, 4 (1.8%) of the respondents in Abuja showed that they do not have any driving, 12 (4.7%) of Lagos respondents reported same. This shows that most drivers in both states have driving licenses although, Lagos state had more drivers that reported having their driving licenses than Abuja. In the same vein, Lagos also has many drivers on the wheel who do not have driving license than those in Abuja.
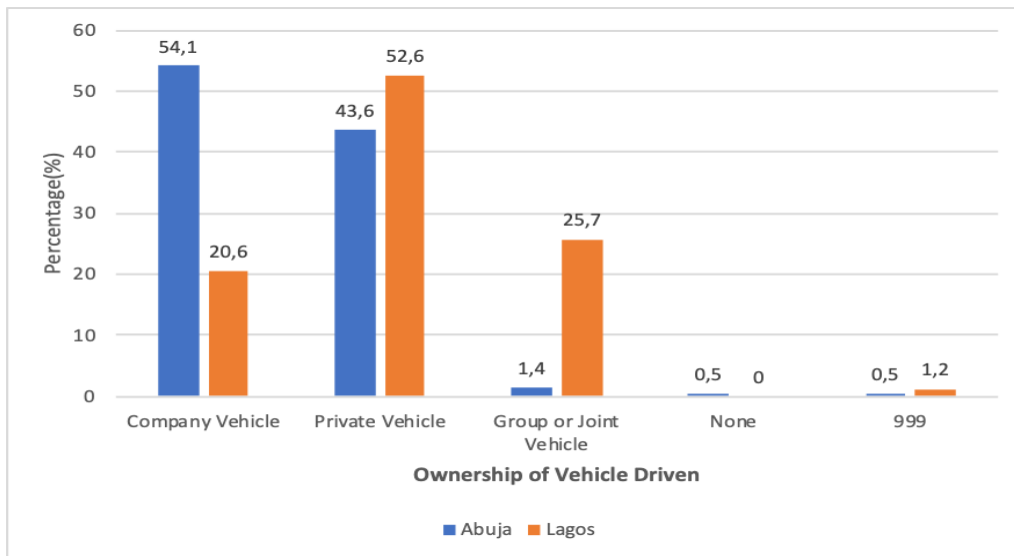
FIGURE 22: RESPONDENTS OWNERSHIP OF VEHICLE DRIVEN

Regarding ownership of vehicles driven, Fig. 25 shows that 118 (54.1%) of the respondents in Abuja indicated that they drive company´s vehicles. In contrast, 133 (52.6%) of Lagos respondents showed that they drive their private vehicles. On the other hand, 3 (1.4%) of the drivers in Abuja drive group or joint vehicles, while 52 (20.6%) of Lagos' respondents drive company´s vehicles. This result shows that commercial drivers drive more company vehicles in Abuja than they do in Lagos. In contrast, Lagos commercial drivers drive more private vehicles than they do in Abuja.

4.2.2. Section 1: Part B: Self-Reported Background to Driving History

This section presents information on the background history of the drivers that constituted the respondents in this research. The questions asked in this section of investigation include driver´s driving experience, driving training and procurement, visual and eye tests awareness, driving workload, and traffic rules and regulations.
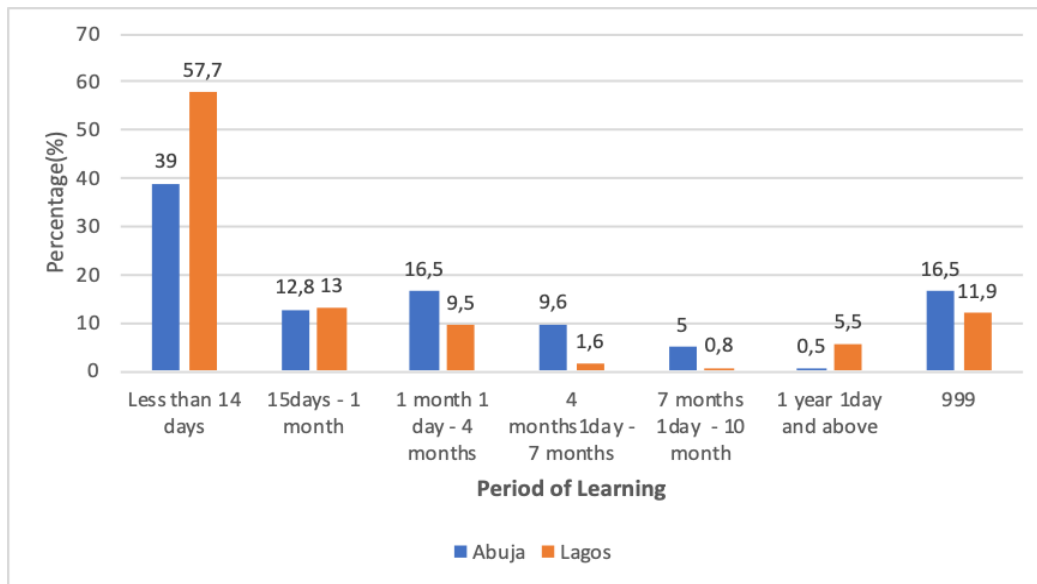
FIGURE 23: DAYS/ WEEKS/ YEARS USED IN LEARNING FIRST TO DRIVE A VEHICLE

Fig. 26 shows that 85 (39.0%) of the respondents in Abuja indicated that they learnt to drive in less than 14 days, while 146 (57.7%) of the respondents in Lagos stated that they learned first to drive a vehicle in less than 14 days. In comparison, 1(0.5%) of the respondents in Abuja indicated that they learned first to drive a vehicle in 1 year one day and above, and 2 (0.8%) of the respondents in Lagos stated that they learned first to be driving in between 7 months, one day-10 months. This implies that even though most commercial drivers in both locations learned driving in less than 14 days, more drivers learned driving in Lagos in less than 14 days than in Abuja. More commercial drivers in Lagos learned their driving in more than one year than there is in Lagos.
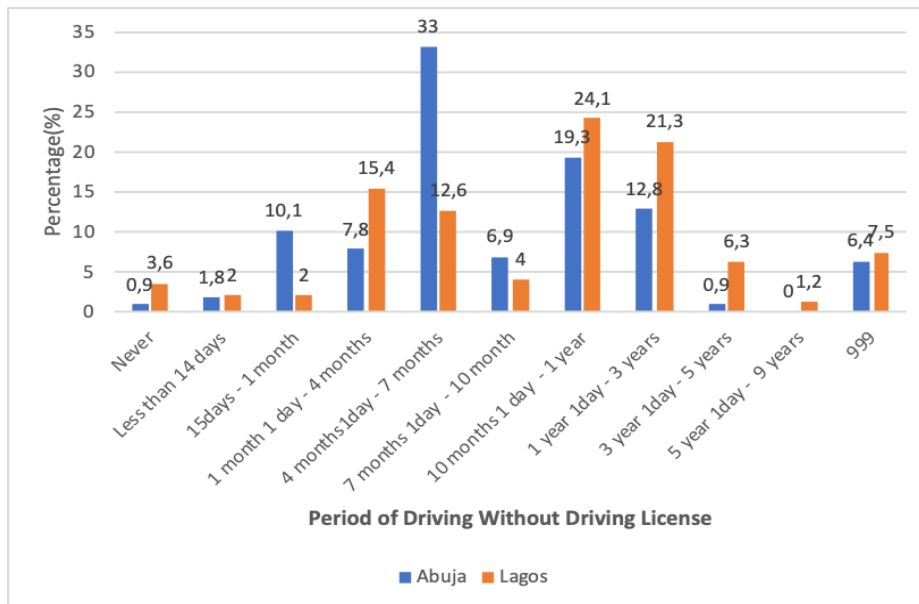
FIGURE 24: DAYS / WEEKS / YEARS OF DRIVING WITHOUT A DRIVING LICENSE

Fig.27 shows that 72 (33.0%) of Abuja respondents indicated that they have spent between 4 months one day and seven months driving without a driving license. In contrast, in Lagos, 61(24.1%) of the respondents indicated that they have spent between 10 months one day – 1 year driving without a license. This result implies that most commercial drivers in Lagos spent more time operating without a driving permit in Lagos than those commercial drivers in Abuja have ever done.
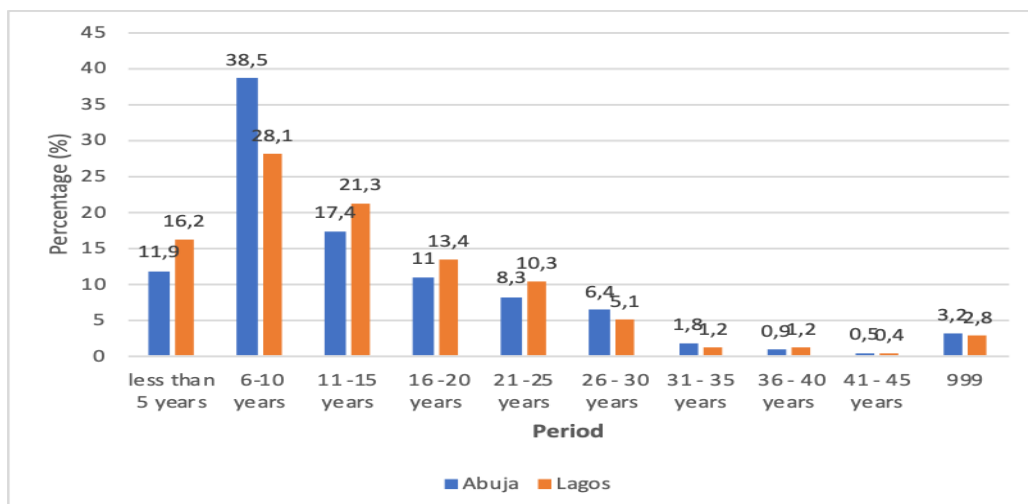
FIGURE 25: HOW LONG HAVE YOU GOTTEN YOUR FIRST DRIVING LICENSE

Fig. 28 shows that 84 (38.5%) and 71 (28.1%) of the respondents in Abuja and Lagos respectively indicated that they had gotten their first driving license between 6 and 10 years. This implies that in both Abuja and Lagos, the commercials drivers got their driving permit

between 6 and 10 years. However, even though that commercial drivers in the two states got their driving license within the same time frame, it is evident that more of the commercial drivers in Abuja got their license within the same time frame than those in Lagos.
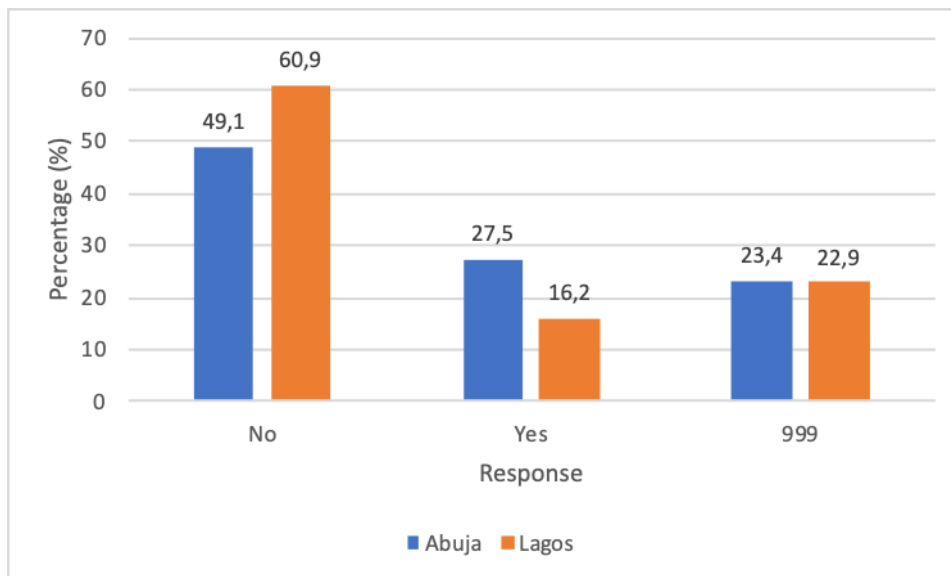
FIGURE 26: SOMEBODY TAUGHT YOU HOW TO DRIVE IN THE NIGHT OR DURING RAINFALL OR ON THE HIGHWAY BEFORE YOU GET YOUR LICENSE

Fig. 29 shows that 107 (49.1%) and 154 (60.9%) of Abuja and Lagos respondents respectively, indicated that nobody taught them how to drive in the night or during rainfall or on the highway before they got their license. However, 60 (27.5%) and 41 (16.2%) of the respondents in Abuja and Lagos respectively, indicated that somebody taught them how to drive in the night or during rainfall or on the highway before they got their licenses This results show that most commercial drivers in both locations were not taught how to drive in the night or during rainfall or on the highway before they got their licenses and has implications for the occurrence of road accidents. Also, more of the commercial drivers in Lagos were taught how to drive in the night or during rainfall or on the highway before they got their license than those that were in Abuja.
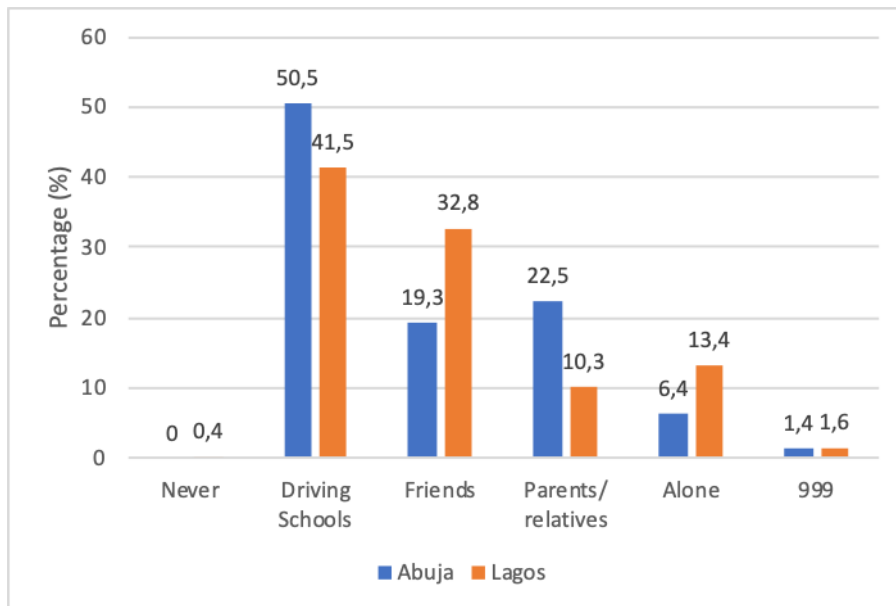
FIGURE 27: Do you learn how to drive from Driving Schools

Fig.30 shows that respondents in Abuja and Lagos who reported they learned how to drive from driving school were 110 (50.5%) and 105 (41.5%) respectively. On the other hand, 14 (6.4%) of the respondents in Abuja stated that they learned how to drive alone (on their own), while only 1(0.4%) of the respondents in Lagos said that they never learned how to drive.

This implies that although most commercial drivers in Abuja and Lagos learned how to drive from the driving school, Abuja had more commercial drivers trained in driving schools than Lagos that also had commercial drivers who never learned how to drive.
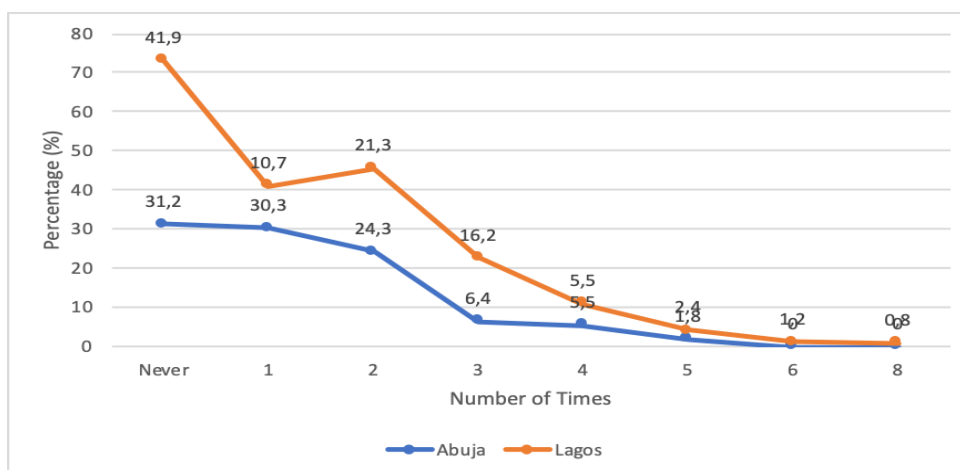
FIGURE 28: Involvement in an accident in the last six years

Fig.31 shows that 68 (31.2%) and 106 (41.9%) respondents in Abuja and Lagos respectively indicated that they had never been involved in an accident. Also, 4 (1.8%) of the respondents in Abuja stated that they had been involved in accidents five times in the last six years, while

2 (0.8%) of the respondents in Lagos indicated that they had been involved in accidents for eight times in the last six years. This implies that even though most of the commercial drivers investigated had not been involved in an accident, Lagos had more than eight commercial drivers reported their involvement in accidents in the last six years.
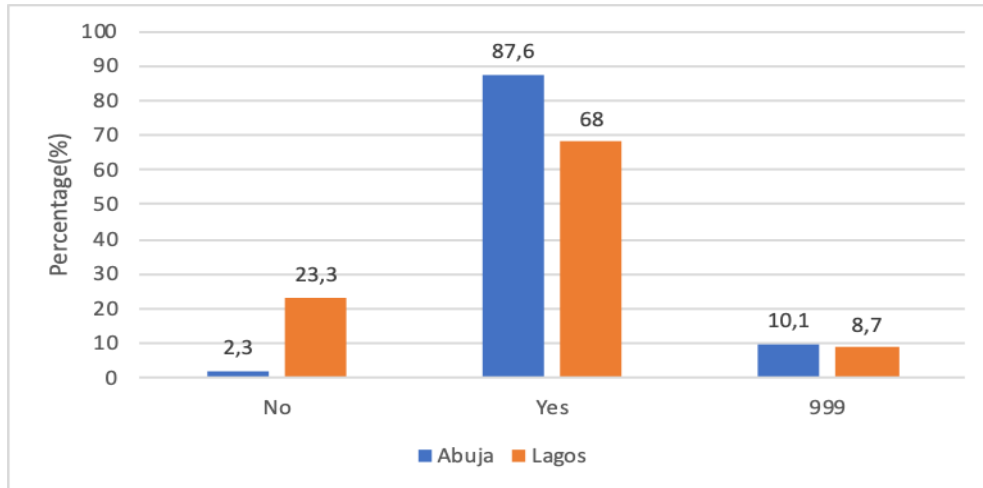
FIGURE 29: WHETHER THE RESPONDENT HAS OR KNOWS ANY PERSON OR RELATION THAT HAD BEEN INVOLVED IN A ROAD ACCIDENT IN THE LAST THREE YEARS

In Fig 32, 190 (87.6%) and 172 (68.0%) of the respondents in Abuja and Lagos respectively reported that they had some persons or relations involved in a road traffic accident in the last three years. On the other hand, 59 (23.3%) and 5 (2.3%) of the respondents in Lagos and Abuja respectively reported that they do not have or know some persons or relations that are involved in a road traffic accident in the previous three years. Therefore, this result implies that commercial drivers in Abuja have more relations involved in accident than their Lagos counterparts.
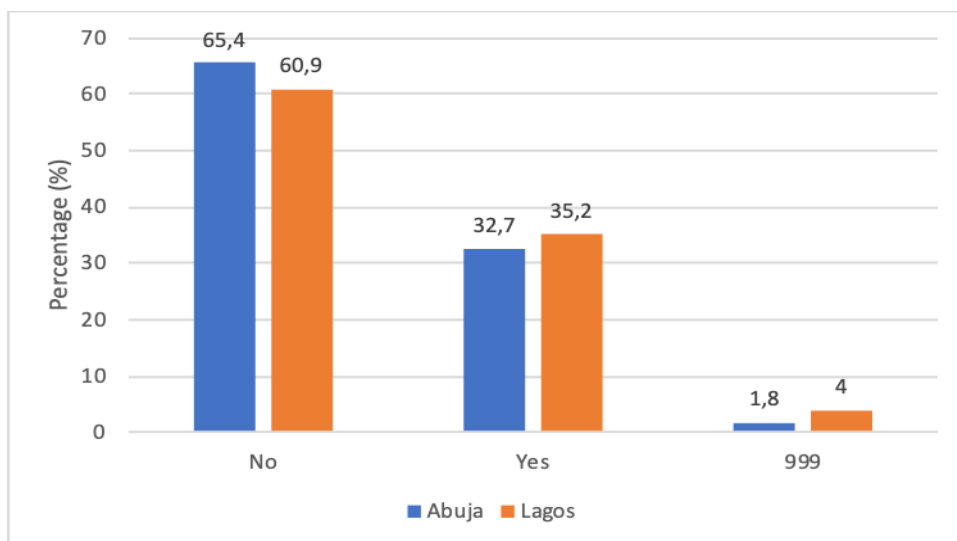
FIGURE 30: COMMERCIAL DRIVER´S OWNERSHIP OF THE VEHICLE THEY DRIVE

Fig. 33 shows that 142 (65.4%) of Abuja respondents indicated that they do not own the vehicles they drove. This was also reported by 154 (60.9%) of the respondents in Lagos. Furthermore, 71(32.7%) and 89 (35.2%) of the respondents in Abuja and Lagos indicated they are the real owners of the vehicles they drive. The findings therefore indicates that most commercial drivers in both locations do not own the vehicles they used to work with, however, more Lagos drivers own their vehicles.
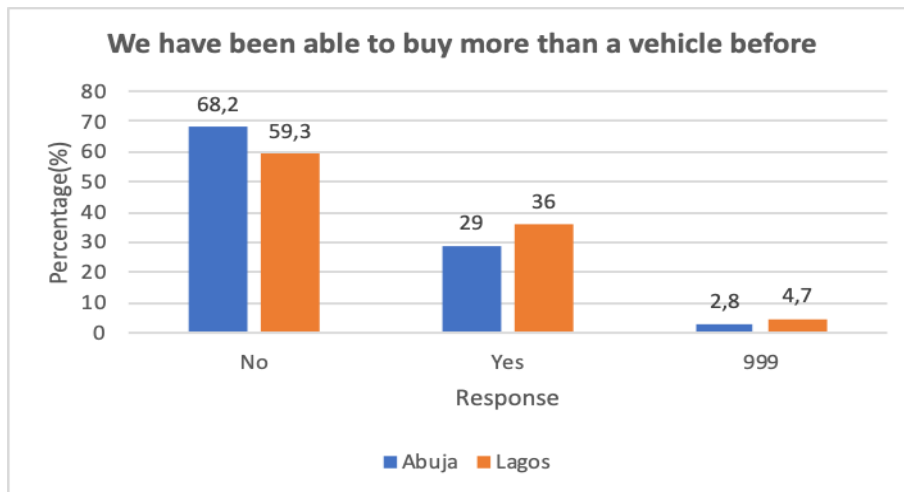
FIGURE 31: WHETHER YOU HAVE BEEN ABLE TO BUY MORE THAN A VEHICLE BEFORE

This result shows that 148 (68.2%) and 150 (59.3%) of Abuja and Lagos respondents have not been able to buy more than a vehicle before. This implies that more commercial drivers in Lagos have not been able to buy more than a vehicle.
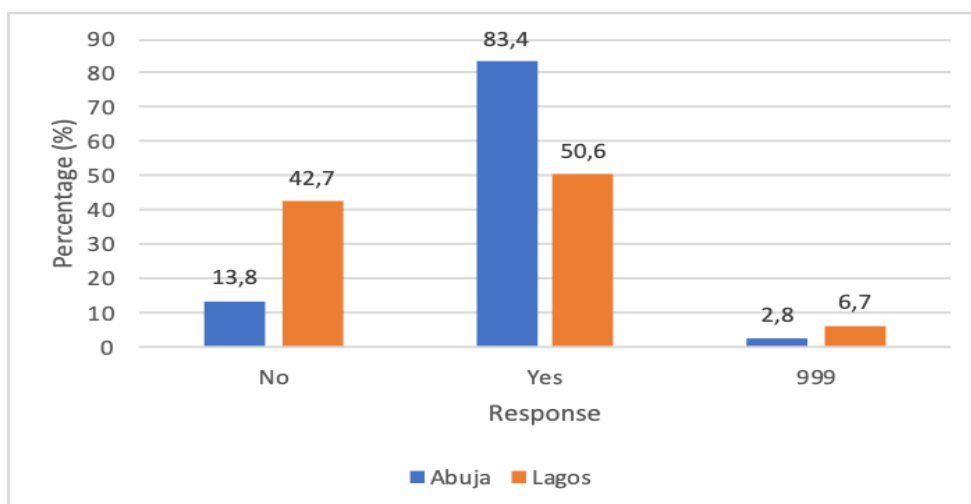
FIGURE 32: VISUAL ACUITY AND HEARING TESTS OBLIGATION BEFORE OBTAINING A DRIVING LICENSE

Fig. 35 shows that respondents from Abuja and Lagos knew that visual acuity and hearing tests must be done before obtaining a driving license were 181 (83.4%), and 128 (50.6%)

respectively. However, in contrast, 128 (50.6%) Lagos commercial drivers knew the importance of visual acuity test and ear test than commercial drivers in Abuja.
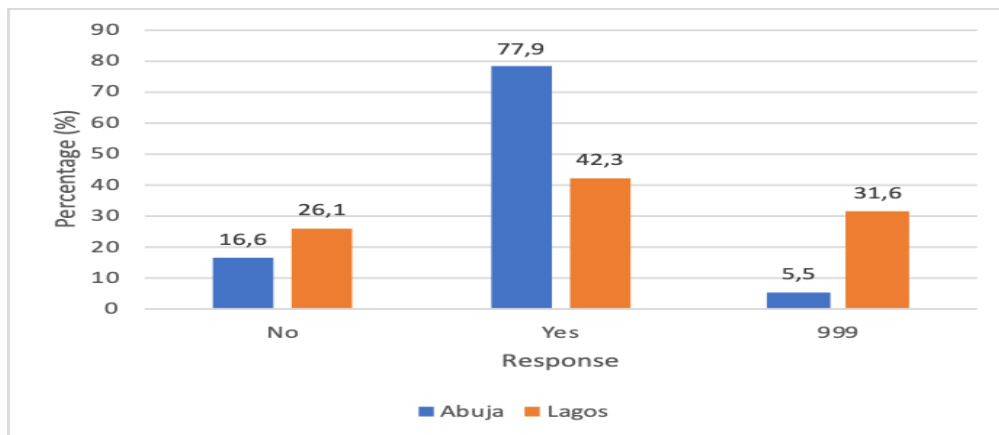
FIGURE 33: WHETHER THE COMMERCIAL DRIVER HAS EVER DONE BOTH EYE AND EAR EXAMINATION TEST BEFORE DRIVING

Fig. 36 shows that 169 (77.9%) of Abuja respondents indicated that they had done both eye and ear examination tests before driving. On the other hand, 107 (42.3%) of the Lagos respondents indicated that they had done eye and ear examination tests before driving. This result shows that Abuja had more commercial drivers who have done eye and ear examination tests before driving than their Lagos counterparts.
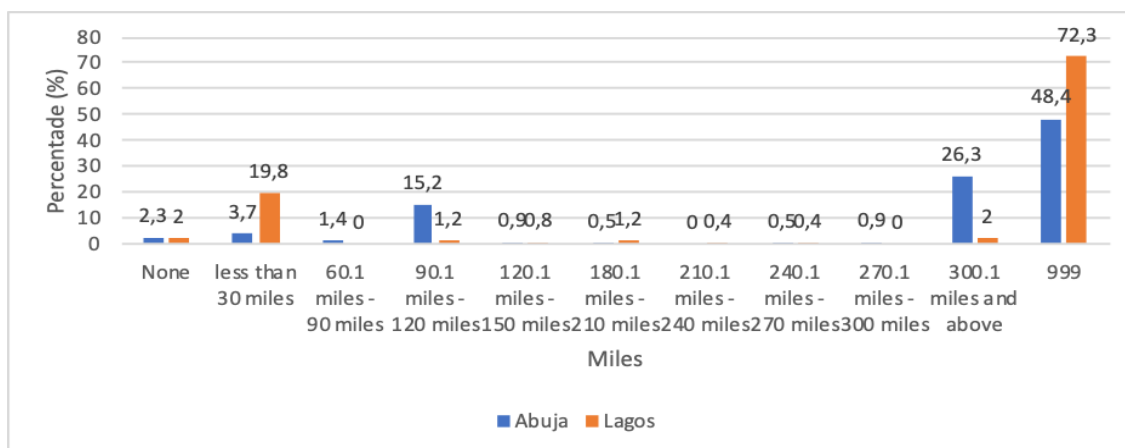
FIGURE 34: NUMBERS OF MILES DRIVEN IN A DAY

Fig. 37 shows that 57 (26.3%) of Abuja respondents indicated that they have driven 300 miles and above in a day, while 50 (19.8%) of respondents in Lagos, stated that they travelled less than 30 miles a day. Abuja drivers travel more miles than Lagos drivers.
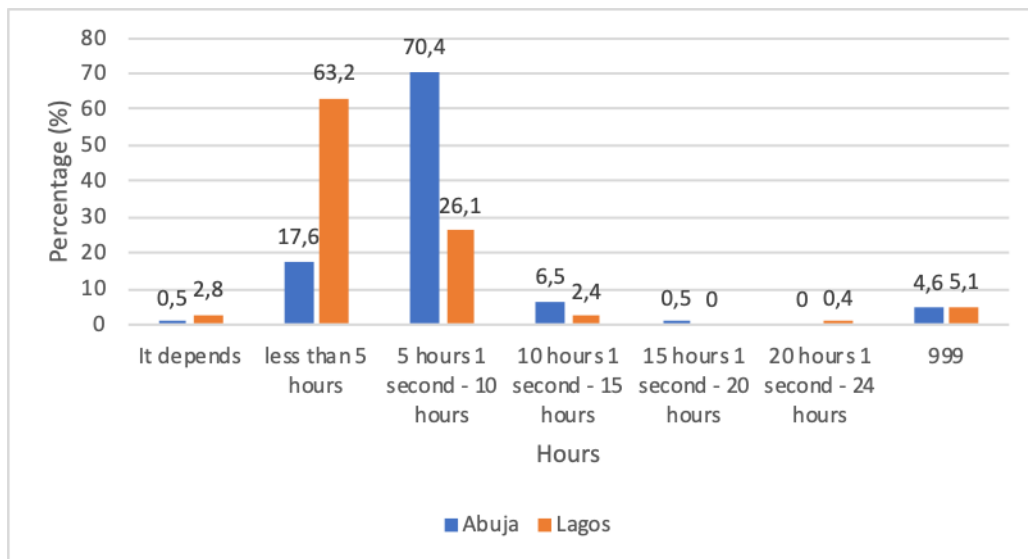
FIGURE 35: NUMBERS OF HOURS DRIVEN IN A DAY

Fig. 38 shows that 152 (70.4%) of the Abuja respondents indicated that they drive between 5 hours 1 second and 10 hours in a day, while 160 (63.2%) of Lagos respondents showed that they drive less than 5 hours a day. The result implies that commercial drivers in Abuja spend more hours driving than commercial drivers in Lagos.
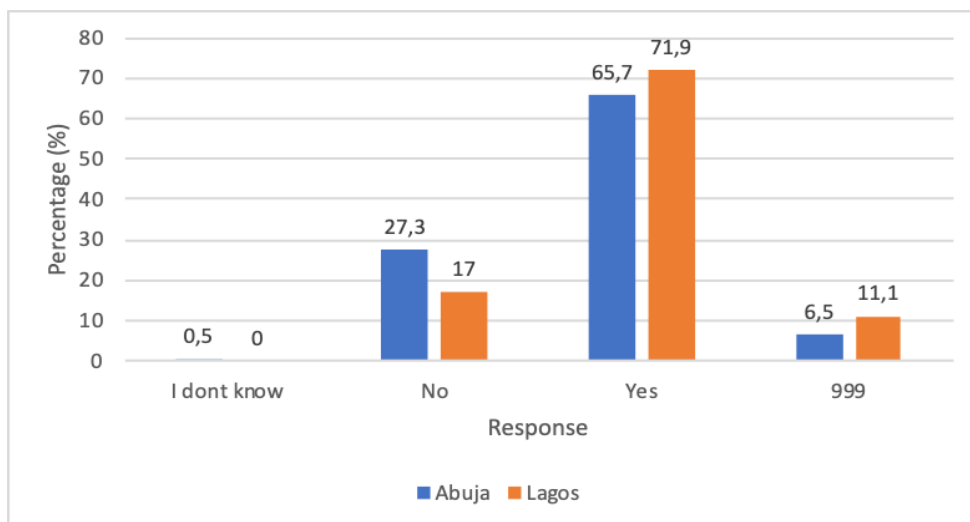
FIGURE 36: DRIVE FOR MORE THAN TWO HOURS WITHOUT MAKING A STOP TO REST

Fig. 39 shows that 142 (65.7%) of Abuja respondents and (71.9%) of the respondents in Lagos indicated that they drove their vehicle for more than two hours without making a stop or rest. This implies that Lagos has more commercial drivers who drove for two hours without making a stop to rest than there are in Abuja.
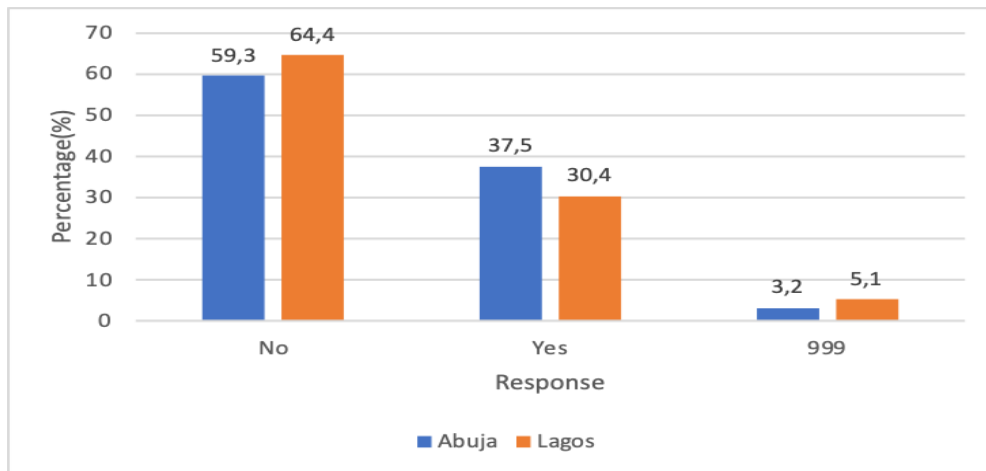
FIGURE 37: SATISFACTION WITH YOUR DAILY WAGES (OR SALARY) AND WORKING HOURS

Fig. 40 shows that 128 (59.3%) and 163 (64.4%) of Abuja and Lagos respondents respectively, indicated that they are not satisfied with their daily wages (or salary) and working hours. This implies that more commercial drivers in Lagos are not satisfied with their daily wages (or salary) and hours of work than in Abuja.
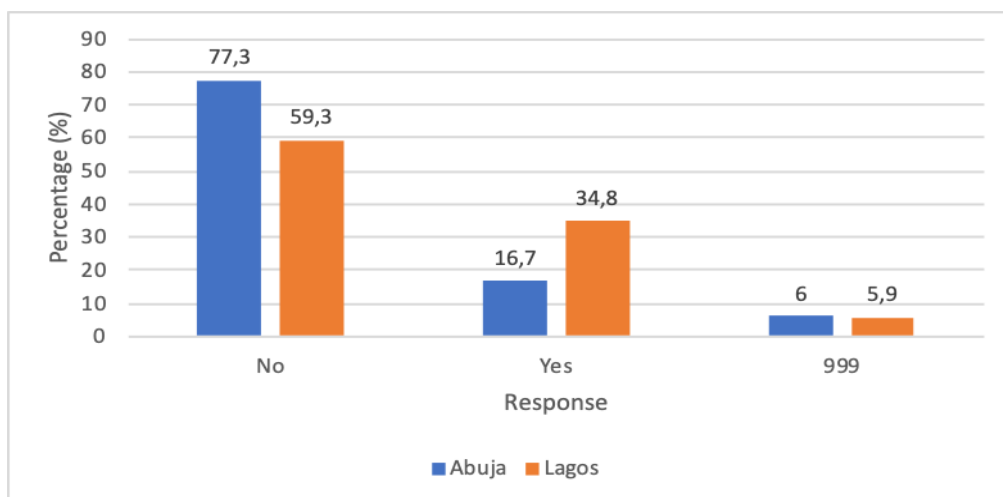
FIGURE 38: WHETHER COMBINING TWO JOBS OR WITH JUST A JOB

Fig. 41 shows that respondents indicated that they still combine their driving job with another job in Abuja and Lagos are 167 (77.3%) and 150 (59.3%) respectively. This shows that Abuja has more drivers that combine the driving work with another job than they have in Lagos.
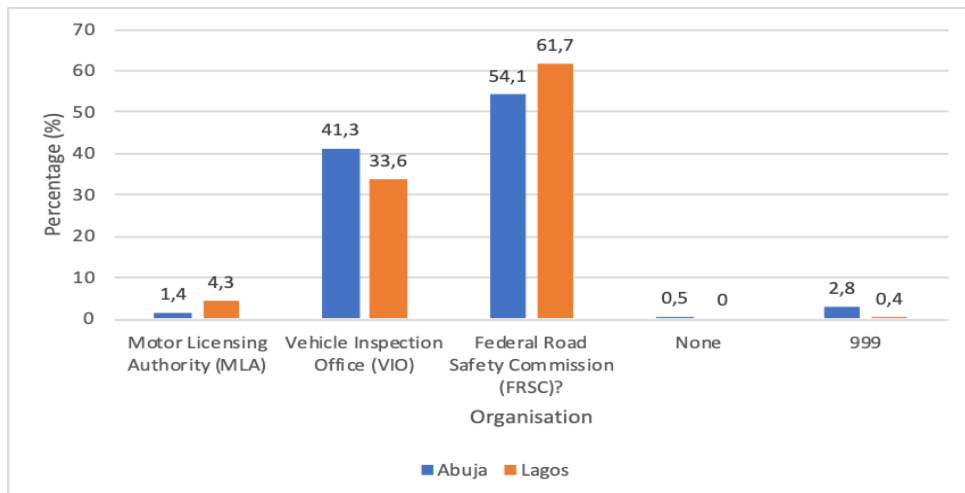
FIGURE 39: WHICH OF THE FOLLOWING ORIGINATION CONDUCTED THE LICENSE TEST AND PRACTICAL

Fig. 42 shows that 118 (54.1%) of the respondents in Abuja as well as 156 (61.7%) of Lagos respondents indicated that the Federal Road Safety Commission (FRSC) was the organization that conducted the driving license test. Meanwhile, driving application forms are meant to be obtained from Motor Licensing Authority (MLA), driving tests are conducted by the Vehicle Inspection Office (VIO) and the licenses are issued by the Federal Road Safety Corps (FRSC) according to the National Road Traffic Regulations (Okafor, Odeyemi, & Dolapo, 2013).
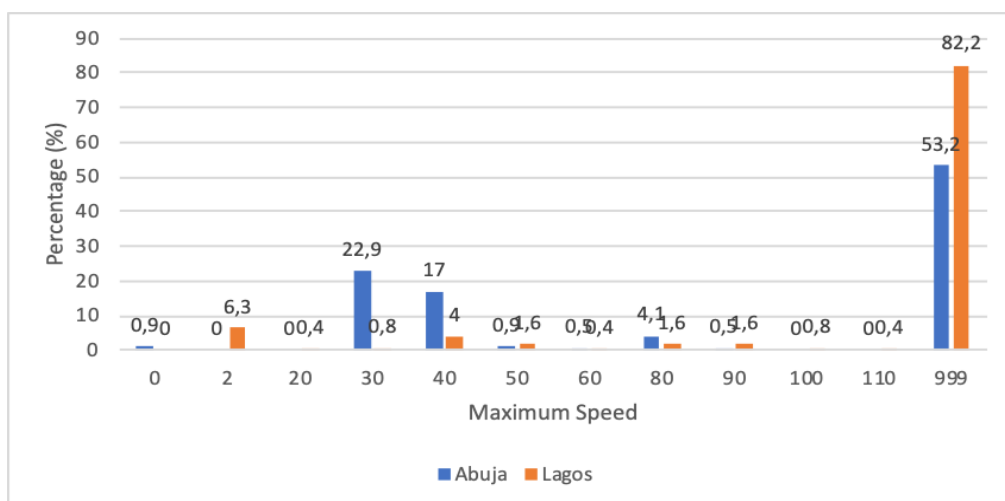
FIGURE 40: THE MAXIMUM SPEED LIMIT OF COMMERCIAL BUSES' IN BUILT-UP AREAS

Fig.43 shows that 50 (22.9%) of Abuja respondents indicated that the maximum speed limit of commercial buses' in built-up areas is 30 km/hr. On the other hand, 16 (6.3%) of Lagos respondents reported that commercial buses' maximum speed limit in built-up areas is 2 km/hr.

These findings reveal that commercial drivers are not knowledgeable about the maximum speed limit of commercial buses' in built-up areas.
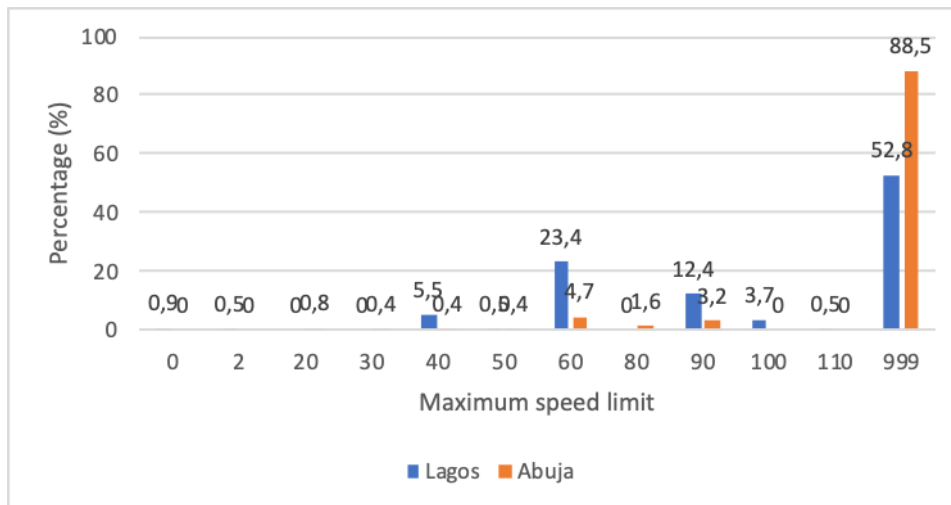
FIGURE 41. THE MAXIMUM SPEED LIMIT OF COMMERCIAL BUSES ON HIGHWAYS

Fig. 44 shows that 51(23.4%) and 12 (4.7%) of the respondents in Abuja and Lagos respectively, indicated that commercial buses' maximum speed limit of on highways is 60 km/hr. This implies that both drivers in Abuja and Lagos agreed that 60km/hr is the maximum speed limit of commercial buses on the highway.
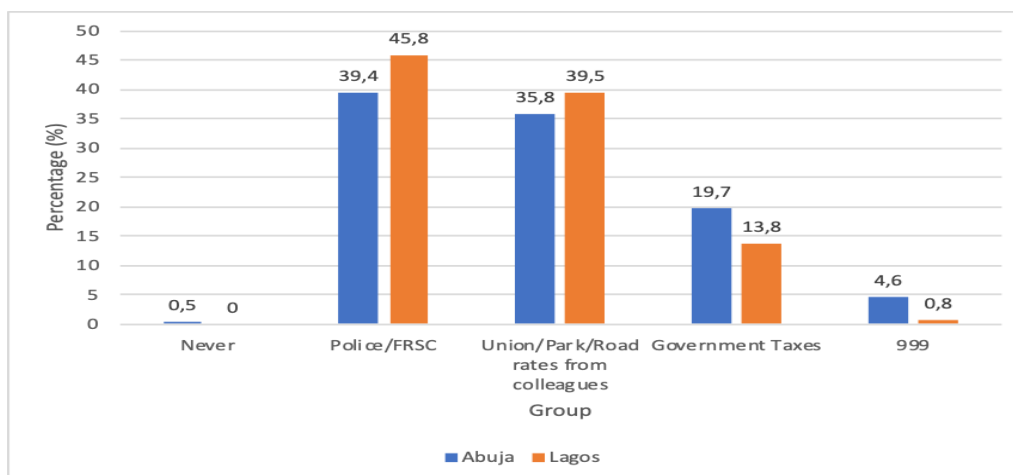
FIGURE 42: ONE OF THE GROUPS THAT MAKE EXTORTION OF YOUR DAILY WAGES

Fig. 45 shows that 86 (39.4%) and 116 (45.8%) of the respondents in Abuja and Lagos, reported that the Police/FRSC is the group that extorts from their daily wages. This implies that the Police/FRSC is the group that extorts commercial drivers' daily wages in Abuja and Lagos.

4.2.3. Section 1: Part C: Drivers' Cognitive Variables Questionnaire (LOMICS-DBQ – 30 items)

This section presents the cognitive variables that related to the drivers in the two survey locations' four motor parks (Abuja and Lagos). The adapted instrument used is of five different parts of six items: Driver Behaviour (DBQ), Driver Attitude Questionnaire (DBQ), Driver Anger Scale (DAS), Driver Skills Inventory (DSI), and Social Climate Questionnaire (SCQ).

4.2.4. Part C: Theme 1 of the Instrument: Driver behaviour (DBQ)

This part shows the responses to the six items related to drivers´ which the old Manchester Driver Behaviour Questionnaire (Reason et al, 1990) tagged as a violation, errors, and lapses.
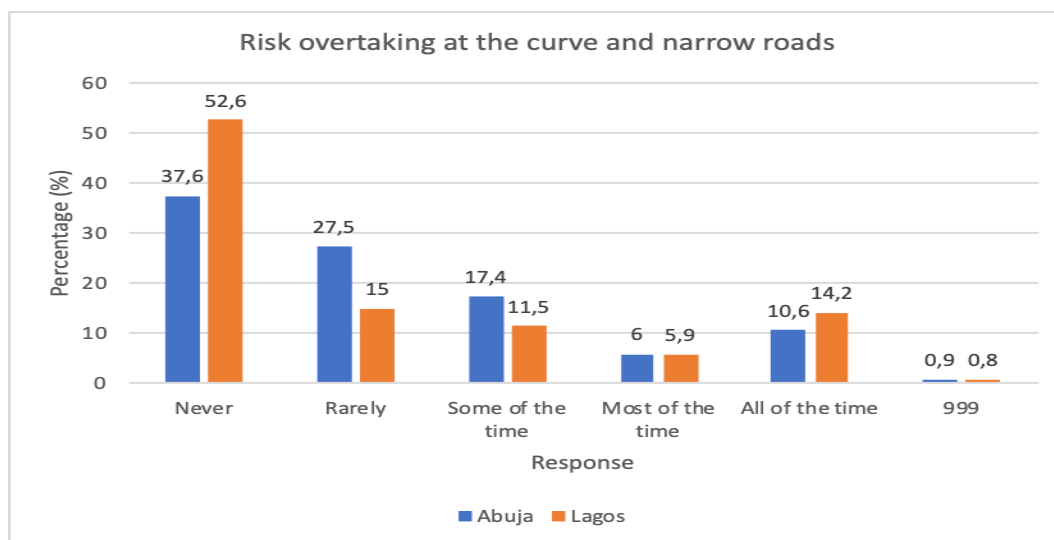
FIGURE 43: RISK OVERTAKING AT THE CURVE AND ON NARROW ROADS

Fig. 46 shows that 82 (37.6%) of Abuja respondents indicated they have never risk overtaking at the curve and narrow road. In contrast, 133 (52.6%) of Lagos respondents showed they never risked or attempted overtaking at the bend and narrow roads. This implies that more Lagos drivers do not risk overtaking at the bend and narrow roads than in Abuja.
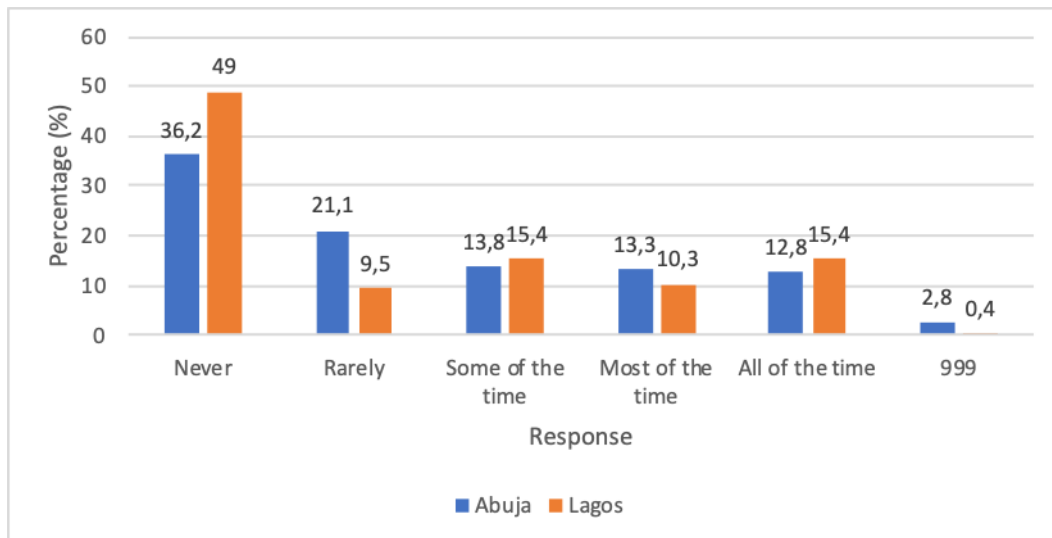
FIGURE 44: CROSSING A JUNCTION AT A RED LIGHT

Fig. 47 results shows that 79 (36.2%) and 124 (49.0%) of Abuja and Lagos respondents respectively, indicated that they have never crossed a junction at a red light. This implies more drivers in Lagos have never crossed a junction at a red light than in Abuja and may be more knowledgeable about traffic rules.
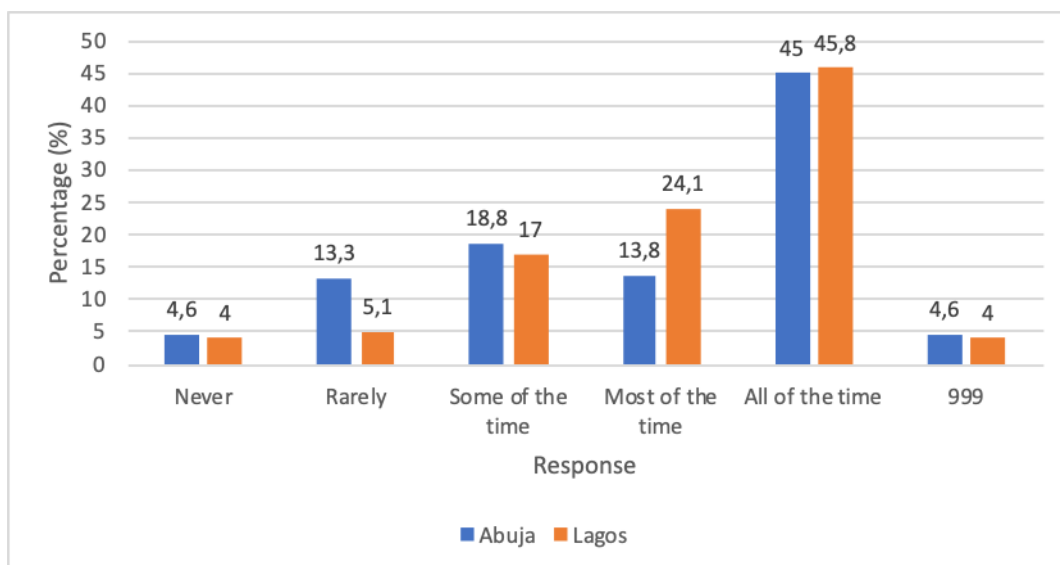
FIGURE 45: USING OF SEAT BELT

Fig. 48 shows that respondents who indicated they used seat belt in Abuja and Lagos were 98 (45.0%) and 116 (45.8%) respectively indicated that they use seat belts. This implies that the proportion of commercial drivers in Lagos use seat belts more than their Abuja´s counterparts.
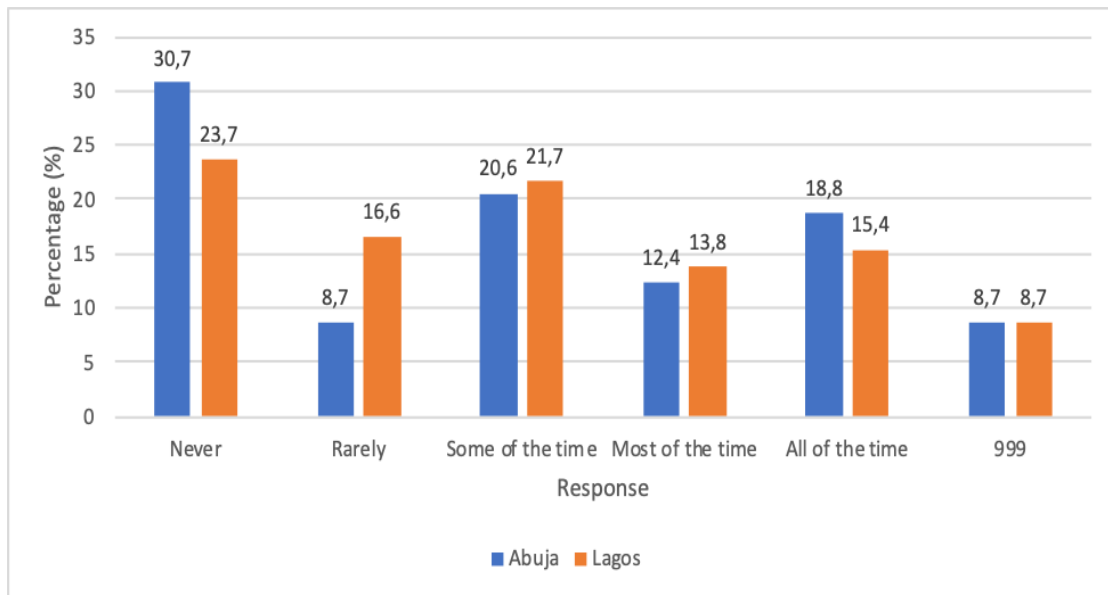
FIGURE 46: DRIVING WHILE DISTRACTED OR THINKING ABOUT OTHER THINGS

As shown Fig. 49 while 67 (30.7%) of Abuja respondents indicated that they have never driven while distracted or thinking about other things, less than a quarter 60 (23.7%) reported same in Lagos. This implies that even though both commercial drivers admitted to never driving while distracted or thinking about other things, Abuja drivers adhered more.
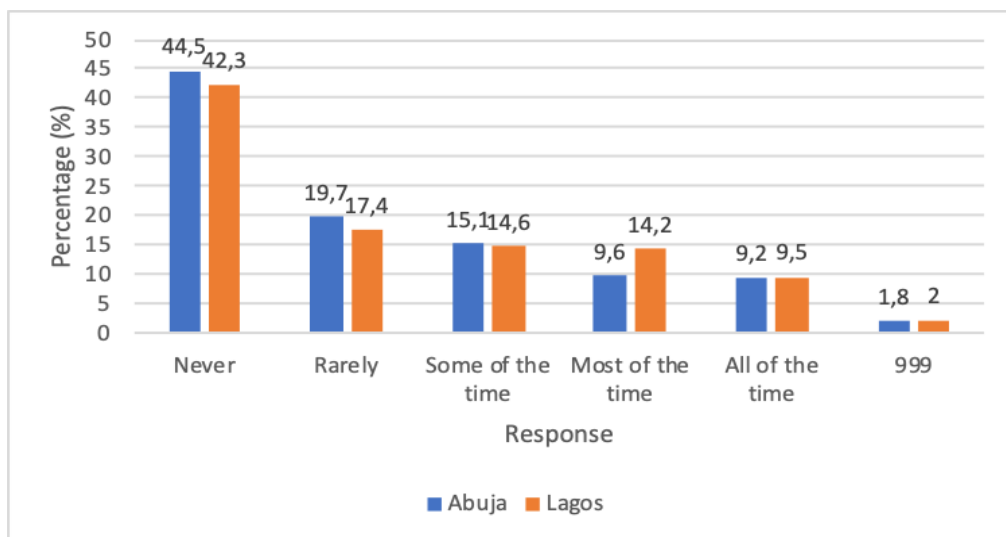
FIGURE 47: DRIVE AT THE NIGHT WITH NON-FUNCTION VEHICLE HEADLIGHTS AND ANOTHER INDICATOR LIGHTS

Fig. 50 shows that 97 (44.5%) and 107 (42.3%) of Abuja and Lagos respondents respectively never drove at night with non-function vehicle headlights and indicator lights. These findings implies that drivers that drive with non-function vehicle headlights.
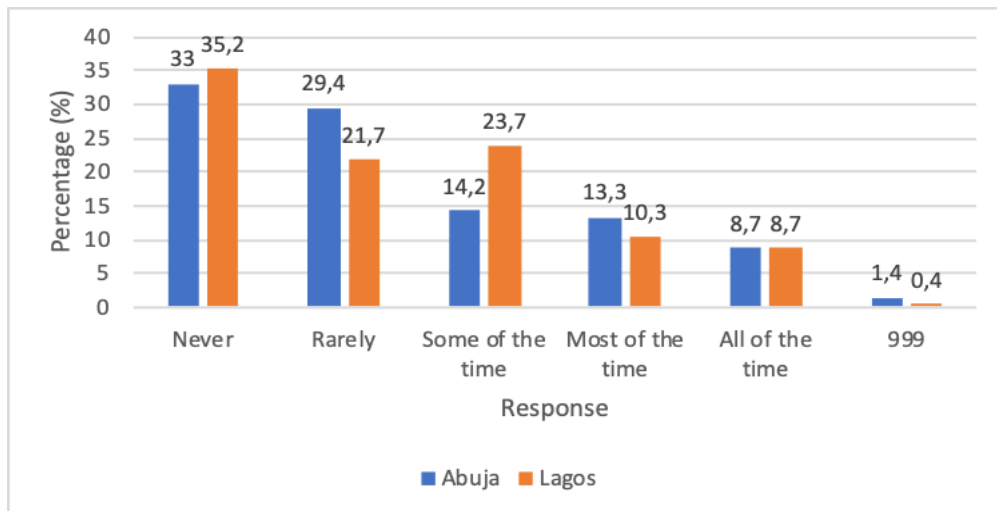
FIGURE 48: UNPLANNED OVERTAKING ON THE RIGHT OR THE LEFT LANE

Fig. 51 shows that respondents who that they never made unplanned overtaking on the right or on the left lane in Abuja and Lagos, were 72 (33.0%) and 89 (35.2%) respectively. This implies that even though most commercial drivers in Abuja and Lagos indicated they never made unplanned overtaking on the right or on the left lane, Lagos still has more drivers that have never made unplanned overtaking on the right or the left lane than Abuja.

4.2.5. Part C: Theme 2 of the Instrument: Driver Attitudes (DAQ)

This part shows the responses on six items related to Drivers´ Attitudes such as driving-driving, mobile use, speeding, fatigued driving, and other aberrant driving behaviours.
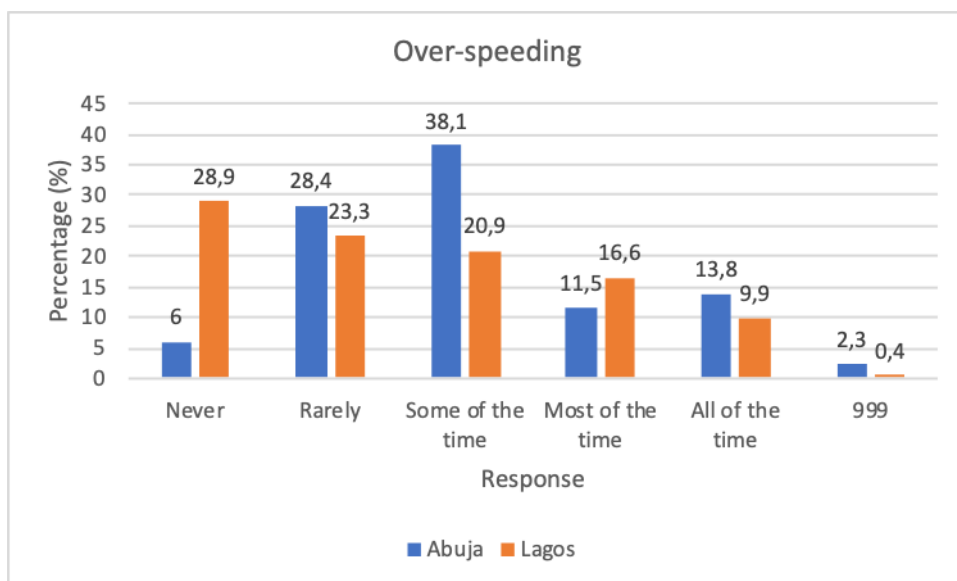
FIGURE 49: OVER-SPEEDING

Fig. 52 shows that 83 (38.1%) of Abuja respondents indicated that they sometimes over speed. In contrast, 73 (28.9%) of Lagos respondents indicated that they have never been involved in over speeding. This result implies that commercial drivers in Abuja over speed more sometimes more than the drivers in Lagos.
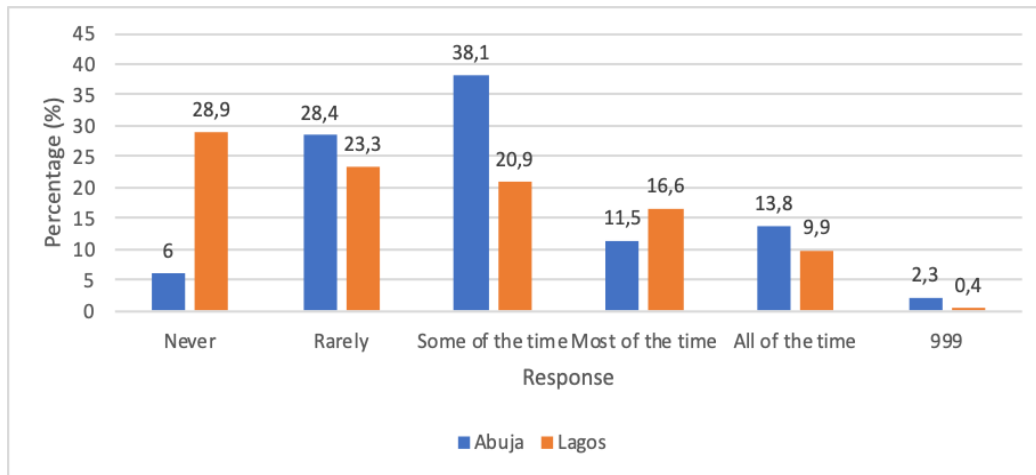
FIGURE 50: RECEIVE CALL (OR MAKE A CALL) AND TEXT ON A MOBILE PHONE WHEN DRIVING

Fig. 53 above shows that 74 (33.9%) of Abuja respondents indicated that they never received or made calls and text messages through a mobile phone while driving. In contrast, 75 (29.6%) of Abuja respondents also indicated that they have rarely received a call or made calls and text messages through a mobile phone. This implies that Lagos drivers received, made calls, and text messages more than those in Abuja.
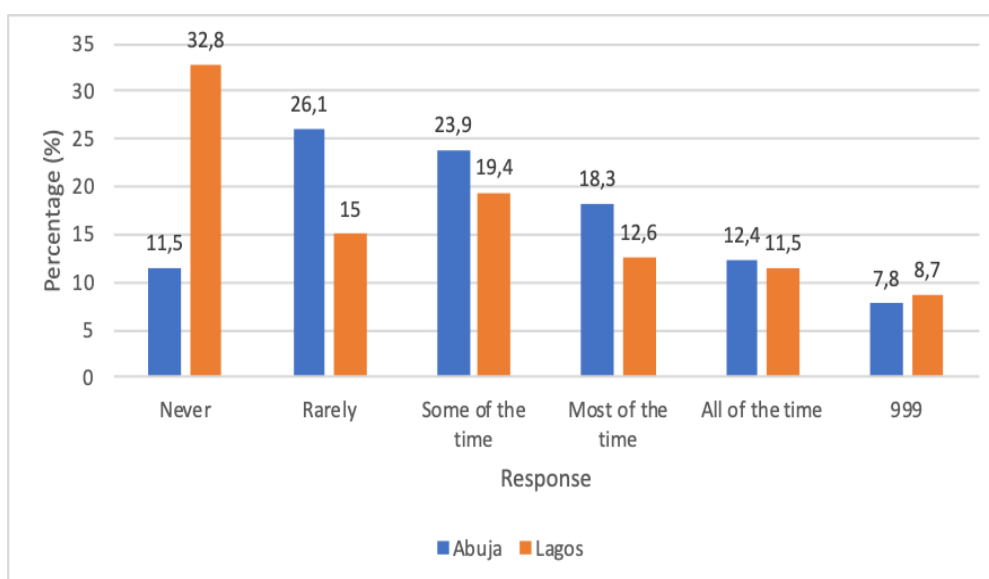
FIGURE 51: DRIVE WHEN YOU ARE VERY WEAK, OR TIRED, OR SLEEPY

Fig. 54 shows that 57 (26.1%) of Abuja respondents indicated that they rarely drive when they are weak or tired, or sleepy. In contrast, 83 (32.8%) of Lagos respondents reported that they never drove when they are weak, or tired or sleepy. This implies that more commercial drivers in Lagos do not attempt to drive when weak or tired, or fatigued.
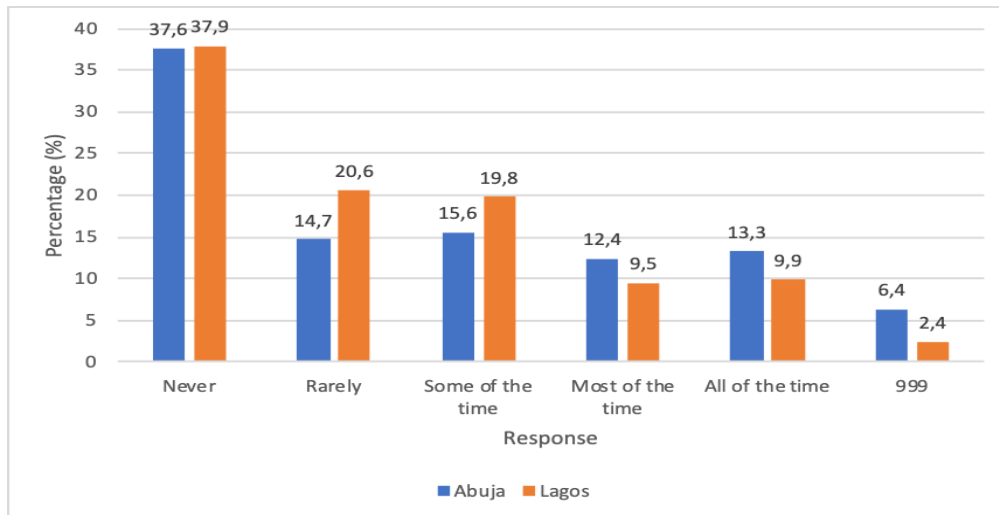
FIGURE 52: MY FRIEND ALWAYS DRIVES IN THE MIDDLE OF THE ROAD

Fig. 55 shows that 82 (37.6%) of Abuja respondents and 96 (37.9%) of the Lagos respondents indicated that their friends never drove in the middle of the road. This implies that the friends of most commercial drivers in both states never went in the middle of the road.
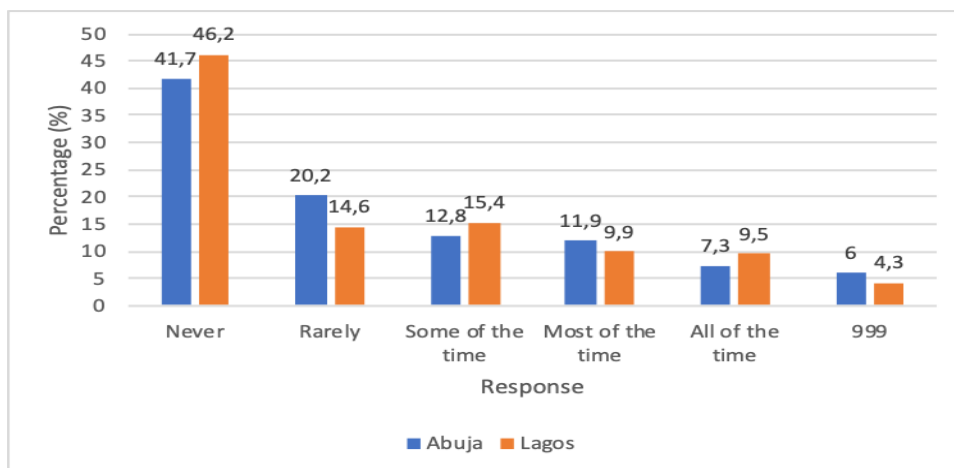
FIGURE 53: DRINKING ALCOHOL AND OTHER INTOXICANTS BEFORE DRIVING

Fig. 56 shows that 91(41.7%) of Abuja respondents indicated that they never drank alcohol and other intoxicants before driving. Also, 117 (46.2%) of Lagos respondents reported that they never drank alcohol and other intoxicants before driving. This implies that most of drivers in both locations do not drink alcohol and other intoxicants before driving.
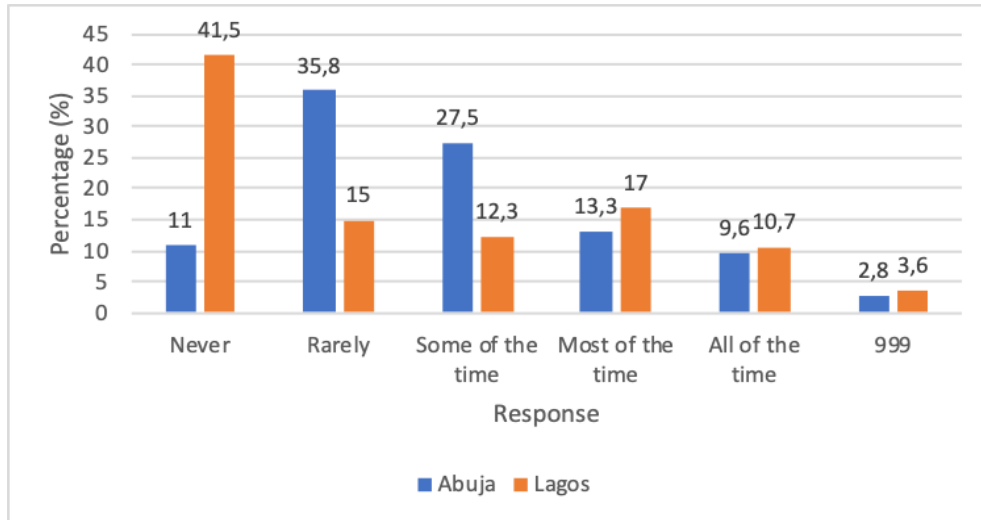
FIGURE 54: HOW OFTEN DO YOU INTENT TO DISOBEY TRAFFIC RULES AND REGULATIONS

Fig. 57 shows that 78 (35.8%) of Abuja respondents indicated they rarely intend to disobey traffic rules and regulations. In contrast, 105 (41.5%) of Lagos respondents said they never intended to violate traffic rules and regulations. This signifies that drivers in Abuja rarely intend to disobey traffic regulations

4.2.6. Part C: Theme 3 of the Instrument: Driver Anger Scales (DAS)

This part shows the responses on items related to Driver Anger scales such as aggressiveness and stubbornness on the wheel, bad driving, disrespectfulness to a law officer, rules, and road users.
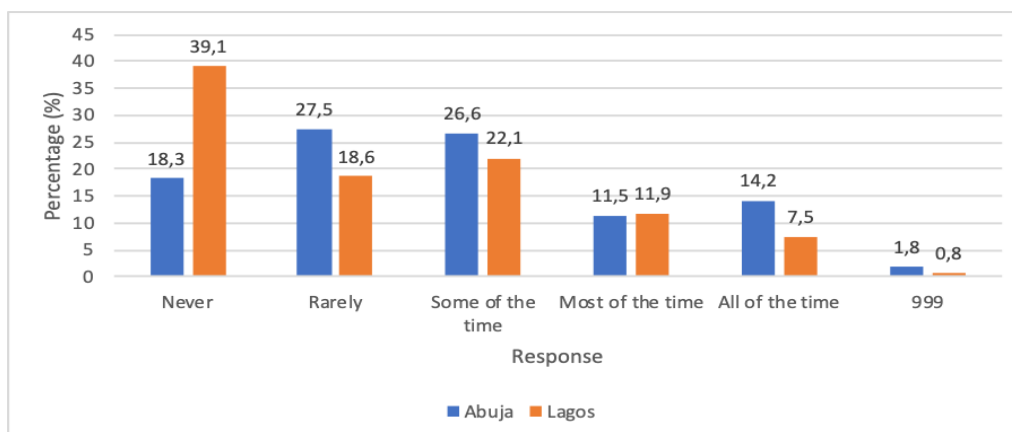
FIGURE 55: YOU TEND TO BE IRRITABLE WHEN YOU ARE WAITING FOR A GREEN LIGHT OR IN TRAFFIC JAMS

Fig. 58 shows that 60 (27.1%) of Abuja respondents indicated that they rarely feel irritable when waiting for a green light when in a traffic jam. In contrast, 99 (39.1%) of the Lagos respondents reported that they never feel irritable when waiting for a green light when in a traffic jam. This result implies that Lagos drivers are more obedient to traffic rules.
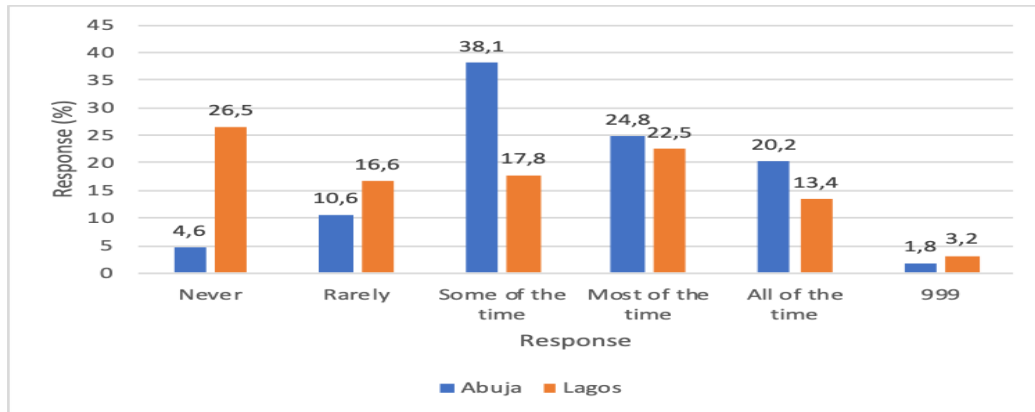
FIGURE 56: DRIVEN SO CLOSE TO THE CAR IN FRONT AND DIFFICULTY TO STOP DURING EMERGENCY SITUATION

Fig. 59 shows that 83 (38.1%) of Abuja respondents indicated that some of the time they drove close to the car in front to the extent that it would be difficult to stop in an emergency. In contrast, 67 (26.5%) of the Lagos respondents indicated that they never drove close to the car in front. This result implied that commercial drivers in Abuja drive close to the car in front to the extent that it would be difficult to stop in an emergency than commercial drivers in Lagos.
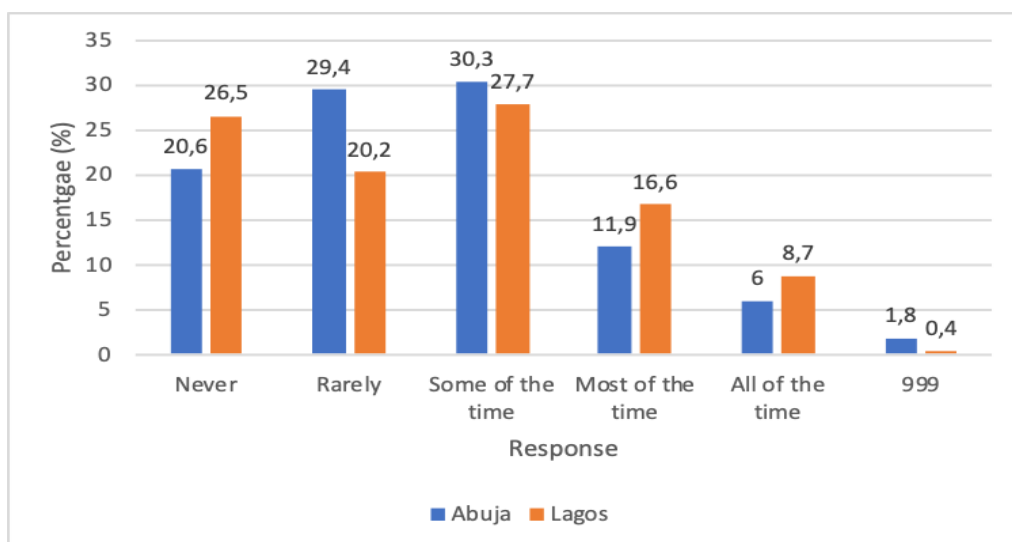
FIGURE 57: EXCELLENT DRIVING SKILLS, OVER-SPEEDING.

Fig. 60 shows that 66 (30.3%) and with 70 (27.7%) of Abuja and Lagos respondents respectively indicated that they sometimes over speed when driving because they have excellent driving skills. On the contrary, Lagos respondents indicated that they sometimes overspeed when driving because they have excellent driving skills. The implication of the data from both cities stated that most driver sometimes over speed because they perceive that have excellent driving skills**.**
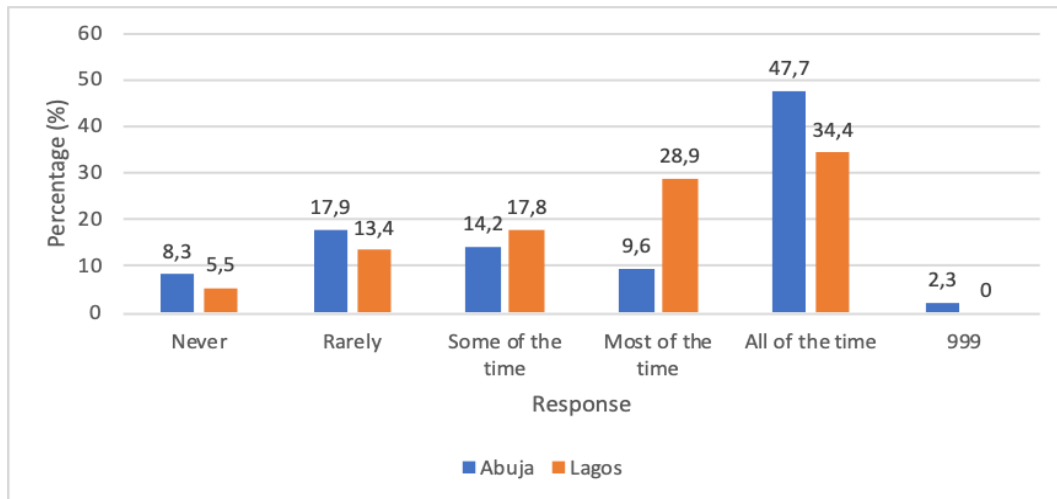
FIGURE 58: OFTEN MAKE OBSCENE GESTURES, SOUND YOUR HORN, AND SAY BAD THINGS TO OTHER ROAD USERS

Fig. 61 shows 104 (47.7%) of the respondents in Abuja indicated that they make an obscene gesture, intimidate other road users through unnecessary use of horn and abusive words, while 87 (34.4%) of the respondents in Lagos indicated that all the times, they often make an obscene gesture to other road users and also intimidate other road users through unnecessary use of sound horn and abusive words against other road users. This implies that Abuja drivers manifest this aberrant behaviour than Lagos drivers.
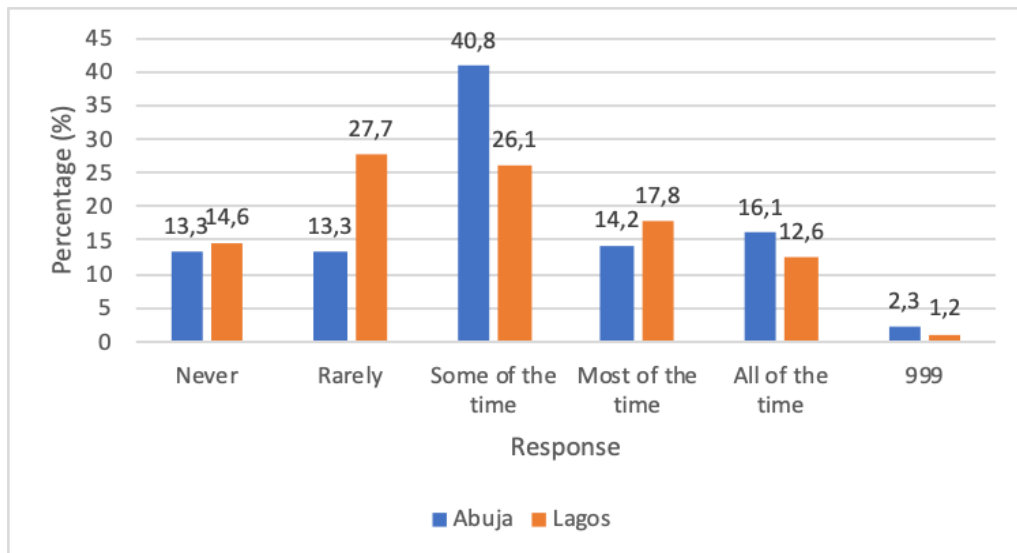
FIGURE 59: STOPPING FOR PEDESTRIANS WHEN YOU ARE MUCH IN A HURRY

Fig. 62 shows that 89 (40.9%) of Abuja respondents stop for pedestrians when they are in a hurry. In Lagos, 66 (26.1%) of the respondents indicated that they do stop for pedestrians when they are in a hurry. The result implies that most of the respondents from both cities sometimes stop for pedestrians when they are in a hurry.
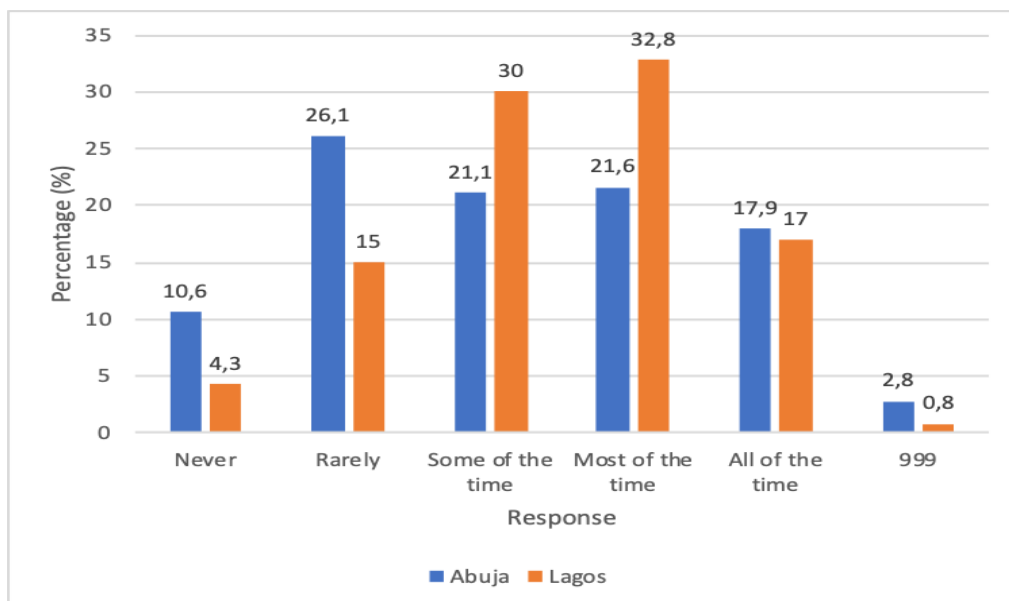
FIGURE 60: FRSC/POLICE TO EDUCATE ON DRIVING AND TRAFFIC RULES

Fig. 63 shows that 57 (26.1%) of the respondents in Abuja indicated that they were rarely invited by either the FRSC/Police for education on traffic and driving rules. In contrast, 83 (32.8%) respondents in Lagos indicated that they had often been invited by FRSC/ Police for education on driving and traffic rules. The implication of this is that commercial drivers in

Lagos often receive more invite from the FRSC/Police for knowledge on traffic and driving laws than commercial drivers in Abuja.

4.2.7. Part C: Theme 4 of the Instrument: Driver Skill Inventory (DSI)

This part shows the responses on items related to drivers' skills inventory to measure perceptual-motor skills and safety skills such as driving, handling skills, traffic education, and rules, driving competence, and hazard perception.
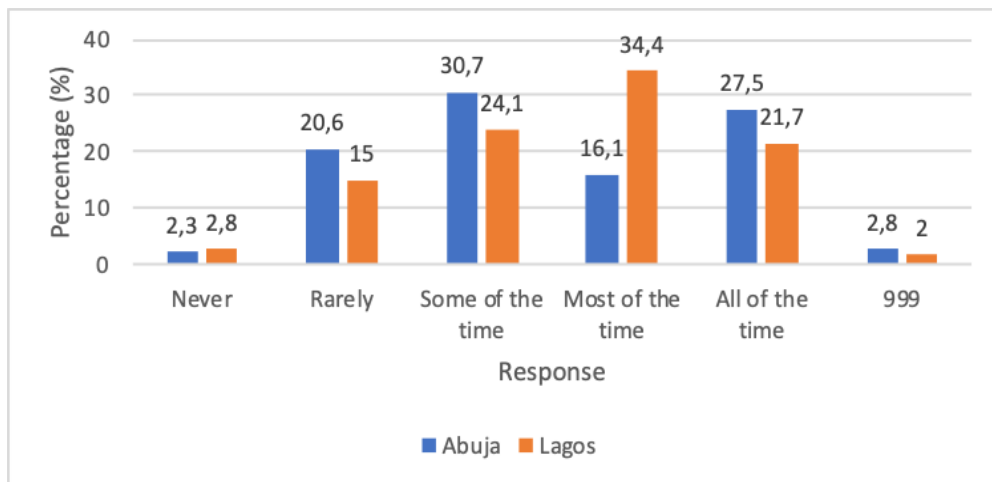
FIGURE 61: IS YOUR DRIVING KNOWLEDGE, SKILLS, AND ABILITIES ARE AS GOOD AS THEY COULD BE

Fig 64 showed that 67 (30.7%) of Abuja respondents indicated that their driving knowledge and skills are sometimes useful. In contrast, 87 (34.4%) of the respondents in Lagos revealed that their driving knowledge and skills are right most of the time. This implies that Lagos commercial drivers possess good driving experience, skills, and abilities than commercial drivers in Abuja.
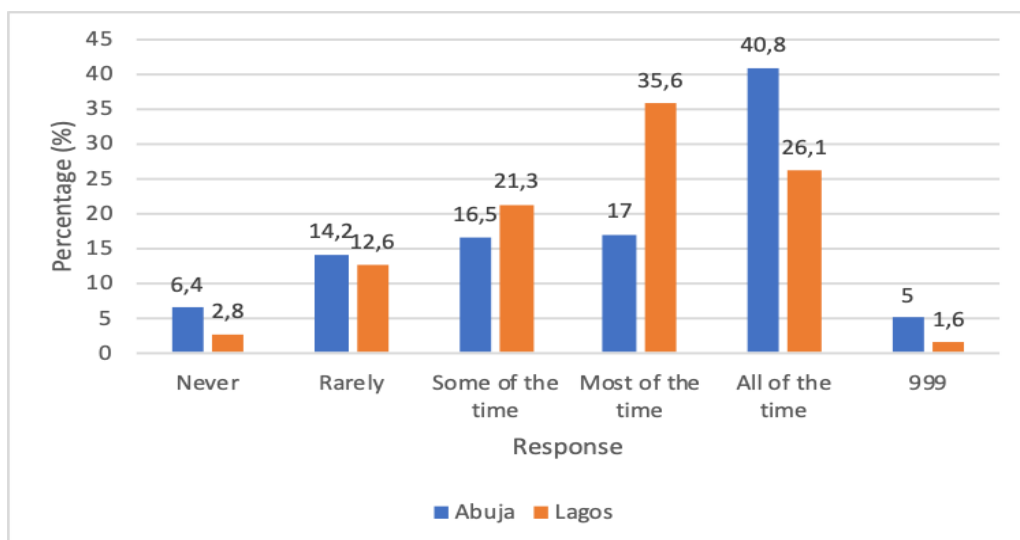
FIGURE 62: YOU LEAVE (2-4 SEC.) A SAFE GAP BETWEEN YOUR VEHICLE AND THE VEHICLE AHEAD TO BE SAVED

Fig. 65 shows that 89 (40.8%) of the respondents in Abuja indicated that they do leave a safe-gap between their vehicle and the vehicle ahead all the times, while 90 (35.6%) of the respondents in Lagos showed that they do leave a safe gap between their vehicle and the vehicle ahead most of the time. This implies that commercial drivers in Abuja observe (2-4 seconds) safety gaps between vehicles, making them not too prone to accident risks than commercial drivers in Lagos.
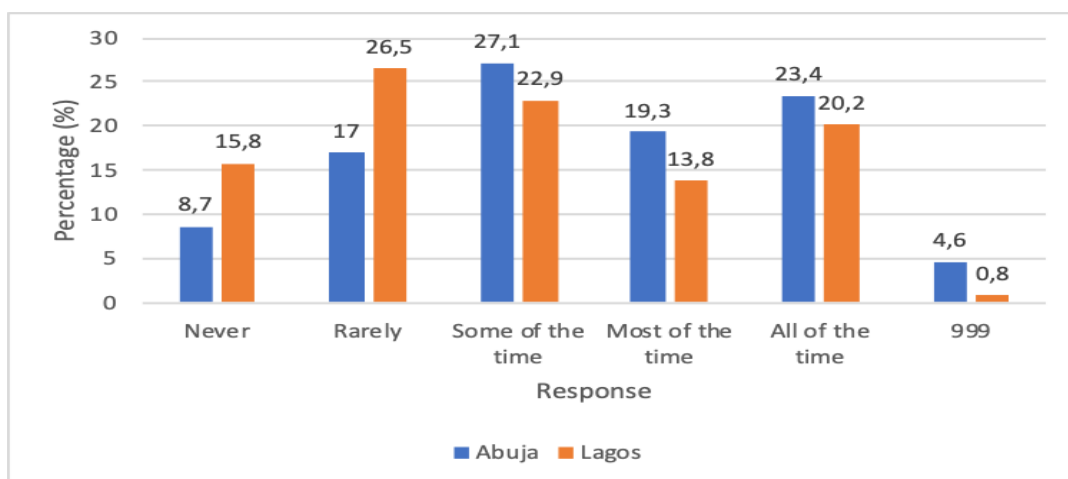
FIGURE 63: PERCEIVING TRAFFIC HAZARDS BY VISUAL SCANNING AND CHECKING THE SIDE MIRRORS AND THE REAR-VIEW MIRROR

Fig. 66 showed that 59 (27.1%) of the respondents in Abuja indicated that they sometimes perceive traffic hazards through the visual scanning of the side mirror and rear mirror. In contrast, 67 (26.5%) of the respondents in Lagos indicated that they rarely perceive traffic

hazards through the visual scanning of the side mirror and rear mirror. Abuja´s drivers perceive traffic hazards through the visual scanning of a side mirror and rear mirror than Lagos´s drivers.
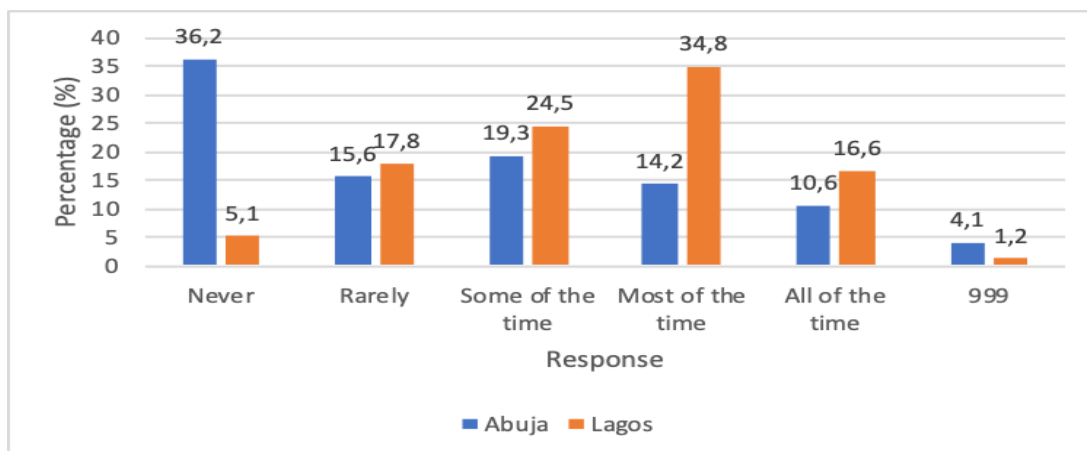
FIGURE 64: HAVE YOU SEEN OR READ AND UNDERSTAND NIGERIA´S ROAD TRAFFIC CODE (RULES)

Fig. 67 shows that 79 (36.4%) of the respondents in Abuja indicated that they have never seen or read and understand Nigeria Traffic code (regulations) and 88 (34.8%) respondents in Lagos reported that most times, they have seen or read and understand Nigeria Traffic code (rules). The significance of this is that most Lagos drivers have seen or read and understand Nigeria Traffic code (rules) than commercial drivers in Abuja.
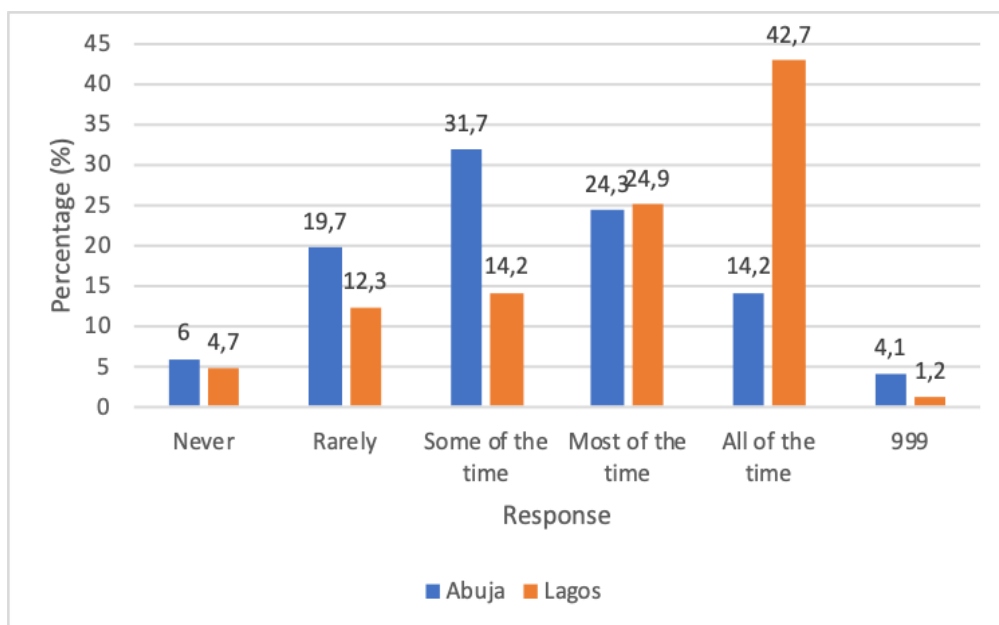
FIGURE 65: PEOPLE THAT WENT FOR DRIVING TRAINING AND DRIVING EDUCATION BEFORE ACQUIRE A DRIVING LICENSE ARE BETTER DRIVERS

Fig. 68 shows that 69 (31.7%) of the respondents believe that sometimes, people that went for driving training and education before acquiring their driver's license are better drivers. Also, 108 (42.7%) of the respondents indicated that people that went for driving training and driving education before acquiring driving license are always better drivers. This implies that most commercial drivers in Lagos believe that people who went for driving training and driving education before obtaining a driving license are better drivers than Abuja drivers.
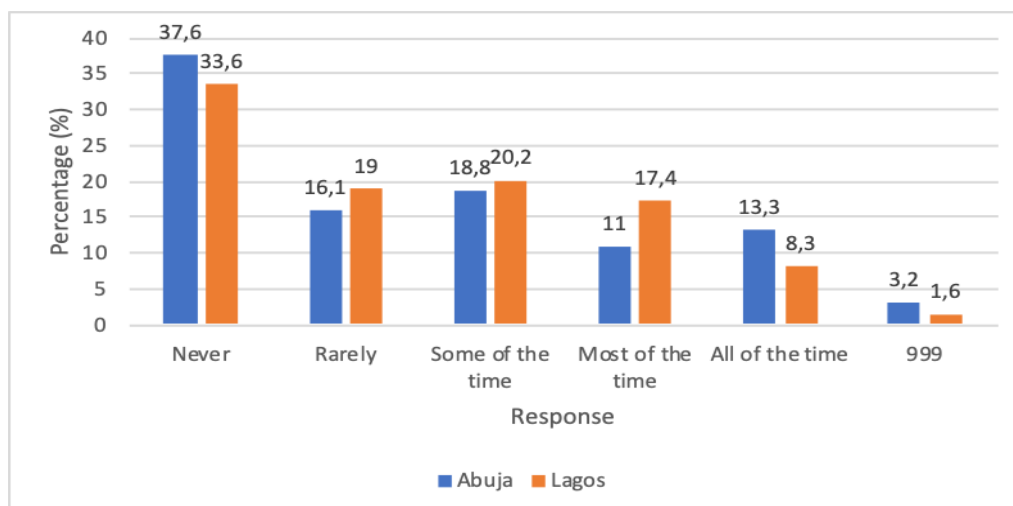
FIGURE 66: CHECKING OF TYRES PRESSURE AND TREAD DEPTH BEFORE DRIVING

Fig. 69 shows that 82 (37.6%) of the respondents in Abuja indicated that they never check their vehicle tyres pressure and tread depth before driving because of the probability of getting accidents. Besides, 85 (33.6%) of the respondents in Lagos never check their vehicle tyres before starting their vehicle engine because of the probability of getting casualties. Abuja has more commercial drivers who do not check their vehicle tyres before starting their vehicle engines.

4.2.8. Part C: Theme 5 of the Instrument: Social Climate Questionnaire (SCQ)

This instrument responses to driver´s cultural and religious beliefs, physical and psychological health conditions, union or association loyalty, workload, and other variables.
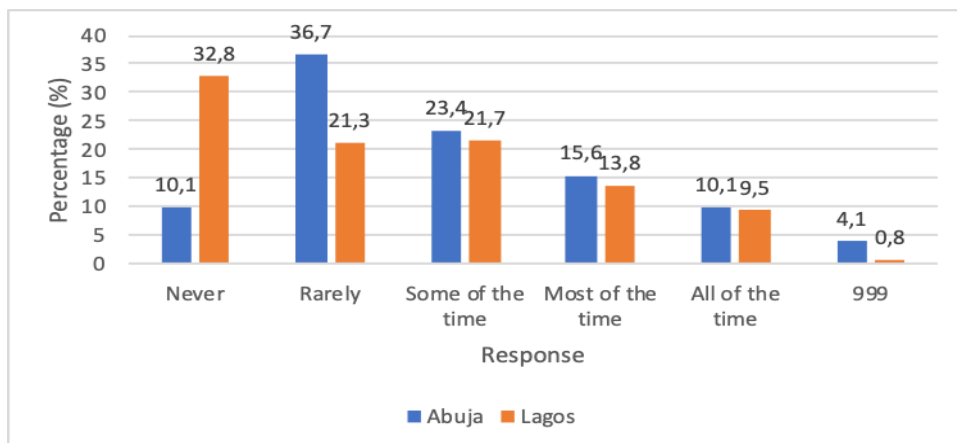
FIGURE 67: IT IS MORE LIKELY TO BRIBE A POLICE / OFFICER WHEN ARRESTED FOR VIOLATING TRAFFIC RULES

Fig. 70 shows that 80 (36.7%) of the respondents in Abuja indicated that they are rarely likely to bribe a Police or Traffic officer when they are caught violating traffic rules. In contrast, 83 (32.8%) of the respondents in Lagos indicated that they are never likely going to bribe a police or traffic warden when caught violating traffic rules. This signifies that Abuja has more commercial drivers who will probably bribe an officer than their Lagos counterparts.
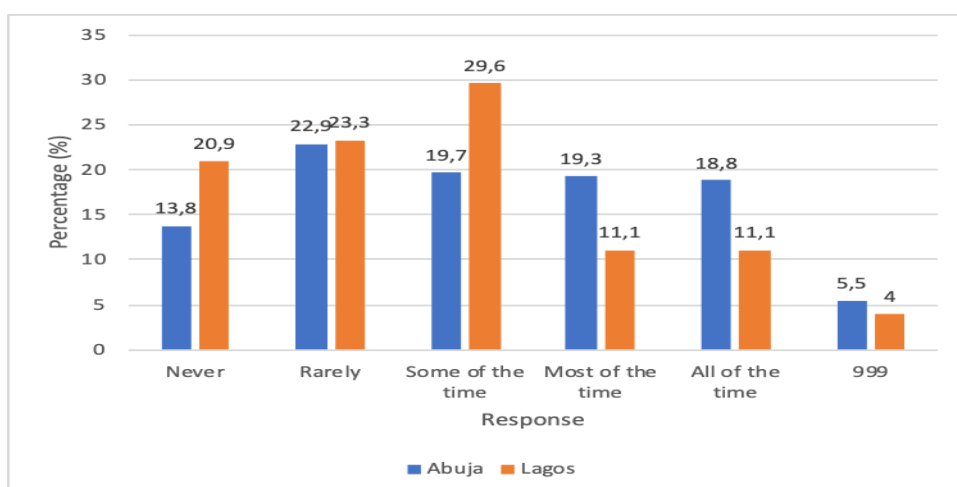
FIGURE 68: YOU HAVE HAD BLURRED VISION WHILE DRIVING OR UNABLE TO JUDGE DISTANCES ON THE ROAD

Fig. 71 shows that 50 (22.9%) of the respondents in Abuja indicated that they rarely had blurred vision or unable to judge distances on the road. Meanwhile, 59 (23.3%) of the respondents in Lagos showed that they sometimes have blur vision while driving or cannot judge distance on the road. This implies that Lagos has more visual deficient drivers than Abuja.
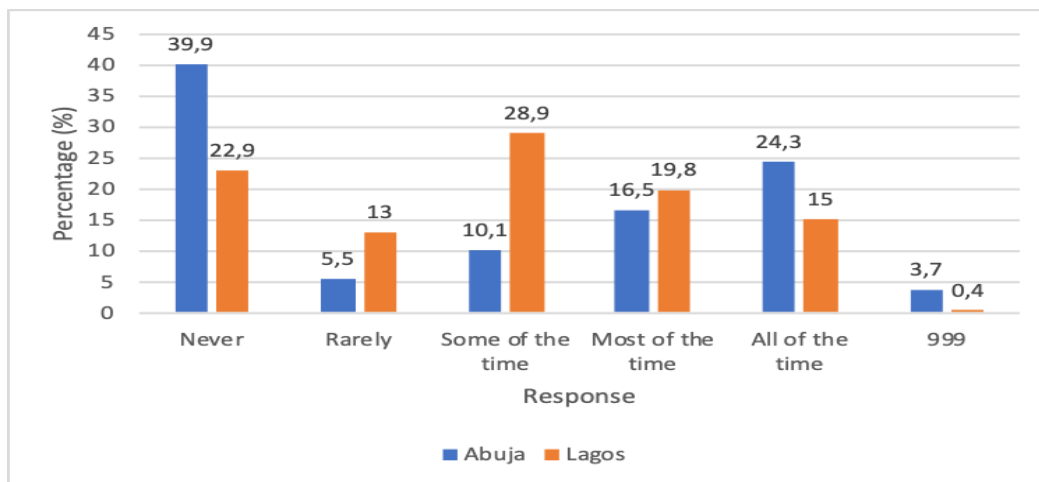
FIGURE 69: YOU BELIEVE AND SUPPORT DRIVERS' UNION OR ASSOCIATION

Fig. 72 shows that 87 (65.4%) of Abuja respondents indicated that they have never believed and agreed with the driver's union or association. In contrast, 73 (28.9%) of the respondents in Lagos indicated that they sometimes believe and agree with the driver's union or association. This implies that Lagos has more commercial drivers that thought and agreed with the driver's union or association than Abuja.
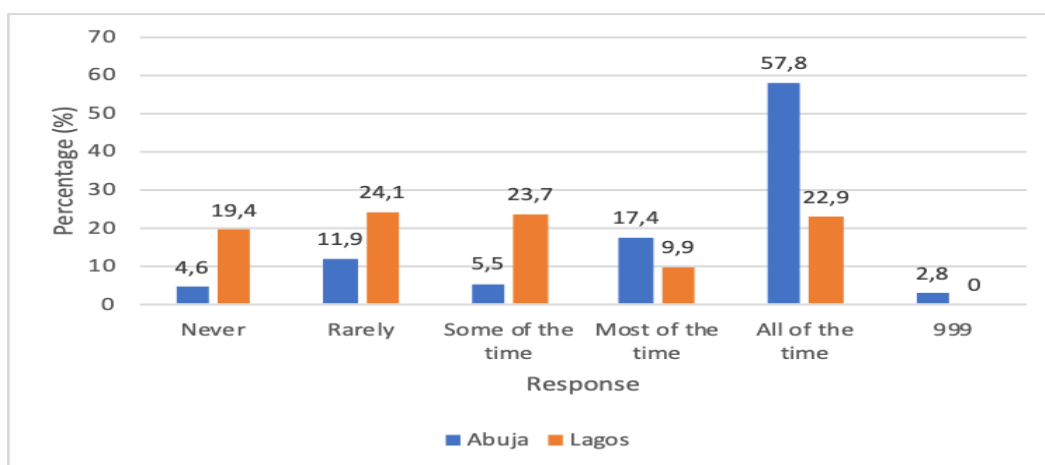
FIGURE 70: THOSE ROAD TRAFFIC ACCIDENTS DEPEND ON THE WILL OF GOD

Fig. 73 showed that 126 (57.8%) of the respondents in Abuja indicated that all the time they believe that traffic accidents on the roads depend on the will of God, and 61(24.1%) of the respondents indicated that they rarely believe that traffic accidents on the roads depending on the will of God at all time. The implication of this is that commercial drivers in Abuja believe that traffic accidents on the roads depend on God's will than commercial drivers in Lagos.
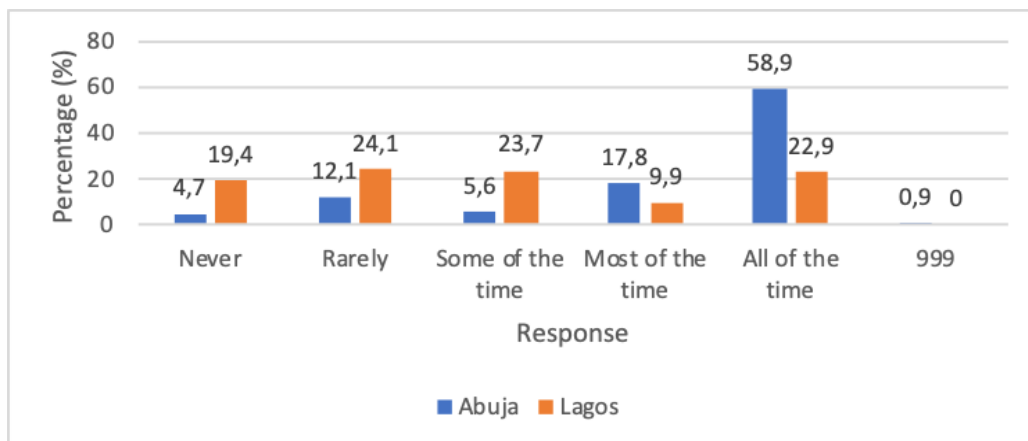
FIGURE 71: WHETHER RELIGIOUS PREACHING AND PRAYERS IN THE BUS SERVES AS "SPIRITUAL" PROTECTION

Fig. 74 shows that 126 (58.9%) of the respondents in Abuja indicated that they believe that religious preaching and prayers in the bus serves as spiritual protection for all the passengers, and 61 (24.1%) of the respondents in Lagos indicated that they rarely believe that religious preaching and prayers in the bus serve as spiritual protection for the passengers. This implies that commercial drivers in Abuja believe more that religious preaching and prayers in the bus serves as "spiritual" protection for the passengers than those in Lagos.

4.3. Section 2: Participant observation survey (Part A: With the FRSC patrol team and Part B: Inside-vehicle observation)
4.3.1. Part A: With the FRSC patrol team

This section explains the graphical representation and explanation of the direct participat observation with the FRSC patrol team which took place at Kara Bridge, Near Berger, Lagos. The Abuja´s observation surveys took place at the Nnamido Azikwe Road, A-Y-A, Asokoro District. The observation provided some empirical evidence of drivers' bad driving attitudes and styles mostly of the roads. (see Appendix D for the question template).
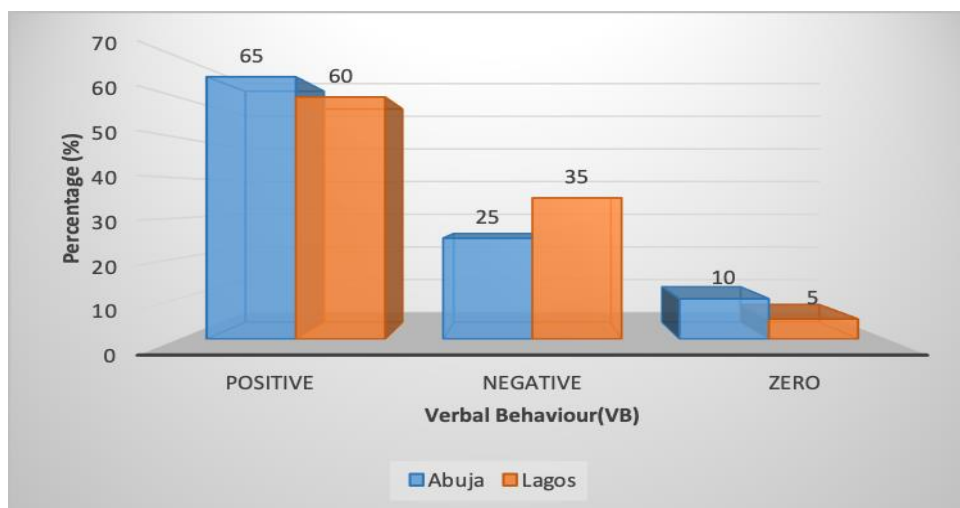
FIGURE 72: VERBAL BEHAVIOUR (PARTICIPANT OBSERVATION WITH THE TRAFFIC PATROL TEAM)

Fig. 75 shows that among respondent-drivers' verbally, threatening behaviour was positive in both Abuja and Lagos. Based on the observations, the verbal behaviour (VB) of 65% and 60% of Abuja and Lagos' motorists respectively were positive. This signifies that bus drivers in Abuja had more positive verbal behaviour than those drivers administered in Lagos.
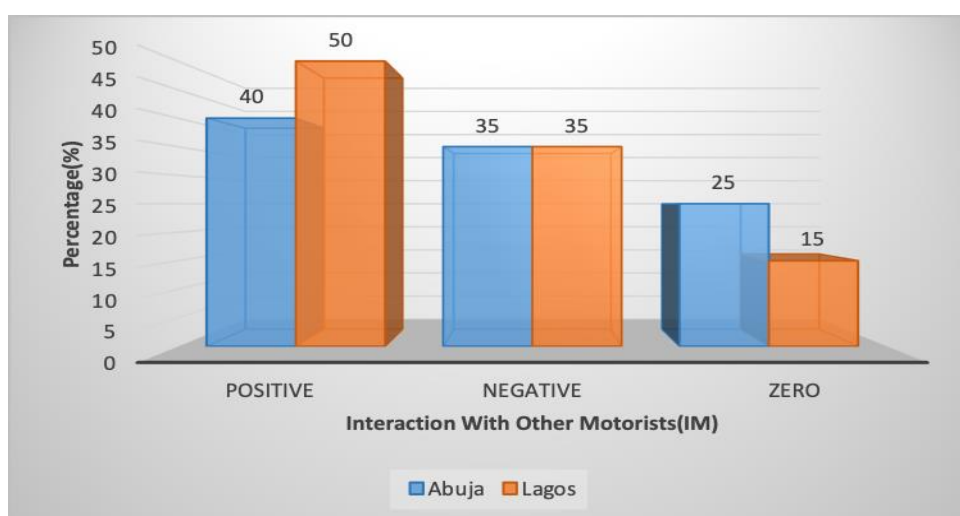
FIGURE 73: INTERACTION WITH OTHER MOTORISTS (IM)

Fig. 76 shows that the interaction among colleagues' drivers and other road users was positive in both Abuja and Lagos. Based on the observations, 40% and 50% of the motorists' in Abuja and Lagos interacted positively. Therefore, the drivers in Lagos interacted more positively with other motorists than those in Abuja.
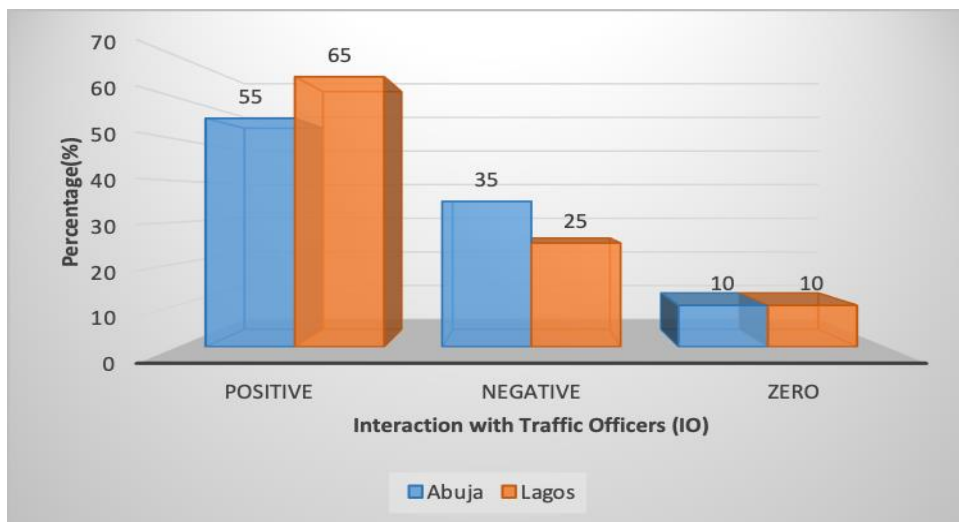
FIGURE 74: INTERACTION WITH TRAFFIC OFFICERS (IO)

Fig. 77 shows that bus drivers' interaction with Traffic Officers was positive in both Abuja and Lagos respectively. Based on the observations, 55% and 65% of the motorists in Abuja and Lagos interacted positively with Traffic Officers. The result implies that motorists in Lagos interacted more positively with Traffic Officers than those in Abuja.
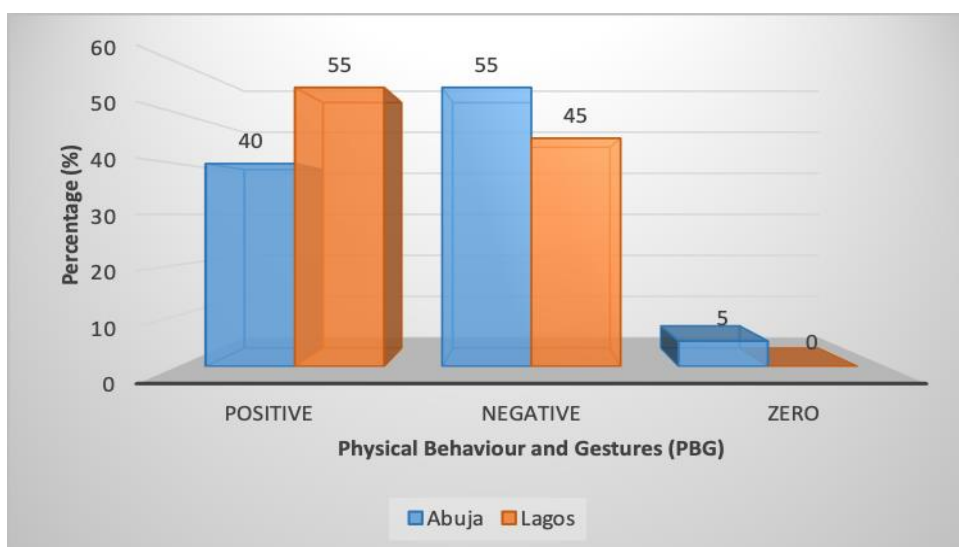
FIGURE 75: PHYSICAL BEHAVIOUR AND GESTURES (PBG)

Fig.78 shows that the physical behaviour and gestures (PBG) of motorists were malicious in Abuja and friendly in Lagos. Based on the observations, 55% of Abuja motorists had negative physical behaviour and gestures (PBG), while 55% of Lagos motorists had positive physical behaviour and gestures (PBG).
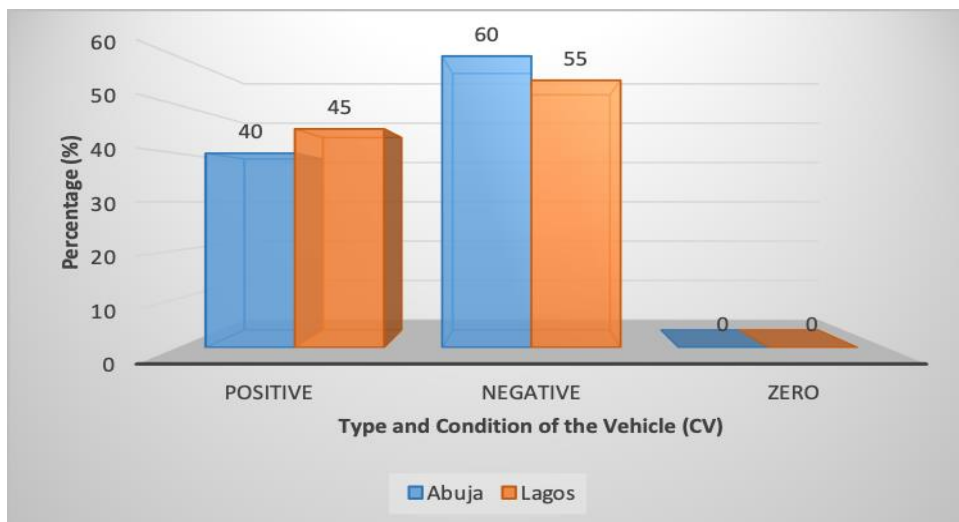
FIGURE 76: CONDITION OF THE VEHICLE (CV) DURING THE OBSERVATION

Fig.79 shows that the physical conditions of the vehicles driven by both Abuja and Lagos were both awful as 60% and 55% of their vehicles' in Abuja and Lagos respectively conditions were awful and not road worthy. Therefore, it was more horrible in Lagos compared to Abuja.
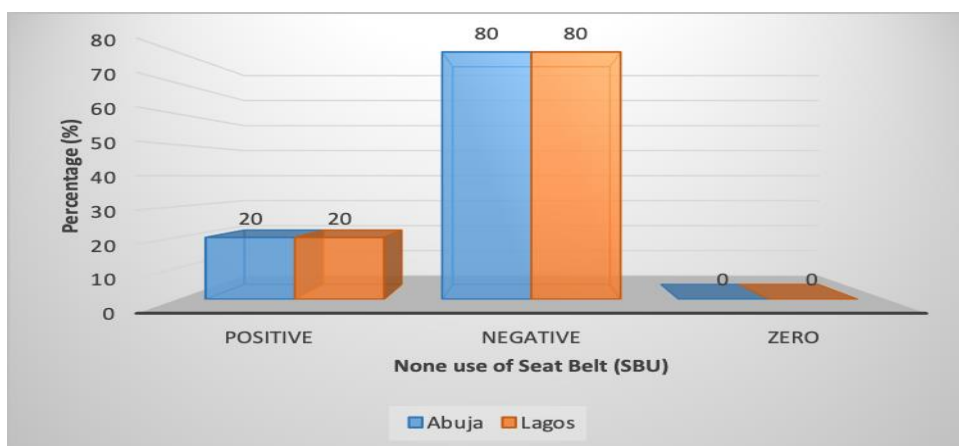
FIGURE 77: NONE USE OF SEAT BELT (SBU)

Fig. 80 shows that most motorists do not use seat belts (SBU) in both Abuja and Lagos. Based on the observations, 80% of the motorists' in both Abuja and Lagos exhibited their defiant attitude in not using the seat belt (SBU).

4.3.2. Part B: Inside-vehicle driving observation

This section explains the graphical representation and explanation of the indirect driver-participation method took place from Oshodi to Ojota Bus-Stops in Lagos and the Abuja´s

inside vehicle observation of 20 journeys to see the natural roads situation between the Utako Bus station and A-Y-A in Asokoro district. (see Appendix C for the question template).
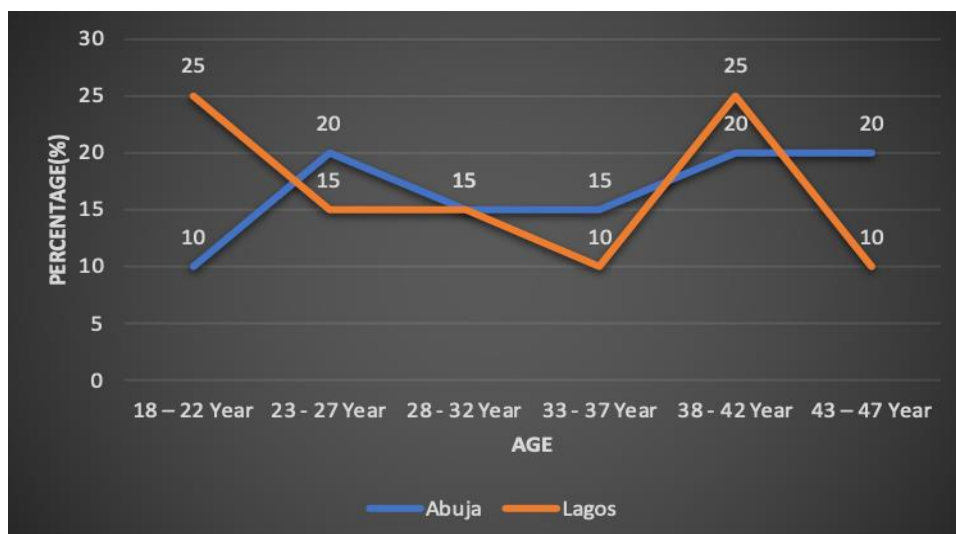
FIGURE 78: AGE DISTRIBUTION OF RESPONDENTS IN THE MOTOR PARKS

Fig. 81 shows that 20.0% of the Abuja drivers were between the ages of 23-27years, 38-42 years, and 43-47 years, respectively. On the other hand, 25.0% of Lagos drivers were between 18-22 years and 38 – 42 years, respectively.
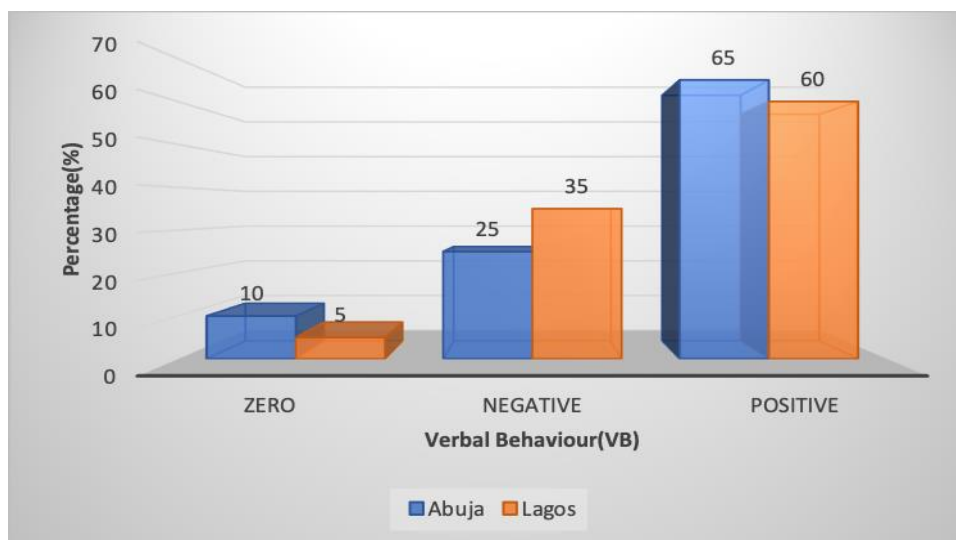
FIGURE 79: VERBAL BEHAVIOUR (VB) (INSIDE-VEHICLE OBSERVATION)

Fig. 82 shows that the drivers' verbal behaviour was positive in both Abuja and Lagos. Based on the observations, the verbal behaviour (VB) 65% and 60% of the drivers' verbal behaviour in Abuja and Lagos respectively was positive. Therefore, the drivers in Abuja had more positive verbal behaviour than those in Lagos state.
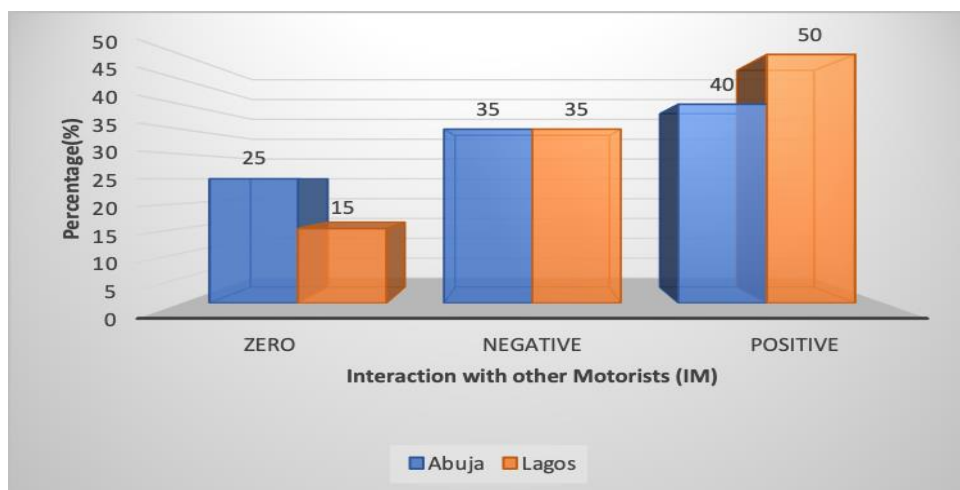
FIGURE 80: INTERACTION WITH OTHER MOTORISTS (IM)

Fig. 83 shows that commercial drivers' interaction with other motorists and other road users was cordial and positive in both Abuja and Lagos. Based on the observations, 40% and 50% of Abuja and Lagos' drivers respectively interacted positively with other motorists. Drivers in Lagos have more rapport and closeness with other road users than Abuja drivers.
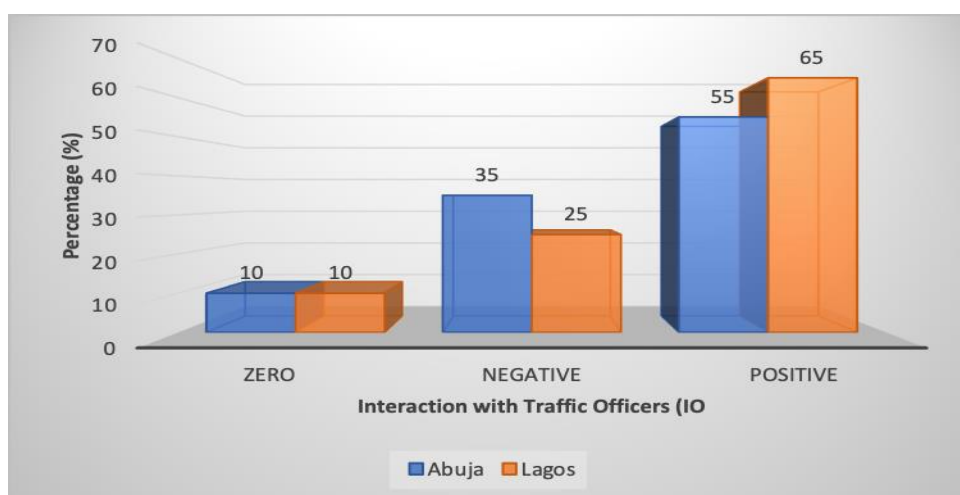
FIGURE 81: INTERACTION WITH TRAFFIC OFFICERS (IO)

Fig. 84 shows that drivers' interaction with traffic officers was positive and cordial in both Abuja and Lagos. Based on the observations, 55% and 65% of Abuja and Lagos' drivers interacted positively with traffic officers. This implies that Lagos drivers interact more positively with traffic officers than those in Abuja.
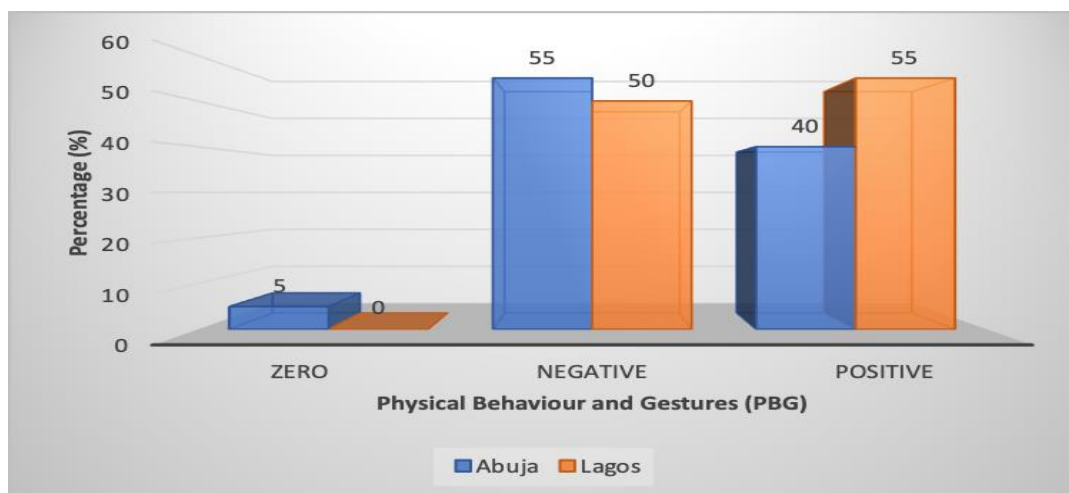
FIGURE 82: PHYSICAL BEHAVIOUR AND GESTURES (PBG)

Fig. 85 shows that the physical behaviour and gestures (PBG) of the drivers were negative in Abuja and positive in Lagos in their relationship with passengers and other road users. Based on the observations, 55% of Abuja drivers had negative physical behaviour and gestures (PBG), while 55% of Lagos drivers had positive physical behaviour and gestures (PBG). Lagos motorists have better relationships with passengers and other people in the traffic environment.
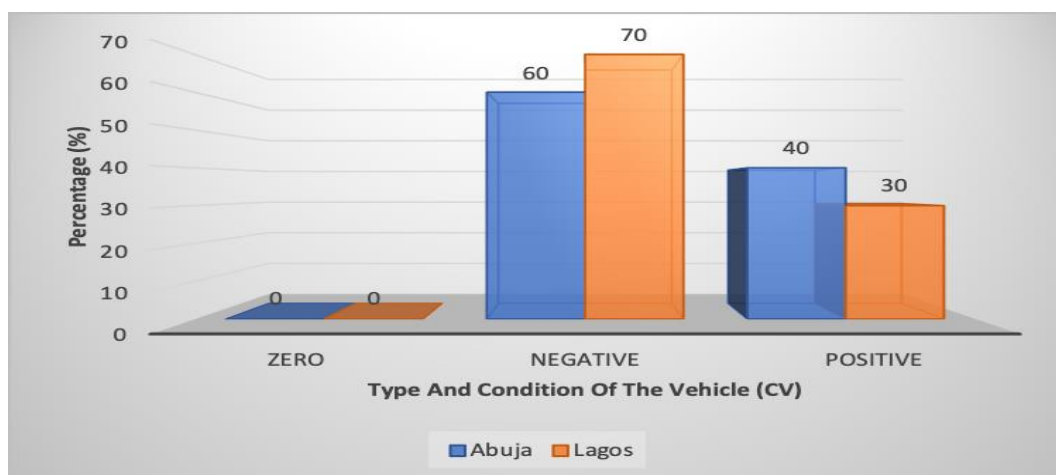
FIGURE 83: TYPE AND CONDITION OF THE VEHICLE (CV) IN THE MOTOR PARKS

Fig. 86 shows that the motorists' attitude towards their road worthy condition of was terrible in both Abuja and Lagos. Based on the observations, 60% and 70% of motorists' attitudes towards vehicle maintenance were negative in both Abuja and Lagos respectively. Therefore, there was a worse condition of vehicles in Abuja compared to Lagos.
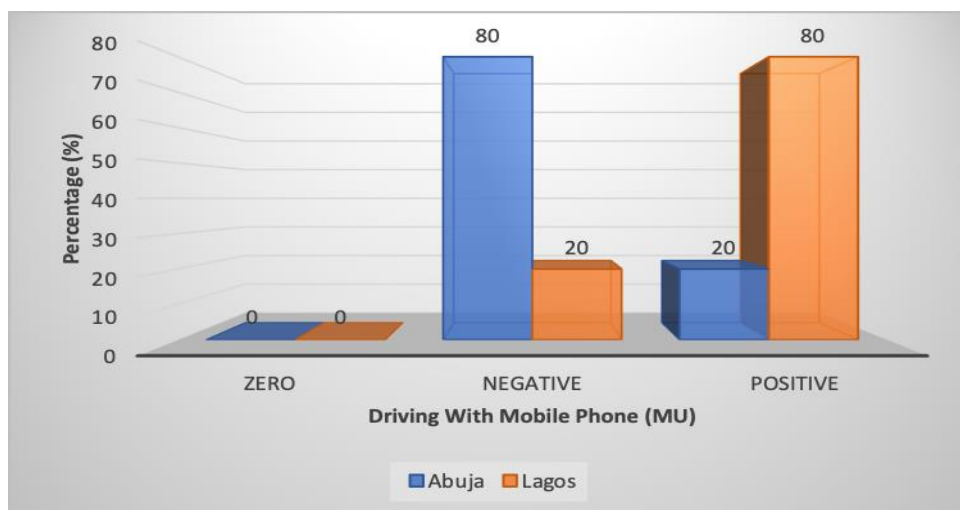
FIGURE 84: DRIVING WITH MOBILE PHONE (MU)

Fig. 87 shows that drivers' attitude towards driving with mobile phone (MU) was negative in Abuja and positive in Lagos. Based on the observations, 80% of Abuja drivers had a negative attitude towards driving with mobile phones. In comparison, 80% of Lagos' drivers had a positive attitude towards driving with mobile phones.
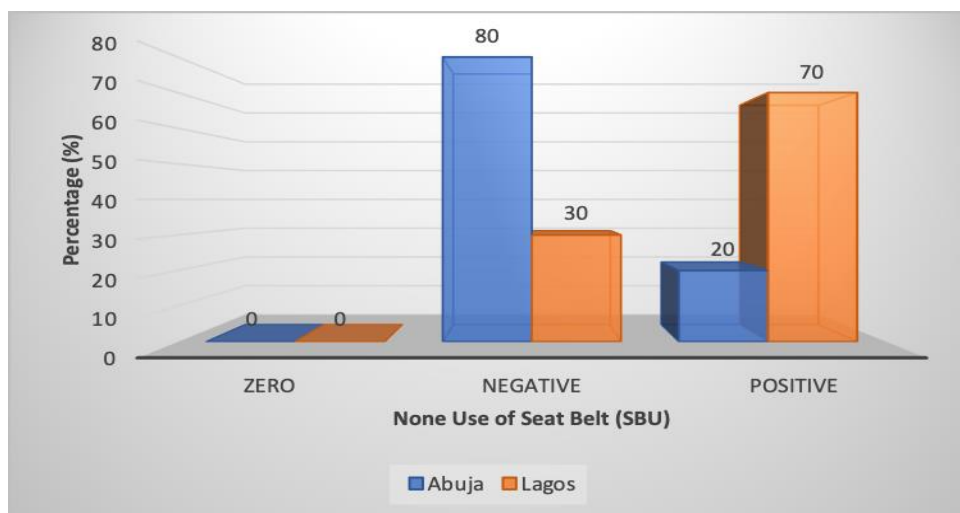
FIGURE 85: NONE USE OF SEAT BELT (SBU)

Fig. 88 shows that drivers' attitude towards safety belt use (SBU). The use of seat belts was negative in Abuja and positive in Lagos. Based on the observations, 80% of Abuja drivers used seat belts while 80% of Lagos drivers do not care to use the seat belt (SBU).
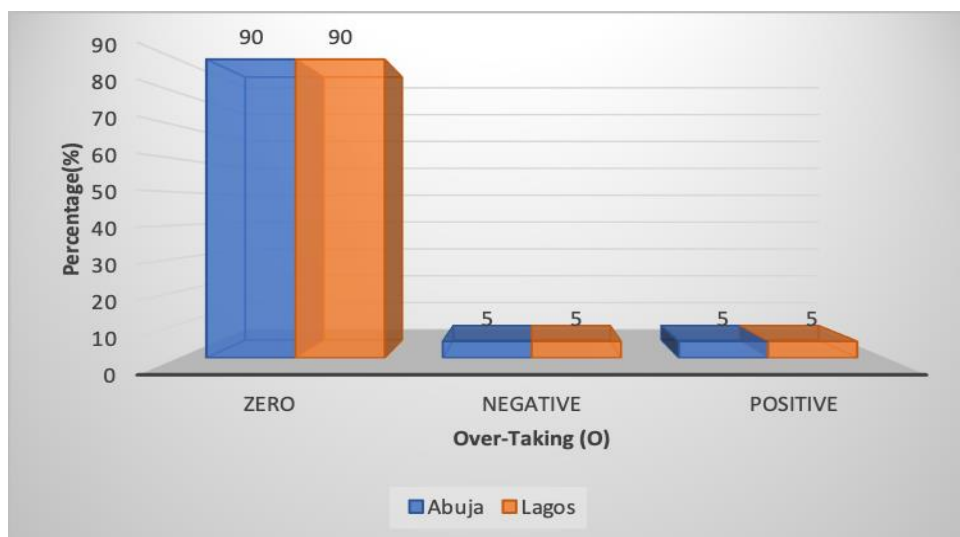
FIGURE 86: OVER-TAKING (O)

Fig. 89 shows that most drivers in Abuja and Lagos made very view over-taking manoeuvres.
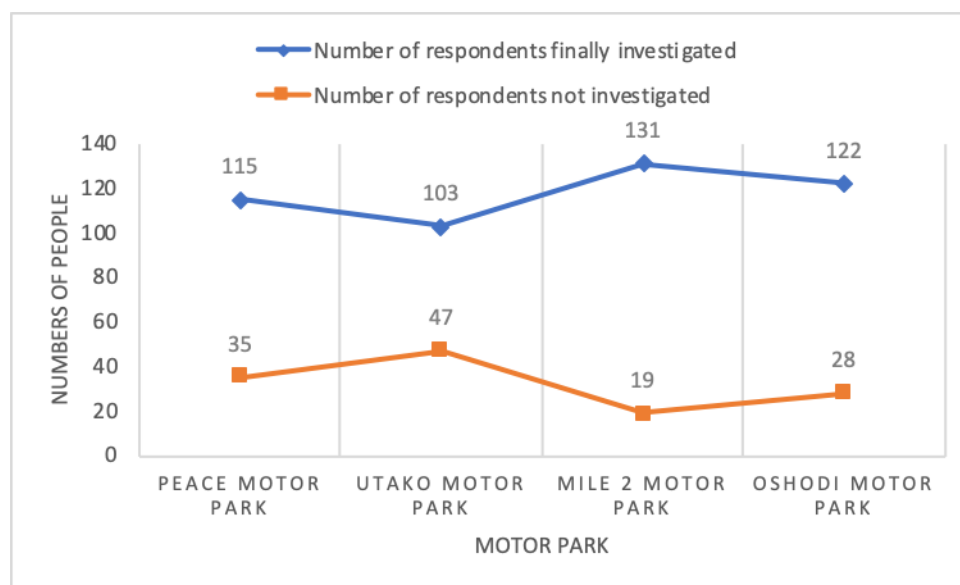
FIGURE 87: RESUME OF THE NUMBERS OF SELF- REPORTED COGNITIVE QUESTIONNAIRE RESPONDENTS INVESTIGATED.

Fig. 90 shows that out of the 100% questionnaire administered, only 78.5% were retrieved and used to this research, 21,5% were not returned. Since the response rate is more than 70%, the results obtainable is still generalizable and valid.

4.4. Section 3: Review of the Research Questions

This section 3 clarified and presented that all the four research questions (RQI-RQ4) were answered in Chapter 4.4.1. to 4.4.4. This has made the research goals and main objectives achievable.

4.4.1. RQ1: What are the relationships between driver's demographic characteristics, a self-reported background to driving history, and the rate of accidents?

TABLE 6: CHI-SQUARE TABLE SHOWING A RELATIONSHIP BETWEEN DRIVER'S DEMOGRAPHIC CHARACTERISTICS, THE SELF-REPORTED BACKGROUND TO DRIVING HISTORY AND RATE OF ACCIDENTS

Factors responsible for RDA	Chi-Square Cal.	Chi- Square T- value	Df	Sig.
Driver's Demographic Characteristics				
Age	22.71	18.21	10	.012
Religion	36.33	15.51	8	.000
Ethnicity	50.10	15.51	8	.000
Driving License Status	46.07	15.51	8	.000
Ownership of Vehicle Driven	23.56	15.51	8	.003
Self-Reported Background to Driving History				
The period used in learning to drive	58.63	21.03	12	.000
Period of driving without Driving License	126.32	28.87	18	.000
Learned to driver from driving school	30.71	15.51	8	.000
Relations involvement in accidents in the last six years	109.63	9.49	4	.000
Participation in the eye and ear examination	43.59	9.49	4	.000
Miles drove per day	96.08	28.87	18	.000
Hours of driving per day	20.21	18.21	10	.027
Satisfaction with daily wages(salary)	18.21	9.49	4	.001

The result showed that age, religion, ethnicity, driving license status, and vehicle ownership were among the driver's demographic characteristics related to the rate of road accidents in Abuja and Lagos. While among the self-reported background to driving history period used in learning to drive, a period of driving without driving license, learned to driver from driving school, relations involvement in accidents in the last six years, participation in the eye and ear

examination, miles are driven per day, hours of driving per day and satisfaction with daily wages (salary) were significantly related to the rate of road accident in Abuja and Lagos.

4.4.2. RQ2: Is there a link between drivers' attitudes, beliefs, and behaviours and the rate of accidents?

TABLE 7: LINK BETWEEN DRIVERS ATTITUDE AND THE RATE OF ACCIDENT

		Drivers Attitude	Rate of Accident
Drivers Attitude	Pearson Correlation	1	.394**
	Sig. (2-tailed)		.000
	N	471	471
Rate of Accident	Pearson Correlation	.394**	1
	Sig. (2-tailed)	.000	
	N	471	471

**. The correlation is significant at the 0.01 level (2-tailed).

Table 7 shows the statistical correlation between a driver's attitudes and accident rates using the Pearson correlation test tool. The result shows a moderately positive correlation between drivers' attitudes and the rate of accidents. The P-value (significant value), which is 0.000, is less than 0.05 level of significance. This implies that there is a significant link between the two variables. Hence, drivers' attitude influences the rate of accident.

TABLE 8: LINK BETWEEN SOCIAL CLIMATE AND THE RATE OF ACCIDENT

		Social Climate	Rate of Accident
Social Climate	Pearson Correlation	1	.013
	Sig. (2-tailed)		.779
	N	467	467
Rate of Accident	Pearson Correlation	.013	1
	Sig. (2-tailed)	.779	
	N	467	471

Table 8 shows the statistical correlation between social climate and accident rate using the Pearson correlation test tool. This result shows a weak positive correlation between the social climate and the rate of accidents. The P-value (significant value), which is 0.779, is more than 0.05 level of significance. Therefore, this means that the link between the two variables was not significant; instead, it was a weak but positive link. Hence, the influence of social climate on the rate of accidents is weak and may not be noticeable. This further implies that the impact of variables such as beliefs may not be apparent on a road accident rate.

TABLE 9: LINK BETWEEN DRIVERS BEHAVIOUR AND THE RATE OF ACCIDENT

		Drivers Behaviour	Rate of Accident
Drivers Behaviour	Pearson Correlation	1	.394[**]
	Sig. (2-tailed)		.000
	N	471	471
Rate of Accident	Pearson Correlation	.394[**]	1
	Sig. (2-tailed)	.000	
	N	471	471

**. The correlation is significant at the 0.01 level (2-tailed).

Table 9 shows the statistical correlation between driver's behaviour and accident rate using the Pearson correlation test tool. The result shows a moderately positive correlation between driver's behaviour and rate of accident. The P-value (significant value), which is 0.000, is less than 0.05 level of significance. This, therefore, means that the link between the two variables was significant. Hence, drivers' behaviour influenced the rate of accidents.

4.4.3. RQ3: Is the driver's educational model as a useful tool for attitude formation and change to reduce aberrant driving behaviours?

TABLE 10: LINEAR REGRESSION RESULT SHOWING THE RELATIONSHIP BETWEEN THE DRIVER'S EDUCATIONAL MODEL AND THE DRIVING BEHAVIOURS.

Variable	B	Std. Error	Beta	T	Sig.
(Constant)	102.292	22.195		4.609	.000
DSI	.522	.034	.579	15.376	.000

$(R = .579^{a},$ Adjusted $R2 =. .334; F = 236.417; Sig.= .000; df = 1)$

The table also shows a coefficient of correlations (R) of 0.579, which indicated a moderate relationship between the two variables, the driver's educational model and the driving behaviours. The adjusted R square of .334. This means the driver's educational model can explain a 33.4% variation in the driver's behaviour. The independent variable's contribution to the dependent variables was significant (F = 236.417; df =1; p<0.05). Hence, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). Hence, the result shows that the driver's educational model significantly affects the driving behaviours.

4.4.4. RQ4: What are the underlying correlations and significant differences between the risk-driving factors and the rate of accidents among commercial motor vehicle drivers in Abuja and Lagos State?

4.4.4.1. Theme 1. Drivers´ Attitudes in Abuja and Lagos

TABLE 11: MULTIPLE REGRESSION OF ACCIDENT IN ABUJA AND DRIVER'S ATTITUDES

Independent variables	Dependent variable: Accidents in Abuja	Sig
Over-speeding	47.589	(3.33)***
Receive call (or make a call) and text on a mobile phone when driving	12.9103	(0.28)
Drive when you are very weak, tired, or sleepy.	11.403	(0.82)***
My friend always drives on the middle of the road	7.905	(0.72)
Drinking alcohol and other intoxicants before driving	9.374	(0.74)
How often do you intent to disobey traffic rules and regulations	39.594	(2.99)***
R^2	0.61	
F	3.64***	

Note: figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's attitudes on accidents in Abuja is 0.6150, indicating that approximately 61% of the variation in an accident in Abuja is explained jointly by its driver's

attitudes such as Over-speeding; Receiving call (or make a call) and texting on a mobile phone when driving; Drive when you are very weak, tired or sleepy; my friend always drives on the middle of the road; Drinking alcohol and other intoxicants before driving; How often do you intend to disobey traffic rules and regulations (the joint relationship between the dependent and independent variables combined). This indicates that 39% of Abuja's accident variations are explained by some variables not controlled in the model.

Besides, our F-statistic is 3.64 and significant at the 1% level, indicating that the model is adequate and substantial. The over-speeding coefficient is 47.58924, showing a positive relationship between accidents in Abuja and Over-speeding. Moreover, this relationship is significant at 1% level. Also, the results on receiving (or making a call) and texting on a mobile phone when driving is 12.91039, indicating a positive relationship between the accident in Abuja and receiving (or making a call) text on a mobile phone when driving and not significant. Drive when you are very weak, tired, or sleepy is -11.40337, indicating a negative relationship with an accident in Abuja, and this relationship was further proven to be statistically significant at the 1% level.

Furthermore, my friend always drives in the middle of the road at 7.905035, showing a positive relationship with an accident on Abuja roads, which is not statistically significant. ; Drinking alcohol and other intoxicants before driving coefficient is -9.37424, indicating a negative relationship between the accident in Abuja and Drinking alcohol and other intoxicants before driving. And this relationship is not statistically significant. Finally, how often you intend to disobey traffic rules and regulations coefficient is -39.59483, indicating a negative relationship on accident in Abuja roads, and this relationship is statistically significant at 1% level. That suggests that a percentage change on how often driver´s intend to disobey traffic rules and regulations will cause an accident in Abuja to decrease by 39%.

TABLE 12: MULTIPLE REGRESSION OF ACCIDENT IN LAGOS ON DRIVER'S ATTITUDES

Independent variables	Dependent variable: Accidents in Lagos	Sig
Over-speeding	8.598	(2.10)**
Receive call (or make a call) and text on a mobile phone when driving	5.446	(1.25)
Drive when you are very weak, tired, or sleepy.	6.806	(1.58)
My friend always drives on the middle of the road	4.447	(1.06)
Drinking alcohol and other intoxicants before driving	3.139	(0.78)
How often do you intent to disobey traffic rules and regulations	0.660	(0.16)**
R^2	0.50	
F	2.59**	

 Note: Figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's attitudes on Lagos accidents is 0.5095, indicating that approximately 50% of the variation in an accident in Lagos is explained jointly by its driver's attitudes such as Over-speeding; Receive call (or make a call) and text on a mobile phone when driving; Drive when you are very weak, tired or sleepy; my friend always drives on the middle of the road; Drinking alcohol and other intoxicants before driving; How often do you intent to disobey traffic rules and regulations (the joint relationship between the dependent variable and independent variable combined). This indicates that 50% of Lagos' variations in an accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.59 and significant at 5% level, indicating that the model is adequate and significant. The over-speeding coefficient is -8.59838, indicating a negative relationship between accidents in Lagos and Over-speeding. And this relationship is significant at 5% level. Moreover, receiving calls (or make a call) and texting on a mobile phone when driving a coefficient is -5.446555, indicates that there is a negative relationship between the accident in Lagos and Receive call (or make a call) and text on a mobile phone when driving

and relationship not significant. Drive when you are very weak, tired, or sleepy coefficient is -6.805563, indicating a negative relationship with an accident in Lagos, and this relationship was further proven not statistically significant. My friend always drives in the middle of the road coefficient is 4.44691, showing a positive relationship with an accident on Lagos roads, and this relationship is not statistically significant; Drinking alcohol and other intoxicants before driving coefficient is 3.138702, indicating a positive relationship between the accident in Lagos and Drinking alcohol and other intoxicants before driving. And this relationship is not statistically significant.

Finally, how often you intend to disobey traffic rules and regulations coefficient is -0.6604573, indicating a negative relationship on accident on Lagos roads. This relationship is statistically significant at the 5% level. That suggests that a percentage change in how often drivers´ do intent to disobey traffic rules and regulations will cause an accident in Lagos to decrease by 66%.

4.4.4.2. Theme 2: Social Climate variable items among respondents´ in Abuja and Lagos

TABLE 13: MULTIPLE REGRESSION OF ACCIDENT IN ABUJA ON SOCIAL CLIMATE

Independent variables	Dependent variable: Accidents in FCT	Sig
It is more likely to bribe a Police of Traffic officer when you are caught violating traffic rules	10.809	(0.67)
You have had blurred vision while driving or unable to judge distances on the road	24.423	(1.83)**
Always under time, work-load pressure, and economic stress	9.303	(0.69)
You believe and agree in drivers' union or association	5.827	(0.51)
That traffic accidents on our roads depend on the will of God	23.638	(1.58)**
R^2	0.33	
F	2.22***	

Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 %(*); 5 %(**); 1 %(***).

Our R^2 on the result of social climate on accidents in Abuja is 0.33, indicating that approximately 33% of the variation in an accident in Abuja is explained jointly by its social climates when asked such questions as It is more likely to bribe a Police or Traffic officer when you are caught violating traffic rules; you have had a blurred vision while driving or unable to judge distances on the road; Always under time, work-load pressure and economic stress; You believe and agree in drivers' union or association; those traffic accidents on our roads depend on the will of God; Religious preaching and prayers in the bus serve as "spiritual" protection for the passengers (the joint relationship between the dependent variable and independent variable combined). This indicates that 67% of Abuja's accident variations are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.22 and significant at 1% level, indicating that the model is adequate and significant. It is more likely to bribe a Police or Traffic officer when you are caught violating traffic rules coefficient is -10.80908, indicating a negative relationship between accidents in Abuja, and it is more likely to bribe a Police of Traffic officer when you are caught violating traffic rules. And this relationship is not significant.

Moreover, the question: on having a blurred vision while driving or unable to judge distances on the road coefficient is -24.42387, indicates that there is a negative relationship between the accident in Abuja and having had a blurred vision while driving or unable to judge distances on the road and is significant at 5% level. Always under time, work-load pressure and economic stress coefficient are 9.30305, indicating a positive relationship with an accident in Abuja, and this relationship was further proven not statistically significant.

Additionally, you believe and agree in drivers' union, or association coefficient is 5.827691, showing a positive relationship with an accident on Abuja roads, and this relationship is not statistically significant. That traffic accidents on our roads depend on God`s will coefficient is -23.63837, indicating a negative relationship between the accident in Abuja and those traffic accidents on our roads depend on God's will. And this relationship is statistically significant at the 5% level.

TABLE 14: MULTIPLE REGRESSION OF ACCIDENT IN LAGOS ON SOCIAL CLIMATE

Independent variables	Dependent variable: Accidents in Lagos	Sig
It is more likely to bribe a Police of Traffic officer when you are caught violating traffic rules	5.467	(1.33)
You have had a blurred vision while driving or unable to judge distances on the road	5.503	(1.43)**
Always under time, work-load pressure, and economic stress	5.721	(1.67)*
You believe and agree in drivers' union or association	0.388	(0.10)
That traffic accidents on our roads depend on the will of God	1.662	(0.48)
R^2	0.51	
F	2.26**	

Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of social climate on accidents in Lagos is 0.51, indicating that approximately 51% of the variation in an accident in Lagos is explained jointly by its social climates such as It is more likely to bribe a Police or Traffic officer when you are caught violating traffic rules; you have had a blurred vision while driving or unable to judge distances on the road; Always under time, work-load pressure and economic stress; You believing and agreeing in drivers' union or association; those traffic accidents on our roads depend on the will of God; Religious preaching and prayers in the bus serve as "spiritual" protection for the passengers (the joint relationship between the dependent variable and independent variable combined). This indicates that 49% of the variations in an accident in Lagos are explained by some variables not controlled in the model. Furthermore, our F-statistic is 2.69 and significant at 5% level, indicating that the model is adequate and significant. It is more likely

to bribe a Police or Traffic officer when you are caught violating traffic rules coefficient is -5.466791, indicating a negative relationship between accidents in Lagos, and it is more likely to bribe a Police of Traffic officer when caught violating traffic rules. And this relationship is not significant. Moreover, having a blurred vision while driving or unable to judge distances on the road coefficient is -5.503612, indicates that there is a negative relationship between the accident in Lagos and having a blurred vision while driving or unable to judge distances on the road and is significant at 5% level. The work-load pressure and economic stress coefficient are always under time -5.721594, indicating a negative relationship with an accident in Lagos, and this relationship was further proven statistically significant at 10% level. Furthermore, you are believing and agreeing that drivers' union or association coefficient is -0.3878116, showing a negative relationship with the accident on Lagos roads, which is not statistically significant. That traffic accidents on our roads depend on the will of God coefficient is -1.661666, indicating a negative relationship between the accident in Lagos and those traffic accidents on our roads depend on God's will. And this relationship is not statistically significant.

4.4.4.3. Theme 3: Drivers´ behaviour in Abuja and Lagos

TABLE 15: MULTIPLE REGRESSION OF ACCIDENT IN ABUJA ON DRIVER'S BEHAVIOUR

Independent variables	Dependent variable: Accidents in FCT	Sig
Risk overtaking at the curve and narrow roads	43.325	(2.90)***
Crossing a junction at a red light	21.9958	(1.32)
Using of seat belt	22.491	(1.26)
Driving while distracted or thinking about other things	5.497	(0.44)
Drive at the night with non-function vehicle headlights and indicator lights	15.614	(1.00)***
Unplanned Overtaking on the right or the left lane	8.521	(0.57)
R^2	0.48	
F	3.06***	

Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's behaviour on accidents in Abuja is 0.482, indicating that approximately 48% of the variation in an accident in Abuja is explained jointly by its driver's behaviour such as Risk overtaking at the curve and narrow roads; Crossing a junction at a red light; Using of the seat belt; Driving while distracted or thinking about other things; Drive at the night with non-function vehicle head-lights and indicator lights; Unplanned Overtaking on the right or the left lane (the joint relationship between the dependent variable and independent variable combined). This indicates that 52% of the variations in Abuja's accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 3.06 and significant at the 1% level, indicating that the model is adequate and substantial. Risk overtaking at the curve and narrow roads coefficient are 43.32562, indicating a positive relationship between accidents in Abuja and risk overtaking at the curve and narrow roads. And this relationship is significant at 1% level. Moreover, crossing a junction at a red-light coefficient is -21.95858, indicates that there is a negative relationship between the accident in Abuja and crossing a junction at a red light. But this relationship is not statistically significant. Using seat belt coefficient is -22.95197, indicating a negative relationship with Abuja`s accidents, and this relationship was further proven to not statistically significant.

Furthermore, driving while distracted or thinking about other things coefficient is 5.497762 showing a positive relationship with an accident on Abuja roads, and this relationship is not statistically significant. Driving at the night with a non-functional vehicle head-light coefficient is -15.61419, indicating a negative relationship between the accident in Abuja and drive at night with non-functional vehicle headlights and indicator lights. Meanwhile, this relationship is statistically significant at 1% level. Finally, unplanned overtaking on the right or the left lane coefficient is 8.521824, indicating a positive relationship on accident in Abuja roads, and this relationship is not statistically significant.

TABLE 16: MULTIPLE REGRESSION OF ACCIDENT IN LAGOS ON DRIVER'S BEHAVIOUR

Independent variables	Dependent variable: Accidents in Lagos	Sig
Risk overtaking at the curve and narrow roads	1.490	(0.43)**
Crossing a junction at a red light	4.308	(1.08)
Using of seat belt	0.996	(0.21)
Driving while distracted or thinking about other things	3.058	(0.21)
Drive at the night with non-function vehicle head-lights and indicator lights	3.091	(0.71)**
Unplanned Overtaking on the right or on the left lane	6.483	(1.50)
R^2	0.40	
F	2.10**	

Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's behaviour on accidents in Lagos is 0.4007, indicating that approximately 40% of the variation in an accident in Lagos is explained jointly by its driver's behaviour such as Risk overtaking at the curve and narrow roads; Crossing a junction at a red light; Using of the seat belt; Driving while distracted or thinking about other things; Drive at the night with non-function vehicle head-lights and indicator lights; Unplanned Overtaking on the right or the left lane (the joint relationship between the dependent variable and independent variable combined). This indicates that 60% of the variations in Lagos' accidents are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.10 and significant at the 5% level, indicating that the model is adequate and significant. Risk overtaking at the curve and narrow roads coefficient are -1.490896, indicating a negative relationship between accidents in Lagos and risk overtaking at the curve and narrow roads. And this relationship is significant at the 5% level. Moreover, crossing a junction at a red-light coefficient is -4.30867, indicates that there is a negative relationship between the accident in Lagos and crossing a junction at a red light. However, this

relationship is not statistically significant. Using of seat belt law breakers coefficient is -0.996679, indicating a negative relationship with the accident in Lagos, and this relationship was further proven not statistically significant. Furthermore, driving while distracted or thinking about other things coefficient is 3.058714, showing a positive relationship with the accident on Lagos roads, and this relationship is not statistically significant. Driving at night with non-functional vehicle head-lights coefficient is -3.090805, indicating a negative relationship between the accident in Lagos and drive at night with non-functional vehicle headlights and indicator lights. And this relationship is not statistically significant. Finally, unplanned overtaking on the right or the left lane coefficient is -6.483069, indicating a negative relationship on accident in Lagos roads, and this relationship is statistically significant at the 5% level.

4.4.4.4. Theme 4: Drivers´ Skills (DSI) in Abuja and Lagos

TABLE 17: MULTIPLE REGRESSION OF ACCIDENT IN ABUJA ON DRIVER'S SKILLS

Independent variables	Dependent variable: Accidents in Abuja	Sig
Driving knowledge, skills, and abilities has being as good as they could be	11.184	(0.78)
You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe	13.481	(0.93)**
Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror	14.877	(1.12)
Have you seen or read and understand Traffic codes?	6.544	(0.47)
Believe that people that went for driving training and driving education before acquire driving license are better drivers	21.830	(1.41)
I do check vehicle tyres before starting your vehicle engine because of accident	0.091	(0.01)
R^2	0.22	
F	8.88***	

Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's skills on accidents in Abuja is 0.22, indicating that approximately 22% of the variation in an accident in Abuja is explained jointly by its driver's skills such as: driving knowledge, skills and abilities are as good as they could be; you leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead so as to be safe; Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror; Have you seen or read and understand Nigeria Traffic code (rules); Do believe that people that went for driving training and driving education before acquiring driving license are better drivers; Do check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents (the joint relationship between the dependent variable and independent variable combined). This indicates that 78% of Abuja's variations accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 8.88 and significant at the 1% level, indicating that the model is adequate and significant. Is your driving knowledge, skills, and abilities being as good as they could be? The coefficient is -11.18485, indicating a negative relationship between accidents in Abuja and is your driving knowledge, skills, and abilities are as good as they could be. And this relationship is not significant. Moreover, "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead so as to be safe" coefficient is -13.48173, indicates that there is a negative relationship between the accident in Abuja and "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be saved" and text on a mobile phone when driving and significant at the 5% level. Perceiving traffic hazards by visual scanning and checking the side mirrors and the rear-view mirror coefficient is -14.8776, indicating a negative relationship with an accident in Abuja. This relationship was further proven to be statistically not significant.

Furthermore: the "Have seen or read and understand Nigerian Traffic code (rules)" coefficient is -6.544611, showing a negative relationship with the accident on Abuja roads, and this relationship is not statistically significant. "Do believe that people who went for driving training and driving education before acquiring driving license are better drivers" coefficient is -21.83086, indicating a negative relationship between the accident in Abuja And this relationship is not statistically significant. Finally, "Do check your vehicle tyres before starting your vehicle engine because the probability of getting an accident" coefficient is –

0.0914861, indicating a positive relationship on accident in Abuja roads, and this relationship is not statistically significant?

TABLE 18: MULTIPLE REGRESSION OF ACCIDENT IN LAGOS ON DRIVERS´ SKILLS

Independent variables	Dependent variable: Accidents in Lagos	Sig
Driving knowledge, skills, and abilities being as good as they could be	4.553	(1.04)
You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe	1.388	(0.32)
Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror	7.736	(2.33)**
Have you seen or read and understand Nigeria Traffic code (rules)	0.155	(0.04)
Do believe that people that went for driving training and driving education before acquire driving license are better drivers	6.225	(1.42)***
Do check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents	1.278	(0.007)*
R^2	0.57	
F	2.48**	

 Note: Those figures in the parentheses are the t ratios, the parameters are significant at 10 % (*); 5 % (**); 1 % (***).

Our R^2 on the result of driver's skills on accidents in Lagos is 0.57, indicating that approximately 57% of the variation in an accident in Lagos is explained jointly by its drivers´ skills such as: Is driving knowledge, skills and abilities are as good as they could be; you leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe; Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror; Have you seen or read and understand Nigeria Traffic code (rules); Do you believe that people that went for driving training and driving education before acquiring driving license are better drivers: Do check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents (the joint relationship between the variable and independent

variables combined). This indicates that 43% of Lagos variations in an accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.48 and significant at the 5% level, indicating that the model is adequate and significant. "Driving knowledge, skills, and abilities are as good as they could be" The coefficient is 4.553756, indicating a positive relationship between accidents in Lagos and is your driving knowledge, skills and abilities are as good as they could be. And this relationship is not statistically significant. Moreover, "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be saved" coefficient is 1.387962, indicates that there is a positive relationship between the accident in Lagos and "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe and text on a mobile phone when driving" are not statistically significant. Perceiving hazards in traffic by visual scanning and checking the side mirrors and the rear-view mirror coefficient is -7.736228, indicating a negative relationship with an accident in Lagos. This relationship was further proven to be statistically significant at the 5% level.

Moreover, "Have seen or read and understand Nigeria Traffic code (rules)" coefficient is -0.1551649, showing a negative relationship with an accident on Lagos roads, and this relationship is not statistically significant. Do believe that people that went for driving training and driving education before acquiring driving license are better drivers coefficient is 6.22509, indicating a negative relationship between the accident in Lagos and Do believe that people that went for driving training and driving education before acquiring driving license are better drivers. This relationship is statistically significant at 1% level. Finally, do check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents coefficient is -1.277834, indicating a negative relationship on accident in Lagos roads and this relationship is statistically significant at 10% level.

4.5. Section 4: Analysis of secondary data

This research examined the rate of road traffic accidents in Abuja and Lagos State. Five years of road accident data (2015- 2019) obtained from FRSC were used for this study. This is also to be noted that all other RTA data from 2015 were facilitated by the concerned authority except that of 2019, which uncompleted by the end of May 2020, when this investigation stated the primary and secondary data analysis. The study administered this study analysis with the 3rd quarter (January to August) of 2019 road traffic accident data.

TABLE 19: FIVE YEARS STATISTICS SUMMARY OF ROAD TRAFFIC IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

State	2015			2016			2017			2018			2019		
	Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed	Cases	Injured	Killed
FCT	1,293	2691	318	1373	2700	253	1106	2360	287	1051	2347	281	663	1432	156
Lagos	364	767	105	441	971	165	425	892	113	356	772	100	314	564	61
Total	1,657	3458	423	1814	3671	418	1531	3252	400	1407	3119	381	977	1996	217

Table 19 shows the analysis summary of the cases of accident, numbers of injured, and the numbers of those that were killed. The result shows that for the five years under study, i.e., from 2015-2019, Abuja had the highest rate all through Lagos.

TABLE 20: NUMBERS OF ROAD TRAFFIC ACCIDENT CASES IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

State	2015	2016	2017	2018	2019	Total	%	Mean
FCT	1,293	1373	1106	1051	663	5486	74.3	1,097.20
Lagos	364	441	425	356	314	1900	25.7	380.00
Total	1,657	1814	1531	1407	977	7386	100.0	1,477.20
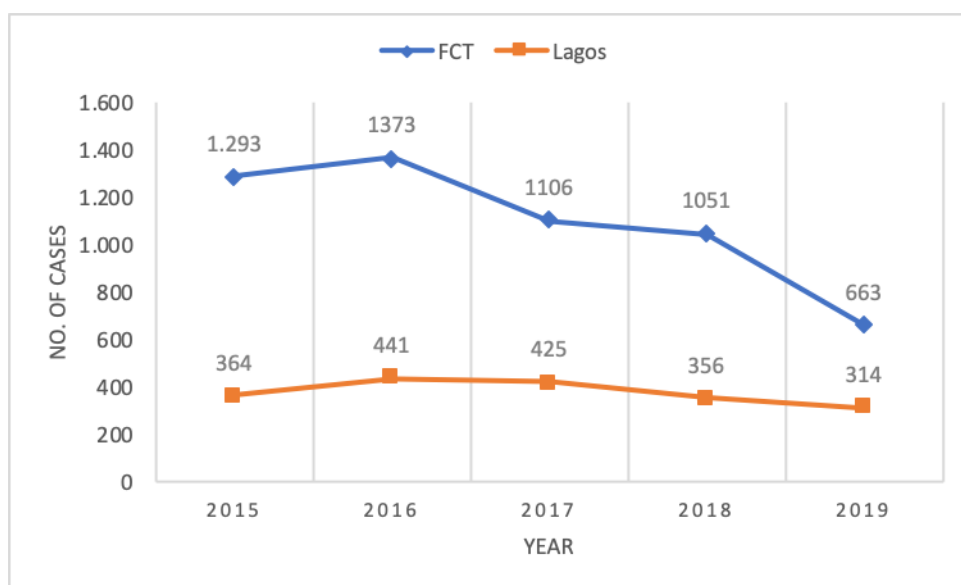
FIGURE 88: NUMBERS OF ROAD TRAFFIC ACCIDENT CASES IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

Both Table 20 and figure 91 show that Abuja had the highest number of road traffic accidents in 2016, while its lowest rate was 2019. However, in Lagos, the accident rate was also highest in 2016, but Lagos had the lowest case in 2019. This result implies that the RTA rate was high in both locations in 2016 and low in both locations in 2019. However, judging with the mean score, Abuja had the highest RTA rate compared to Lagos in all the five years investigated.

TABLE 21: NUMBERS OF PEOPLE INJURED IN ROAD TRAFFIC ACCIDENT IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

State	2015	2016	2017	2018	2019	Total	%	Mean
FCT	2691	2700	2360	2347	1432	11530	74.4	2,306.00
Lagos	767	971	892	772	564	3966	25.6	793.20
Total	3458	3671	3252	3119	1996	15496	100.0	3,099.20
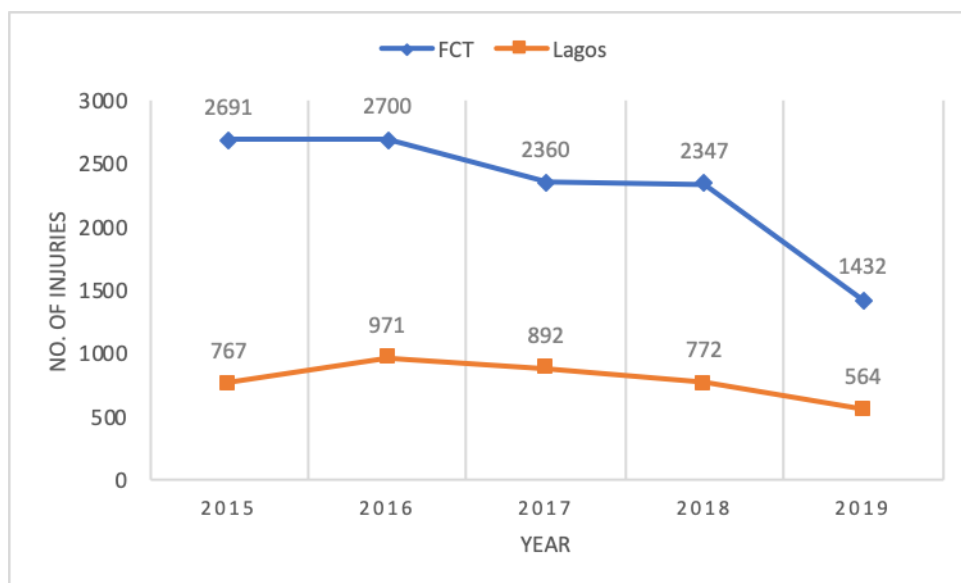
FIGURE 89: NUMBER OF PEOPLE INJURED IN ROAD TRAFFIC ACCIDENT IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

Table 21 and Figure 92 show that the rate of injuries was highest in 2016 in Abuja and Lagos while also lowest in Abuja and Lagos in 2019. From the chart, it was evident that the injury rate was more in Abuja than in Lagos.

TABLE 22: NUMBERS OF PEOPLE KILLED IN ROAD TRAFFIC ACCIDENT IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

State	2015	2016	2017	2018	2019	Total	%	Mean
FCT	318	253	287	281	156	1295	70.4	259.00
Lagos	105	165	113	100	61	544	29.6	108.80
Total	423	418	400	381	217	1839	100.0	367.80
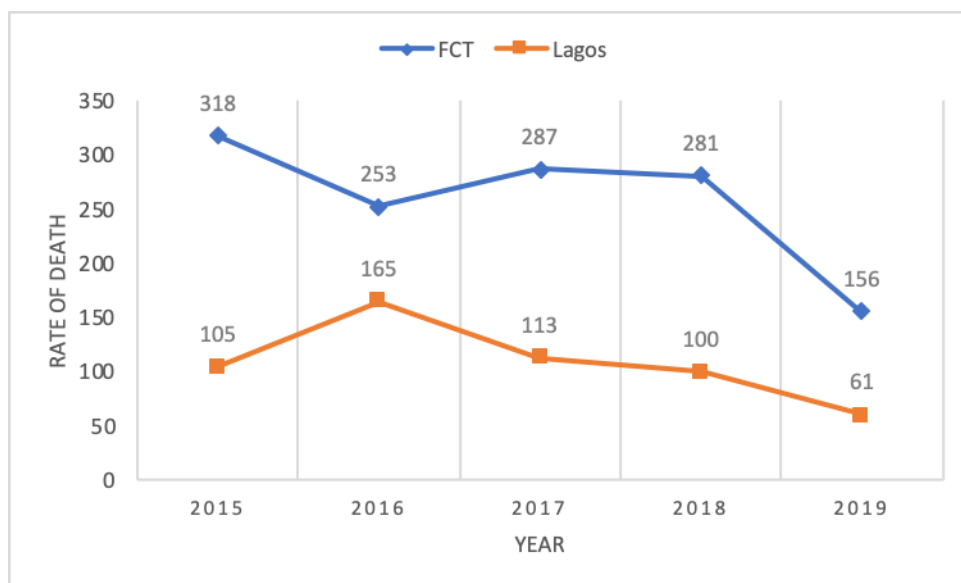
FIGURE 90: NUMBER OF PEOPLE KILLED IN ROAD TRAFFIC ACCIDENT IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

Table 22 and Figure 93 show that the numbers of people killed in Abuja's road accident were highest in 2015 while Lagos's number was highest in 2016. However, the lowest rated of death by road accident was reported in 2019. Eventually, the result shows that the rate of road accidents was higher in Abuja than Lagos when considering their mean value.

TABLE 23: NUMBER OF PEOPLE INVOLVED IN ROAD TRAFFIC ACCIDENTS IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

State	2015	2016	2017	2018	2019	Total	%	Mean
FCT	3009	6965	5827	6069	4036	25906	67.5	5,181.20
Lagos	876	3244	3020	2859	2457	12456	32.5	2,491.20
Total	3885	10209	8847	8928	6493	38362	100.0	7,672.40
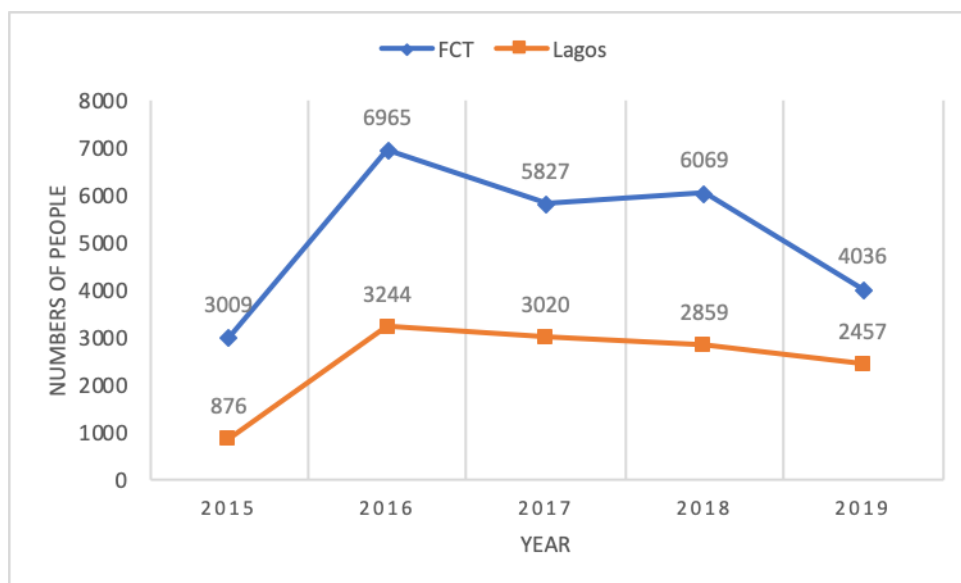
FIGURE 91: NUMBER OF PEOPLE INVOLVED IN ROAD TRAFFIC ACCIDENTS IN ABUJA AND LAGOS STATE BETWEEN 2015 AND 2019

Table 23 and Figure 94 show that the number of people involved in a road traffic accident was highest in 2016 in both Abuja and Lagos, while the lowest in the two locations was 2015. However, based on the mean value Abuja had the highest number of people involved in road traffic accidents.

TABLE 24: FIVE YEARS MOTOR-VEHICLE LICENSE ADMINISTRATION (VLA) (2015 – 2019)

No	State	2015	2016	2017	2018	2019	Total number	%	Mean
1	FCT	30,894	17,531	76,225	94,970	66,477	286097	27.8	57,219.40
2	Lagos	85,123	50,932	266,067	196,943	145,047	744112	72.2	148,822.40
	Total	116,017	68,463	342,292	291,913	211,524	1,030,209	100.0	206,041.80
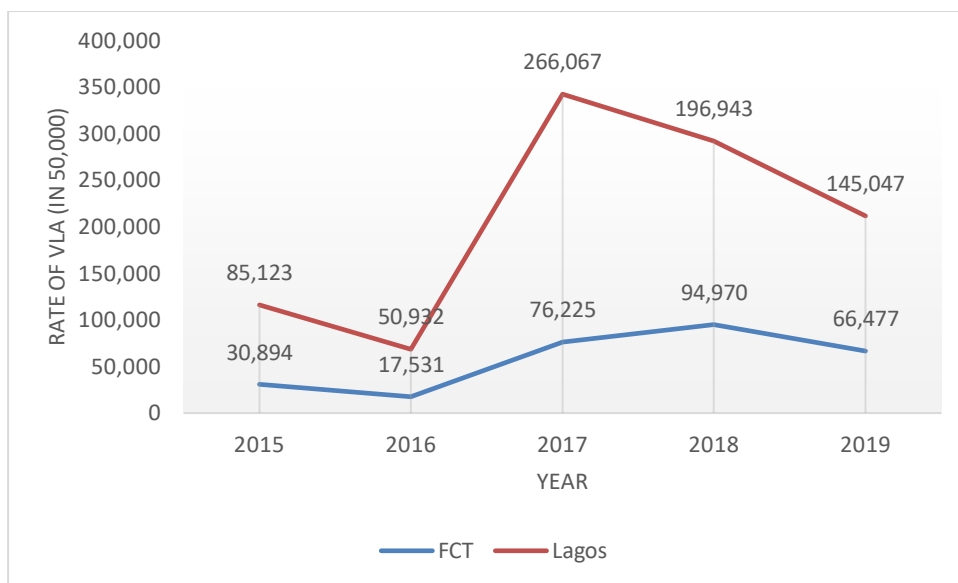
FIGURE 92: FIVE YEARS MOTOR-VEHICLE LICENSE PROCUREMENT ADMINISTRATION (VLA) (2015 – 2019)

Table 24 and Fig. 95 show that the rate motor-vehicle driving licenses issued was highest in Lagos in 2017 and highest in Abuja in 2018 while issuance licenses rates was lower in 2016 for the two survey sites. The mean result shows that motor-vehicle licenses procurement was higher in Lagos compared to Abuja.

4.6. Section 5: An Overview of Stakeholders Responses (Qualitative analysis)

This section summaries the responses of the stakeholders into twelve themes which include; religious belief; passengers´ feedback; educational measure; banning of alcohol; legal procurement of driving license; adoption of safe attitudes; advertisement understandings; community and driver´s union participation; road crash data improvement; steps to stop extortion of drivers; road safety as political priority and effectiveness of traffic law enforcement.

4.6.1. Cultural and religious beliefs

Cultural, religious beliefs and survival needs moderate and mediate driver´s perceived crash risk in developing countries (Teye-Kwadjo et al, 2013). Road traffic safety is far from personal myths, taboo, and religious beliefs in some commercial drivers´ minds. Road safety focuses more on the state of the roads and vehicles condition/roadworthiness, and drivers´ attitude. When a commercial driver is behind the wheels, he can only control less than 20% of what

happens. Apart from this, the other thing they can do is to 'Trust' Their Instincts. Safety driving should not depend on myths, societal taboos, or religious beliefs because automobile accidents of crash have three factors.

The crash factors include the environment, the vehicle, and the driver. These factors contribute in uniquely to one's driving experience. Road carnages generally result from either or both human and mechanical errors. Mechanical in the sense that unworthy vehicles, bad roads, etc. on one part and wicked and careless drivers, drivers with health challenges, like bad eye sights and seizures, all add up to usually cause road mishaps on the other part which constituted human error. These can be divorced from personal myths, taboo, and religious beliefs. Some people believe in "what will happen." This is arguable because some things can be averted if proper precaution is taken since a little carefulness here could avert catastrophes on our roads. In Nigeria, some myths cannot be wished away as they are rooted in cultural beliefs. Personal myths, taboo, and religious beliefs do not cause road traffic accidents. However, Pourshams & JanFada (2017) study established linkage between religious beliefs and road traffic accidents. Instead, human errors of omission or commission are the significant causes of road traffic crashes.

However, to reduce personal myths, taboo, and religious beliefs, it is essential to embrace education as it remains the most potent tool for behavioral change and eradicates false beliefs and myths. FRSC is expected to educate commercial drivers in Ogun State weekly on the reality of road safety and the falseness of myths, taboos, and religious beliefs. To educate commercial drivers on the falseness of myths, taboos, and religious beliefs, FRSC can use opinion leaders, religious leaders, and traditional rulers to educate, re-orientate, and create awareness of the subject matter are held in high regards within their community.

4.6.2. Passengers' feedback

Past research demonstrates that driver´s behavior could be modified with passengers´ feedback which serves as a vital tool (Hutton, et al., 2001). It is a common practice in the Nigerian society to travel with an unknown driver whose experience. state of health, and driver's alcohol intake level is unknown to them. These three unknown factors have accounted for several cases of a road traffic accident. Hence, to reduce the rate of road traffic accidents caused by this, passengers need to be at alert and ask questions at the park before boarding any vehicle. Since many commercial drivers get drunk, the passengers need to demand that the drivers do not drink and drive, they also need to keep an eye on the driver's speed. Drivers should be well

informed about the danger and consequences of driving above a safe speed limit. Passengers should be aware that distracting the driver in various ways can adversely affect the driver's judgment.

Drivers should be allowed to have the presence of mind to make crucial split-second judgment and avoid getting into accidents that could have been avoided. The full concentration of passengers and the driver is essential when they are on the road. They should also ensure that their drivers observe adequate driving etiquette, no smoking and driving rules, and ensure that the vehicle is in order before the journey begins. Furthermore, they should also realize that their lives are at risk and to use the power to influence behavioral change in the drivers. This can be achieved through reporting to appropriate authorities such as the FRSC and Police wrong driving attitudes such as drunk driving, speed violations, dangerous driving, etc. and insisting to withdraw their patronage from such motor park(s) or fleet operator will be significant knowing that "the Customer is King". Passengers' watch the driver's mannerism and the vehicle's road worthiness.

There should be check for abnormal behavior occasioned by drunkenness on the part of the driver and check the tyres of the vehicle and other faults from the mechanical devices. If not convinced, passengers are advised not to enter the vehicle but should rather wait for the next available good alternative. Our lack of observations of these situations, most of the time, cause passengers to be vulnerable to road accidents. Also, there is need to be very observant while in transit. Drivers should be cautioned if they exceed the speed limit. Becomes sleepy and perhaps capable of dosing off. The FRSC has an initiative called "Passenger Watch" (PAWA). PAWA is a feedback mechanism to evaluate driver´s performance in form of cards which have to be distributed on boarding passengers vehicle (sometimes with Passengers´ Manifest but manifest is collected before the journey) and have to be collected at the end of the journey (Olagunju, K. (Ed.), (2010). It aims at encouraging passenger vigilance, cautioning of reckless drivers by passenger or report of reckless drivers to FRSC patrol teams for arrest and appropriate sanctions.

4.6.3. Educational measure

Since commercial drivers have demonstrated poor knowledge of traffic rules and safety, they need to be educated. That is why it is compulsory for a driver to know and understand the three traffic signs and markings: of regulatory, warning, and information before attempting to drive on a public road (RSA, Rule Book, 2018). Localization and domestication of driver education

would address this issue. The FRSC carries out its public education, especially to those commercial drivers in local languages, including Pidgin English. They also collaborate with religious leaders to educate members of the public on road safety measures. Also, another way to educate the driver is through videos or visual campaign in their native languages. Such video campaigns will highlight the consequences of impaired driving, including death and the fact that their children and family will suffer in life due to their demise. Also, the FRSC should regularly organize workshops for the drivers in their native language, and the leadership of the Unions should make attendance compulsory at least twice a year.

The Union leaders, not FRSC or other organizations, should enforce a penalty of withdrawal of driving license for defaulting drivers. Finally, the authorities can demand that the license be renewed only after the drivers attend mandatory traffic rules and safety courses. They can also ensure that the road transport workers association is organized and supported with educational materials to create awareness. The commercial drivers' training can also be standardized to include a specialized license that requires training on traffic rules and safety.

4.6.4. Ban of alcohol sales at motor parks

Alcohol usage and misuse are among the significant causes of road carnages. It had been advocated several and is still been advocated that drivers should be discouraged from taking alcohol before or during journeys. Efforts should be geared up to eradicate sales and alcohol intake motor parts is very imperative. Ayodele (2016) advocates the total ban on alcoholic drinks sales in all motor parks to prevent Nigeria's road accidents.

All commercial drivers should be educated and made aware of the danger of drunk driving. Thereafter, a law against driving while under the influence of alcohol should be enacted and stiff penalties such as license suspension for a stipulated time on drunken drivers. In addition to this, the government should have an enforcement mechanism for breath analysis to be applied to commercial drivers before and after each journey. The society must be sensitized on the dangers of drunk driving, and a ban be placed on the sales of alcohol both sachets and bottles or any motor parks as it was done in Tanzania and some other African countries. This can only be achieved when FRSC collaborates with transport unions such as the national union of road transport workers (NURTW) and the road transport employee's association of Nigeria (RTEAN) to eliminate the illegal sale of alcoholic beverages in motor parks. Also, motor parks

should be sealed if they violate the order of not selling alcoholic beverages and other intoxicants in motor parks.

4.6.5. Legal procurement of driving license

The lack of transparent and suitable structures and modalities for procurement of driving license in Nigeria has made the creation of the Driving School Standardization Program (DSSP) by the FRSC to improve the driver licensing system and enhanced the integrity of the Nigerian driver's license a 'narrative' paper policy. The DSSP is ICT driven in an environment electricity shortage and monitoring activities of driving schools and operators of the institutions marred with inconsistencies and fraud.

The Drivers licensing procedure in Nigeria has undergone many policy changes; it is now mandatory for first-time applicants to attend a Driving School and undertake a minimum of 26 hours driving lessons of one hour per day. FRSC is also working with Vehicle Inspection Officers of various States to ensure that first-time applicants are properly tested before FRSC captures their biometrics. The issuance of driver's license should be based on a successful practical driving test, but the procurement of driving license to unqualified drivers became prevalent due to corruption of intermediaries. Driver's license can be gotten by proxy across the counter, through gratification, tests and capabilities are not considered. These are some of the acts that have destabilized the procedures. According to Ssewanya & Niyitegeka (2010), many driving schools operating without necessary traffic safety curriculum and nebulous processes approving driving permit human errors and consequently rate of accidents.

4.6.6. Adoption of safe driving attitudes

Researchers claimed that good driving culture is absent in most Nigerian urban, rural roads, and highways (Uzondu, 2019; Balogun, 2006; Oyeyemi, 2003). With systematic and well-channeled education, attitudes and behaviors of road users will be appropriately adjusted. Since most especially since most Nigerians adhere to some religious group canons, the leaders of such groups can be encouraged by the government to pass on the information dealing with safety driving attitudes. Continuous public enlightenment combined with moral suasion, enforcement mechanism, and establishing a less corrupt society where traffic law enforcement can be relied upon to do their job with integrity without corruption.

Altering the behavior of the older generation is a hard thing. The most effective way of changing attitudes and norms is by introducing the younger generation to road safety education.

Interestingly, Nigeria has taken steps in this regard by the government's approval for the police of road safety to be a subject to be taught in primary and secondary schools in Nigeria. Also, passengers can be enlightened to report any erratic behavior or attitude when noticed from a driver to the nearest law enforcement officers.

Moreover, considering our society where people always like an easy and fast route to almost everything and wanting to boycott due process at will, it will be advised that violators be made to face and/or pay stringent fines and also have their vehicles impounded for a certain period due to their failure to adhere to road safety rules. They should also be instructed to go back and take up driving lessons to ensure they understand the need to comply with these safety rules. Drivers should be made or dissuaded to believe that "what will happen will happen." Accidents are caused by carelessness and failures to observe road traffic rules and regulations. Accidents are not myths and magical or spiritual. They are a physical phenomenon caused solely by human and mechanical deficiencies. These should impact drivers to dis-abuse their minds away from making beliefs, norms, and religious beliefs. Persuasion and attitudinal change are to be encouraged.

4.6.7. Advertisement understanding

Empirical observations during this investigation posit that traditional road safety advertising via media has not been fully utilized. This age is overtaken by the internet, direct and digital marketing safety campaigns (Faulks, 2011), and best practices for road safety mass media campaigns (Wundersitz et al., 2010). The use of pictures and audio-visuals in relaying road safety messages would ensure better understanding by public members. Enlist the support of musicians, comedians, road transport union leaders, show videos of accidents, and the impacts on the families left behind. We can also enlist some churches, mosques, and traditional religions since Nigerians listen to their religious leaders. Since a considerable percentage of commercial drivers are not too educated, the adverts should be communicated in local languages such as Yoruba, Ibo, Hausa, Edo, and pidgin. Also, the adverts should involve every major stakeholder. Modern communication platforms such as radio, television, SMS, electronic billboards, smart work zone, infra-red camera (CCTV), sensors and others can complement current manual approaches.

4.6.8. Community psychology intervention and drivers´ union participation

Road Safety must be a personal and collective responsibility. Forming a volunteer group at the society levels and mainly the community level is critical in achieving an effective information feedback mechanism. Also, community meetings, unions, and family gatherings could help disseminate information on the dangers of reckless road use and enforce character change amongst members. In the same vein, passengers and union should always watch out for bad habits among drivers and report to superior authority for sanctions as a deterrent can be of help. Community policing and Information and Communication Technology (ICT) can encourage road traffic safety through behavior and attitude change (Ssewanya & Niyitegeka, 2010). States and federal ministry of works and transport and other road transport agencies should promote **'road communication technologies'** (RCT) safety awareness standards (Abubaker & Derek, 2014) television and radio jingles and good drivers to be rewarded.

Passengers, drivers' associations, and the community should have a constant interactive forum. FRSC's stakeholder meetings, public education sessions, and other public engagements serve as viable platforms for receiving feedback that guides the operations, activities, and policy formation by FRSC. (Agbiboa, 2020) explains the road transport workers' insecurities because of the usual rift and power struggle of the union-state alliance while Olubomehin (2012) finds that the road transport workers union serves as variable for national economic development.
Also, if the politicians can co-opt the road transport unions in their political campaign, in that case, they surely can use them to educate and create awareness on road safety drivers' union should be used as a vehicle to pass information across to drivers passengers should help by cooperating, report reckless driving to appropriate authority report drivers that drink and drive and if possible object to resist being driven by a drunk driver.

Community psychology approach explores the participatory actions of masses initiatives and interventions (Teye-Kwadjo et al, 2013) and in understanding their problems and improving their well-being (Nelson & Prilleltensky, 2005). Community families should be educated on their rights and how to achieve them in the event of deaths and injuries resulting from accidents and drivers/those responsible for the accident be made to pay appropriate compensation. Unions should be encouraged to sanction reckless members. They also need to take these campaigns to their homes and take it as a core objective of community development

associations (CDA) to ensure a safe and crash-free environment and discourage and dissuade drivers from driving under the effect of alcohol.

4.6.9. Road crash data improvement

Data analysis and problem identification vis-à-vis road traffic management have been a problem in Nigeria. The most vital shortcomings are unreported data (Naji & Djebarni, 2000) and late documentation of yearly road data results which is evident in Nigeria when gathering secondary data for this investigation. Unfortunately, statistical data are not readily available, and they may not be accurate, which means that they may not be reliable. In the area of data collection and analysis, FRSC still has a long way to go. Their data is not robust enough, and they are often under-reported. Also, data harmonization is an enormous challenge. However, use the Global Positioning System (GPS), Electronic Registered Delivery Service (ERDS), and video recording systems. These technologies which are currently available provide an opportunity to obtain and compile relevant data.

Also, software that factors the peculiar road usage situation in Nigeria can be introduced. They would enable the government to know and feel the direct economic impact of 3% annual GDP lost to road traffic crashes. Data collection should be automated to obtain realistic data for effective policies and decision makings. The use of ICT, automated platforms, and data analysis tools helps to codify relevant data for accurate legislation. The government has done little on this issue as we continue to have old staggering un-updated traffic data when the authority are supposed to be working with data on hand to find solutions to the current problems. Mbosso & Nyamawe (2014) proposes the model of Data Processing Unit (DPU) and Data Repository Unit (DRU) that make use of Global Positioning System/Statelites (GPS) and Global System for Mobile Communication (GSM) for tracking over-speeding vehicles´ especial upcountry buses in Tanzania.

TABLE 25: DATA COLLECTION AND USAGE IN ROAD TRAFFIC SAFETY MANAGEMENT

Six Categorization of Data Collation and Usage in Road Traffic Safety Management		
No	**Approaches**	**Implementation Strategies**
1	Education	-Public Enlightenment; Manpower Development; Rallies Conducted; Offenders Trained and Social Media
2	Engineering	-Vehicle Administration; Registration; Safety; Fleet and Operators; Passenger Manifest; Free Vehicle Safety Checks; Categorization of Vehicles involved in RTCs; Implementation of Speed Limiters Records
3	Emergency Management Services	-Emergency Calls Data; Ambulance Services; Health Facilities; RTC Data
4	Environment	-Data on Black Spot Analysis; Mapping; Traffic Count; Road Safety Audit
5	Enforcement	-Operational Activities; Enforcement Infrastructures; Location Information e.g. GPS; Arrest Records
6	Evaluation	-Policy Evaluation; Policy Appraisal

Source: Author adaptation from Olagunju, K. (2009). Data gathering: A panacea to national security. FRSC Presentation.

4.6.10. Steps to stop extortion of drivers

Corruption is endemic in our societal fabric due to poverty and greed. Corruption from the police, traffic law enforcement officers, touts, is a significant factor in road traffic accidents. The police, traffic officers, and touts should be dissuaded from extorting monies from road traffic users in developing countries (Andvig & Fjeldstad, 2008). These law enforcement officers will see bad tyres, underage drivers, mechanical faults, etc., and will turn a blind eye, especially if they are gratified. These bad behaviors, culminating in the causing road accidents. The government's policy officers should step up efforts to prevent police and other road traffic officers from taking bribes. Touts and touting should be weeded out from our motor parks.

Our motor parks should be sanitized. The government has a lot to do in this regard. Security agencies and local governments, and motor union officials need to be adequately remunerated, educated, and disciplined to be able to stop extorting drivers. The driver should be educated on the legal and moral implications of Police extortion. Also, the government should ensure adequate remuneration for the personnel involved.

Police reforms should take care of their wages and well-being. A sound data system should be used by the police to investigate cases of extortion from drivers and there should be no any money exchange with motorists as all fines should be paid to the bank. Road cameras should be placed along most of our roads to watch the drivers and the law enforcers, and more spies should be positioned along our roads to observe and report their activities. Also, credible/formidable platforms for lodging should be made available to stakeholders so that the cases can be investigated and those involved can be sanctioned. Corrupt officers that are caught should be penalized; they should also be given a good welfare package so that they will not be tempted to accept bribes. Only qualified officers should be employed; training and other capacity building programs training should be organized for police and traffic officers to orientate them from time to time.

4.6.11. Road safety as a political priority

The Nigerian government has done a lot in this regard by establishing a Lead Agency (FRSC). This notwithstanding as there is strong empirical evidence that countries with weaker and less coherent state institutions have more fatalities (Wales, 2017). A partnership for road safety advancement is in place under the Nigeria Road Safety Partnership (NRSP), which has seen stakeholders and multinationals. Traffic professionals and Stakeholders should lobby government officials at all levels to see the reason why road safety should be a political priority since the main responsibilities of government is the protection of the lives and property of the people.

Furthermore, private, and public participation in road business and management should be encouraged. The call by WHO on governments in the developing countries to buckle up towards eradicating road crashes is very timely. Politicians in these countries should make it a campaign strategy and work towards garnering all executive and legislative efforts to involve all stakeholders in eradicating road carnage. New laws should be formulated that will lower road carnage; Strict enforcement strategy should be embarked upon by all stakeholders to ensure that road users observe the speed limit, become careful while using the road, and observe

all rules and regulations. This can be done in Nigeria, especially if all stakeholders consider it a priority toward a drastic reduction of road traffic accidents in Nigeria.

Political parties need to inculcate this into their party manifestoes and campaigns and promulgate appropriate laws by legislative bodies. By encouraging lawmakers to make enabling laws that will help road usage and by through voluntary effort assist in placing road signs at our roads. There must be a regular forum to discuss traffic and safety issues, which will lead to legislation, policy formulation, and enforcement.

4.6.12. Effectiveness of traffic law enforcement

Reliance heavily on traffic law enforcement programs modify driver´s behavior and reduce crash risk (Bates, et al., 2012). Collaboration with religious and traditional heads is one way of making policing effective. Also, the robust deployment of enforcement and record-matching technologies would ensure effective enforcement of traffic regulations. More explicitly, there is a need to equip law enforcement agencies with requisite skills and capacity for full enforcement, and equipment that can detect infractions should be deployed. They should also be exposed to equip them with global best practices is equally vital. There is also a need for the recruitment of more enforcement officers. The payment of fines should also be made on the spot/point at which offense was committed/or arrest was made. Traffic management and transport authority officers' needs to be diligent at discharging their duties. Offenders should have their licenses suspended for a given period and have their vehicles impounded for a given period and compelled to go on some weeks driving lessons before getting back their licenses. Fines should also be imposed on traffic offenders. In an investigation that identified 111 studies literature 442,000 road traffic offenders with the review of imprisonments and intermediate sanctions deter traffic offenders from re-offending (Bonta, 2002) suggested that intensive probation supervision and electronic monitoring, intensive surveillance, and short periods of incarceration.

4.7. Summary

This chapter summarized and interpreted the inferences and variances in the research questions in conjunction with other previous literature and references. The research hypothesis analyses with chi-square, Pearson correlations, linear regression, and multiple regression indicated in almost all research questions results analysis that demographic variables (such as age, religion,

ethnicity, driving license status, vehicle ownership) and driving history was significantly statistical related to the tendency for road traffic accidents.

The result posited that 61% of the Abuja´s accident variation was explained jointly by its driver´s attitude such as over-speeding, receive or make call while behind the wheel. The result also posited that 50 % of the Lagos´s accident variation was explained jointly by its driver´s attitudes such as over-speeding, mobile use while driving and fatigued driving. The stakeholders´ responses were summarized into twelve themes that combine all suggestions, ideas, and recommendations from those who hold aces in the road traffic sector. Nvivo.11 mechanism was used to analyse the original Stakeholders responses. A detail copy of the responses can be seen in Appendix G.

Chapter 5: Empirical Findings
5.1. Introduction

This chapter presents the results of my field study. It discusses the descriptive field notes of the detailed processes of this study´s observational sites and trips rationale, the method used to collect data through contextual, case studies, and library inquiry activities for the investigation. Field study helps to create first-hand experiences in natural environments that encourage critical thinking transfer potential and scientific curiosity (Manner, 1995) and enhance more knowledge and understanding of the application of theory in a real situation (Kandamby, 2018).

5.2. An overview of participatory and collaborative research methods used

This participatory and collaborative research method provides a great opportunity and advantage to be part of a natural setting that facilitates seeing and directly feeling those interactions and changes in drivers' behaviors. This technique is to observe some characteristics or attributes of participants and infer some behavioral traits from that Observation (Johnson & Joslyn, 1991).

The Direct and Indirect Observation study facilitates natural field experiments that will provide high internal validity (Kirk & Miller, 1986). The driving culture observation makes the driver and his social environment influence an individual with other road characteristics (Zaidel, 1992). Participants Observation gives research a valued reputation and provides the necessary background on discussion (Burgess, 1984; Denzini, 1989; and Patton, 1990). Besides, the quantitative method helps explain, predict, control, and answer questions on relationships within measurable variables (Leedy, 1993). Semi-structured template questions were constructed and adopted for the Direct Participant Observation and the In-Vehicle participant observation.

On the contrary, Tateyama et al., (2010) find participant observation in the real environment poses many critical accident risks because of the traffic conflicts, and it offers advice for a car driving simulator. One of the patrol officers almost got knock-down by a vehicle that refused to wait for checking.

5.3. Phases of the research

The research phases are separated into four. Phase 1 (Quantitative) on "Roadside survey participant observation with the FRSC patrol team and Inside-Vehicle participant observation. Phase 2 (Quantitative) is the distribution and administration of socio-demographic characteristics questions and cognitive variables questionnaire on the respondents at the four different motor parks. Phase 3 (Qualitative)is the semi-structured question-interview for the stakeholders (road traffic safety experts) via digital electronic mail. The last phase is 4 (Qualitative), a participant observatory trip to London and Bangkok road transport ministries.

5.3.1. Phase 1 A and B: Road-side survey and inside-vehicle participant observation

5.3.2 Introduction: Analysis of driving styles and the conflicting road traffic environment

This observation takes cognizance of driver´s relation with the vehicle, passengers, and the conflicting traffic environment. Driving is a task that involves knowledge and skills for the driver and other road users' safety. A single error of a driver can have life or death consequences. A driver must know and understand the three traffic signs and markings: a regulatory driver must learn to drive on a public road (Rules of the Road, 2018). This personal study participation in data collecting and driver's observation collaboration sessions with the personnel of the road traffic safety corps (FRSC) Patrol teams in Lagos and Abuja gives this study a first-hand perceptions and in-depth exploration of drivers' characteristics which helped in the preparation of the socio-demographics and cognitive variables questionnaire.

5.3.3. Direct and indirect observation of driver's behavior on the road

In this part of direct participant observation, two phases were used: This Observation took place in January and February 2017. The first week of January date fix to take advantage of traffic conflicts expected after the Christmas and New Year festive holiday, and the exact time the motorists and people returned to their workplace.

Direct systematic observation with the Federal Road Safety Corps (FRSC) patrol team took place in two schedule routes in Abuja called Jabi and A-Y-A, Asokoro district Abuja, Nigeria. The Route Commander led the Observation (R.C) called officer O. I.R. with patrol vehicle number A01815 R.S.

The Lagos state observation FRSC patrol team was directed by Route Commander (R.C) O. and officer A., with the patrol vehicle number 2.175 / RS2.113 and the plate number A760 RS. The Lagos observation was done at Berger / Ogudu area Lagos. The prepared template questions for the observation were the tool used to record all the investigation events.The Inside-Vehicle Observation with the questions prepared on the template on four different occasions from each of the buses stops to other various destinations of 5 kilometers.

5.4. Phase 1 A: Road-side traffic survey observation with the FRSC patrol team in Abuja and Lagos

5.4.1. Introduction

Abuja and Lagos are both the present and old capital cities of Nigeria. These two important economic and political cities have the teeming usual road traffic conflict all the working days. It is a kind of naturalistic observation of drivers to measure perceived risk in the road environment (Walton & Thomas, 2005)

The study´s choice of the two survey sites (Abuja and Lagos) was to make a proper sampling representation of the country. Abuja is in Nigeria´s geographical centre, while Lagos, the age-long former capital city, belongs to Nigeria´s South-West. The main finding concerns the predominance of tribes at both survey sites. Also, the result shows that Peace Park was dominated (51.4%) by the Ibos, Utako Park was dominated (71.8%) by Hausa commercial drivers, Oshodi Park was dominated (41.0%) by Yorubas. In comparison, Mile 2 Park was dominated (66.7%) by other ethnic groups apart from the ones mentioned in this research. This study suggests that in the "limitation of the study" chapter, it would be better to increase the number of states or sites to be investigated in the nearest future on the same research scope to give more sampling representation.

5.4.2. The rationale for the roadside observation

This investigation aimed to understand the behavior of road users and psychological processes beneath it. The rationale is to explore the road situations in the natural setting and behavioral responses gathered from each of the drivers as best indicators and variables for the investigation. Besides, these two survey sites' teeming population is an excellent representative sampling for the country's population. The direct systematic observation was purposefully to get the actual occurrence of events called the Participant Observation; this is also called

Observed Behavioral Tool. It is the physical performance parameter with the formulation of behavioral and empirical support situational arrangement.

5.4.3. The survey overview with FRSC patrol teams in Abuja and Lagos

-Introduction

A research template is made for the participant observation exercise conducted with the Federal Road Safety Corps (FRSC) road traffic patrol team in both Abuja and Lagos. The observation´s rationale was meant to observe attitudes and risk- factors and categories of the respondents observed. Most variables observed include verbal and physical behaviour; interactions with other motorists; interactions with traffic officers; types and conditions of vehicles driven; presence or absence of seat belt and its use; driving with telephone mobile and other traffic rules and signs compliance. The details template can be seen in Appendix D.

- Abuja survey patrol officers

The patrol Team Officers include: O. I. R. (as the Route Commander), J. I. E., D.O.I., and D. J. A. with patrol vehicle number AD 1815 RS. Code Number: RS 7.1.

-Observation survey site:

This observation also took place in Nnamido Azikwe Road, A-Y-A, Asokoro District, in Abuja Federal Capital Territory.

FIGURE 93: SCENES OF PARTICIPANT OBSERVATION WITH MOTORISTS AND FRSC PATROL TEAM IN ABUJA

-Traffic observation brief:

The observation provided some empirical evidence of drivers' bad driving attitudes and styles, most of the roads. Some of the drivers were driving without licenses and another document necessary for road safety. Most vehicles are old, rusty, and smoky, which was not a road worthy vehicle being on the road. Most of the drivers are aggressively and recklessly in their driving behavior.

-Lagos survey

The first observation firstly took place with a patrol team led by officers K. O. A., A.D. A., O. M. B., and O. M. S. This observation was disrupted because of severe traffic and must meet another patrol team. These new patrol team officers include officers, Mr. K (the team leader), D. S, A. I., and B.

-Observation survey site

The observation took place at the OPIC, Lagos-Ibadan Expressway. The venue must move to Kara Bridge, Near Berger, Lagos, in another zone.

-Traffic observation brief:

The Lagos observation is very different in terms of driver's behavior, their relation to the environment, and other road users. The types of vehicles used are fairly used vehicles, as seen in Abuja. Most drivers in Lagos drive without proper document about them and the vehicle driving. There is chaos and traffic conflicts in most of the roundabouts visited. Most of the motorists disobey traffic rules and regulations, and their vehicles are not road worthy.

5.4.4. Phase 1 B: Inside-vehicle participant observation in Abuja and Lagos

5.4.5. Introduction

In this study, Inside -vehicle participant observation was used. It is a conversational technique of observing driving behavior while physically present in the vehicle. A car driving simulator was not used to conduct this research study. A research template was made for the participant observation exercise conducted with the Federal Road Safety Corps (FRSC) road patrol team in both Abuja and Lagos. The observation´s rationale was meant to observe attitudes and risk-factors dimensions and categories of the respondents observed. Most variables observed include verbal and physical behaviour; interactions with other motorists; interactions with traffic officers; types and conditions of vehicles driven; none use of seat belt; driving with telephone mobile and other traffic rules and signs compliance. Details template can be seen in Appendix C.

5.4.6. The rationale for the inside-vehicle observation

The goal was to investigate the way hazard perception and commercial drivers' skills in real and virtual traffic environments condition. The observation involved understanding driver behavior to vehicle handling, passengers, and other road users.

This participant observation technique sought to understand the individual as victim-friendly in their natural domain and characteristically well-being (Nelson & Prilleltensky, 2005). Besides, this study explored the opportunity to observe driving styles, maneuvers, and relations with the immediate environment. These formed the construct of behavior and related driving task performance characteristics due to the usual traffic conflict environment.

5.4.7. Traffic observation briefs

The inside-vehicle observation made the revelation in Abuja is almost the same as Lagos in behavioral performances of most of the drivers invested. It was evident among most drivers

investigated that they did not have absolute control of the vehicles while on the wheel. Most verbal relations with the passengers are entirely on trip fare transactions. No evidence of greetings and courtesy. The driver's reaction to the other road users was better than the drivers investigated in Lagos.

In most of Lagos' journeys, the bus conductor hardly found a seat to sit due to overcrowding passengers on board. Most of the drivers investigated did not show any sense of maturity in driving attitudes. Both old and young drivers behave in the same way at the sight of law enforcement officers and other road users. The conductor (driving assistant) usually had a temporary seat when a passenger dropped at their destinations. The conductor is a special assistant to the driver. The bus conductor must organize the passengers with their load and collect transport fares before or while customers get to their respective destinations. The drivers who were the primary point of observation drove very severely with all risky driving behaviors as recorded as the journey lasted.

5.5. Summary of Abuja and Lagos participant observation results

In this study´s Chapter 2.9, the factsheets of the RTA trends and patterns explains the high level of aberrant behaviors in both Lagos and Abuja, respectively. Besides, it was observed in Lagos's observation trips and mostly in Abuja that there were few officers on the road. Apart from the usual driving and aberrant driving behavior among bus drivers, there are still driving conflicts between drivers and vehicle passengers. Most of the drivers observed did not drive defensively and did not have total control of their vehicles.

Meanwhile, it was observed among the drivers that they had some trust and allegiance for their leaders (President of the Motor Parks (Bus Stations). It could create an effective linkage avenue between the policymakers/law enforcement officers and the drivers. This observation's templates serve as the fountain of ideas to construct the socio-demographic and cognitive variables Questionnaires. All the drivers observed were all male. It surprising that none of the vehicles observed were having the Child Restrains devices in their buses.

FIGURE 94: OBSERVED INSIDE-VEHICLES SCENES PAGE DURING THE PARTICIPANT OBSERVATION SURVEY

5.6. Phase 2: Driver's socio-demographic characteristics questions and psychometric and cognitive self-report questionnaire (LOMICS-DBQ)

5.6.1. Introduction of the behaviour measuring instrument (LOMICS-DBQ)

This study´s questionnaire consisted of five-in one-optimized and measurement tool called LOMICS-DBQ for this study. The adopted LOMICS-DBQ was meant for the prediction of driver´s differences and involvement in road traffic crashes. The LOMICS-DBQ contained 30-item psychometric and cognitive variables categorized in 6 items-factors known for each of the old five measuring instruments (DBQ, DAQ, DAS, DSI, and SCQ as explained in chapter 3, 9.5). All the items questions were from the constructs of the Theory of Planned Behavior (TPB). This quantitative section was divided into three sections of simple self-reported investigation to facilitate the (a) personal characteristics features; (b) to fully understand the Self-Reported background to drive history and (c) finally the last to examine the drivers' psychometric and cognitive variables.

The adopted measuring or investigating instruments were five most frequently used measures of self-reported driving skills, driving styles, attitudes and behaviors. Self-Reported Behavior in the Questionnaire had the advantage of producing information on many factors (variables) from many respondents. It was also regarded as a measuring tool that investigated a humanistic validity seeking case study (Yin, 2018). According to James et al., (1993), all crashes cases (except fatal crashes) can be elicited through self-report method.

Investigating motorists' attitudes in a place like Nigeria with characteristics low-income earners inhabitants, certain key road safety factors and issues must be examined and are not precisely known variables from those "applied" Questionnaires from organized and developed continents. Some researchers argue that it is naïve and strange to expect the Western world road safety interventions to work correctly in developing nations without taken into cognizance its social-cultural context (Alyson-Hazen & Ehiri 2006; King, 2005; Mohan, 2003).

5.7. Phase 3: semi-structured interview for stakeholders (Qualitative)

5.7.1. Introduction

A semi-structured interview was conducted with stakeholders of the road traffic sector. Stakeholders are critical on road traffic safety as they play a vital role in setting up road safety regulations of a country (Tetali et al., 2013). The interview was adopted to elicit information generally on drivers' attitudes, skills, and training; beliefs on customs, superstition, religion,

and fatalism; traffic laws and signs awareness and communications; enforcement and prosecution of traffic risky-behavior offenders; Driving testing and licensing issues; policies and legal framework; Vehicle Inspection and Visual Impairment solution; Bus Station Union advantage; and Driving salaries and workload; Environment stress and Pollution and Mutual link between the drivers and other road users. The third phase was administration of semi-structured questions-interview with the stakeholders via electronic media between mid-March and August 2018.

Twenty-nine stakeholders who responded online to the interview-questions had a high degree of influence in the Nigeria road traffic safety. Two hundred and ninety-one responses were collected. The people of professions and vocations that included drivers` association leaders, automobile dealers and mechanics, health and medical workers, rescue emergency and safety workers, volunteers/NGOs, special marshals, and road safety clubs, vehicle owners and operators, insurance companies, the police force, other law enforcement agencies, vehicle inspection officers, directors of state public works, cyclist union association and organized transport union, e.g., NURTW, NARTO, ACOMORAN, NUPENG, etc.

5.7.2. The rationale for the study

Stakeholders are critical with their experiences and ideas on the issue of road traffic safety. The structural framework of stakeholder relationship as road safety is "..an inherently multi-disciplinary field, and the road safety profession tends to lack a deep understanding of the social, economic, political, and demographic contexts in which safety strategies and countermeasures are conceived and applied" (LaJeunesse et al., 2018).

5.7.3. Stakeholders´ questions template

Stakeholders are becoming recognized and respected as important part of any policy decision-making process and project development in all ramifications. This is more important in order to adapt and apply new instrument of the construct of psychometric and cognitive variables as the most accurate and trusted behavioural measurement of a typical driver from a low-medium-income countries (LOMICS) as against "westernized" instruments.

This study stakeholder´s questions focused on the issue of human factor in relation to the increasing rate of accidents and development or modelling of applicable new interventions to reduce injuries and deaths on our roads. The question template consisted of nineteen questions on driver´s religious beliefs, passengers' feedback, non-compliance / poor knowledge of traffic

rules, alcoholic sales at motor parks, driving skills / competencies, educational level, driver´s union / association allegiance etc (see in Appendix F)

5.7.4. Stakeholders qualitative responses in NVivo 11 administered analysis

The NVIVO 11 device methods was used to analyzed the stakeholders responses and summarized into twelve themes which included; religious belief; passengers´ feedback; educational measure; banning of alcohol; legal procurement of driving license; adoption of safe attitudes; advertisement understandings; community and driver´s union participation; road crash data improvement; steps to stop extortion of drivers; road safety as political priority and effectiveness of traffic law enforcement. (see Chapter 4.6 and Appendix G for more details)

5.8. Phase 4: Bus drivers´ behavior management and sustainable transport service: London and Bangkok´s study trip experience (Qualitative)

5.8.1. Introduction

The goal for the journey to London and Bangkok was to add more knowledge of how commercial bus drivers' behavior were being managed in other continents of teeming population cities and high volume of motorized traffic, especially in terms of recruitment, control, and management. London's journey was in October 2019, and Bangkok's trip took place in February 2020.

The London and Bangkok journeys preceded with letters to the notable road traffic agencies with a request for bus drivers' participant observation in which was granted. London's road traffic agencies are Transport for London situated in the center of London and Driver and Vehicle Standards Agency (DVSA) situated at Croydon Street in Bristol. Thailand's agencies visited included the Bangkok Mass Transit Authority (BMTA), Department of Land Transport, and the Transport and Traffic Policy and Planning office, all offices situated in Bangkok, Thailand's capital city.

5.8.2. The rationale for the visiting locations (London and Bangkok)

The study tour was educative and fills in the cultural gaps (Reday & Counts, 2013). The rationale for selecting the United Kingdom is that Nigeria got her independence from the British, and the road transport policy was started in Nigeria by the colonialists with traffic laws. The London Red Bus management and successful known reputation in providing effective and efficient services to the people. Besides, in Oni, (2010) proposes for Nigeria policy makers to

use Travel Demand Management cost-effective strategy used in United Kingdom was best suited for Nigeria in Bus-Transit management.

Moreover, the main reason for Bangkok was the teeming population adds with the tourists elicit my curiosity to understand how effective and efficient the city transportation sector most especially in the area of bus drivers' services and management which was the subject matter of this investigation.

5.9.   Bus drivers' behaviour management and sustainable transport service: An overview of observative study experience in London (Europe) and Bangkok (Asia)

5.9.1. An Overview

This section serves as the empirical study observation of this thesis in my search for sustainable road transportation operation that concerns recruitment, control, and management of bus drivers' in world´s other continents. The trip to London was made in October 2019, and the Bangkok took place in February 2020. The Bangkok journey was extended to almost three months because of the Coronavirus (Covid-19) epidemic lock-down that made it impossible to come back to Spain until the Spanish government made provision for Spanish tourists and citizens to come back through IBERIA airline collaboration in May, 2020.

The journey to London and Bangkok was preceded with letters to the notable road traffic agencies with request for bus drivers´ participant observation in which it was granted. London´s main road traffic agencies are Transport for London situated in the centre of London and Driver and Vehicle Standards Agency (DVSA) situated at Croydon Street in Bristol. The Thailand´s agencies visited included the Bangkok Mass Transit Authority (BMTA), Department of Land Transport, and Office of Transport and Traffic Policy and Planning, all offices situated in Bangkok, the capital city of Thailand.

A recent research study notes that if Nigeria wants to achieve a great economic transformation, it requires a sustainable transport system can only be achieved with well implemented policies with collaboration with government and public bodies (Adanikin & Oyedepo, 2017). That made it my first goal for embarking the journey to London (Europe) and Asia (Bangkok). Sustainable transportation according to the Canadian Centre for Sustainable Transportation.

a). "allows the basic needs of individuals and societies to be met safety and in a manner consistent with human and ecosystem health and with equity within and between generations".

b). "is affordable operates efficiently, offers choice of transport mode, and supports a vibrant economy and …".

c). "limits emission and waste within the planet´s ability to absorb them, minimises consumption of non-renewable resources, limits consumption of renewable resources to sustain yield level, reuses and recycles its components, and minimises the use of land and the production of noise" (CST, 2009).

5.9.2. London bus service: Introduction

Nigeria got her independence in 1960 through British colonialists. Most relics of colonial rule policies and rules are still in operation especial in few sectors of the economy as transportation. The history of British rule has since remained in every aspect of Nigeria life (Udo. 1978). The British introduced right-hand driving and what formed the nucleus of road traffic rules (codes) in Nigeria before it was changed in 1972.

5.9.3. Transport management and professional competency

Transport for London is a statutory corporation with subsidiary companies. TfL runs most of London´s the public transport services, including the London Underground, London Buses, the Docklands, TfL Rail, London Trams, London River Services, London Dial-a-Ride, Victoria Coach Station, Santander Cycles and the Emirates Air Line. TfL is committed to make people´s lives easier and increase the appeal of sustainable travel over private car use. The sole aim is to be a fully inclusive employer, valuing and celebrating the workforce´s diversity to improve the city services for everyone (TfL, Quarter 1, 2017/18).

Driver and Vehicle Standards Agency (DVSA) is an executive agency of the UK Department for Transport. It carries out driving tests, approves people to be driving instructors and MOT testers, carries out tests to make sure lorries and buses are safe to drive, carries out roadsides checks on drivers and vehicles, and monitors vehicle recalls (DVSA, 2020), On the 20th of June, Driving Standards Agency (DSA) and Vehicle and Operator Services Agency (VOSA) merged into a new agency that is now called DVSA name was confirmed on the 28th of November, 2013.

The purpose of the agency is to help people stay safe on Britain´s road. The agency aim is to improve road safety, user experience and value money. The agency provides mock driving tests for all instructors and encourage learner drivers to broaden their experience in driving. The agency carries out research with customers and staff to find out how well their services work,

improve and provide the best service possible. DVSA should not be mixed with Driver and Vehicle Licensing Agency (DVLA) holding over 48 million drivers records and over 40 million vehicles record and collect billions of pounds in vehicle excise duty (VED) yearly.

FIGURE 95: A RED BUS DRIVER ALSO FACES TRAFFIC ENVIRONMENT SITUATION IN SERVICE DELIVERY

5.9.4. Bus drivers´ management and control

The scope of this research was only on the road transportation which involved the commercial bus services. The case study here was the London red bus service. TfL and operators' garages have collaborative and non-collaborative several ways to control the bus drivers. Those few controls that can fix to the contextual background of this study included the following:

5.9.4.1. Professional conduct of the drivers

A bus driver should exhibit a credible level of professional conduct and responsibility. Driving a bus is said to be a serious task that needs great expectation from the TfL. There are garages where different buses from different companies operate. In London most of the bus operating companies included : Go Ahead London, Arriva, Abellio, First Bus Company, Stage Coach,

RATP formerly called London United comprises of three combined companies, CT Plus, Transit, Comfort (Metro line) and so on.

5.9.4.2. Certificate of professional competency

Every person on the red bus wheel must be competent to drive. This is not the TfL or the garage operator initiative. It is an EU directive and recommendation for all passengers' transport drivers. This policy makes it mandatory for passengers´ drivers must attend a certain numbers of hours refresher-courses every year. The driver is eligible to a card and certificate of professional competent.

5.9.4.2. iBus device

This is an Automatic Vehicle Location (AVL) device connected with each red bus GPS that makes it easy to track all London buses to provide audio visual information and announcements to the driver and passengers. This device can show the location of the bus with the aid of the roadside's CCTV.

5.9.4.3. Mystery passenger

TfL regards each red bus driver as an ambassador of his or her operating company. Drivers conduct dictates TfL relation with any of the operators. The driver portrays as the mirror of the company which the TfL monitor every time and then with CCTV inside the bus that directly facing the bus driver and any report given by the Mystery Passenger. The bus inside the bus cannot record audio but can read lips and body language in case of verification.

5.9.4.4. Network Management Control Centre (NMCC)

This used to be called "Centrecomm" before for a long time. This NMCC is linked with all the CCTVs in London. The NMCC will relate to the iBus through the GPS. This device helps to monitor buses and drivers in case of emergency or accident. There are two emergency and non-emergency button-devices of Blue and Red colour in the bus for the driver. The red colour is to be pressed in case of emergence occurrence to inform the police, ambulance, and the fire-brigade. The blue button device is meant for non-emergency occurrence.

5.9.4.5.   The incident control personnel

or she is directly employed by the TfL. They go on buses or van to check for incidents and events on the roads. They are to make proper announcement of any dangerous or disturbing events to all the bus drivers. Incident Control Personnel knows all the safe and shortest route. ICP calls the NMCC to inform them of all occurrences and suggests new routes the buses will have to divert to. A driver who is not well informed about the incident can call his or her garage   Controller and get the first-hand information again.

5.9.4.6.   Open line on each bus

Each of the bus on the road has a written telephone number for anybody or passenger to make complain or address an issue concerning the vehicle and the driver with appropriate data and sincerity. Transport for London (TfL) has the CCTV and other devices to verify or confirm the allegations or misconducts. Driver can call a police officer if it is a criminal assault and not for passenger. A spare driver can be called from the operator garage if the misconduct is very serious and the punished to be given to the erring driver depends on his past records.

5.10.   Bangkok bus service

5.10.1 Introduction

The Thailand trip was the researcher's desire while searching for a country with teeming population to go in Asia to add value to my investigation with base from Africa and as a resident in Europe. The researcher gathered from the online searches that Bangkok was recently among the most visited city in the world in 2019 for the fourth consecutive years with about 22.8 million. Paris and London ranked second and third with 19.1 million tourists each and Dubai followed with 15.9 million tourists (MasterCard, 2019). Bangkok is 7,762 km area and its population is estimated 10,539,415 in 2020 according to UN World Urbanization Prospects (UNO, 2020)

5.10.2. Transport management and professional competency

Actually , the researcher got to Bangkok mid-February, 2020 and able to meet few officials of the Bangkok Mass Transit Authority, Office of the Transport and Traffic Policy and Planning

and Department of the Land Transport before the Coronavirus epidemic becoming serious and eventually make to stay back in Bangkok for almost three months.

Bangkok Mass Transit Authority (BMTA) is the largest operator of public buses system in Thailand. It offers bus and van routes throughout Bangkok city and its sub-urban provinces. It was established in 1976, has 118 routes within its control and render moving services to about 3 million people every day. The authority is a subsidiary agency created by the Ministry of Transport, Thailand.

The main goal of the Thailand´s Office of Transport and Traffic Policy and Planning (OTP) under the Ministry of Transport is to increase the quality of life of the people by providing infrastructure that would be supportive part of the economy and social development in line with development plan of Thailand 2015-2022 (OTP, 2018). The OTP also has a strategic plan that seeks transport and traffic develop "developing infrastructures, supporting transportation and tourism, developing towns and cities and resolving traffic problems in Bangkok and vicinity to be convenient, fast and safe", give support to achieve a policy of "smart technology" by implementing modern technologies, develop and elevate standards of rural roads and by construction roads and bridges to support nation´s transport in every region and routes.

FIGURE 96: MOST JUNCTIONS AND ROUNDABOUTS IN BANGKOK ARE WITH POLICE POST ANNEX

5.10.3. Bus drivers' management and control

In 1975, the Thailand government called interested operators and set up a public-private joint transport service venture that later known to be called Metropolitan Transit Company Limited (MTCL). This coalition did not last for a year due to non-fulfilment of agreements and other logistic factors. Later, the Ministry of Transport in 1976 set up Bangkok Mass Transit Authority (BMTA).

FIGURE 97: ALL REGISTERED BUSES IN BANGKOK IMPROVING SECURITY AND SAFETY ON BUSES WITH CCTV

5.10.3.1. Transport management centre (TMC)

The bus transit authority in Thailand attempts in detecting, preventing, and reducing crime against all road users installed CCTV cameras on all registered commercial buses in the cities. TMC observes driving behaviour. A recent research in Bangkok proves that GPS measures vehicle speed, acceleration and location and gives considerably reliable and accurate data (Heng & Pathomsiri, 2018). Another two researchers have negative conclusions about the GPS about the error that affects the accuracy of positioning the object, time, and speed (Hasanah & Pathomsiri, 2018). To sustain and improve safety standard of public transportation, Department for Land Transport embarks on monitoring and observing driving behaviour, in Bangkok enforces all new-registered public transportation with 10 wheels or more to install certified GPS that link to the Transport Management Centre. This policy´s consequence reveals an improvement in driving behaviour and obey of traffic rules and regulations in Bangkok (DTC, 2016).

5.10.3.2.Intelligent transport system (ITS)

Intelligent Transport System integrates control, information and communication technologies in transport infrastructure that establish a smart transport system as an autonomic entity of high reliability of functioning (Sladkowski & Pamula, 2016). Fewer low-and-middle-income countries have actualized intelligent transport system due to socio-economic and political complexities. In 2018, Thailand government launched a long-term National Transport Development Strategic Plans.

It is called 20 years of Thailand Transport Systems Development Strategy (2018-2037). The plans include "access to transport services with affordability and equity; universal design and service design; improved transport and logistic efficiency; reduces transport and logistics costs; development of domestic and international transport connectivity" (OTP, 2019).

Thailand in Asia falls among the low-and middle-income countries of the world, but they have speed-up the rate of technological and infrastructural development in the last two decades. This is evident in the BMTA´s transport management and professional competency with introduction of intelligent transport system that helps in manage and control driving behaviour while on the wheel.

5.11.   Digital devices used in the survey sites

A digital Nikon Camara S200 with 7.MP potential was used throughout the investigation to record and take vital pictures during all the survey investigations. An HP computer, pavilion X360, an on-board computer, was used to store and log all the data. The computer has Convertible 14-cd 1042nr, and the made is Intel.

A rechargeable battery device called "Power Bank" is taken along throughout the investigation as the electricity supply is not constant in any city of Nigeria. This power bank has enough capacity to ensure that the camera, computer, and mobile phone have enough energy to complete a day work.

5.12.   Summary

This field study aspect of the investigation provided a great opportunity and advantage to be part of a natural setting that facilitated a direct observation and feel of those interactions and changes in drivers' behaviors. It made the empirical findings very participative, collaborative, and interesting. Both direct and indirect observations provided high internal validity of the

conflicting traffic environment. The research experience tour to London and Bangkok road transport agencies to examine and understand how drivers' behaviours are managed and regulated to have a safe road makes a significant empirical revelation of the two capital cities transport management, professional conduct, competency and responsibility.

Chapter 6: Discussion of the Results

6.1. Introduction

This chapter's primary goal is to examine the field study, discuss the results, reinforce the importance of all the thesis objectives, hypothesis, and validate the results obtained in the preceding chapter data presentation and analysis. All the four research questions (RQI-RQ4) were answered in Chapter 4.4.1. to 4.4.4., which have made the research goals and main objectives achievable. The second goal here is to examine the respondents´ demographic and cognitive characteristics; stakeholders interviewed, and two cities bus driver's behaviour management (London and Bangkok). This is observed and how those variables and experience frameworks affect crash risk fatalities and provide a practical framework for an effective and efficient measuring instrument description of individual differences in accident involvement. However, it will be recalled from the earlier in methodology analysis that 100% questionnaire administered, only 78.5% were retrieved and used to this research, 21,5% were not returned (See Table 4). Since the response rate is more than 70%, the result obtainable is still generalizable and valid.

6.2. Discussion of the results in three parts (A, B, and C)

The results of the study are simplified and discussed in four parts which are:

Part 1 A and B: Driver's Socio-demographic Characteristics and Background to Driving History; Part 2: Participant Observation and Self-Reported Cognitive Questionnaire Evaluation being categorized into five variables: Driver Behaviour, Driver Attitudes, Driver Anger Scale, Driver Skill Inventory and Social Climate; Part 3: Semi-Structured Stakeholders questions responses (see Appendix G of NVivo 11 analysis); and the last Part 4 is London and Bangkok investigative-observation experience in Chapter 5.8 Phase 4.

The four research questions answered in this study include:

1.   What are the relationships between a driver's demographic characteristics, a self-reported background to driving history, and a road accident rate?

2.   Is there a link between drivers' attitudes, beliefs, behaviours, and accident´s rate?

3.   Is the driver's educational model a useful tool for attitude formation and change to reduce the aberrant driving behaviours?

4.   What are the underlying correlations and significant differences between the risk-driving factors and the rate of accidents among commercial motor vehicle drivers in Abuja and Lagos State?

6.3. Part 1 A: Driver's socio-demographic characteristics

Part 1 A & B: Driver's socio-demographic characteristics

It showed the demographic variables such as age, gender, religion, educational status, etc. In literature, age and educational status are being considered significant than geographical areas in driving attitudes and behaviours (Nordfjaern et al., 2010)

The result concluded that all the four variables (Educational Attainment 'see fig. 20', Marital Status 'see fig. 21', Ethnicity 'see fig. 23', Ownership of the Vehicle 'see fig. 25' in this section have a significant relationship with the driving license status of the commercial drivers in Lagos and Abuja. From the results in the figures 20, 21, 23 and 25, it can be concluded that there is significant relationship between demographic variables of the participants and their driving license status.

6.3.1. Age distribution of respondents in the motor parks

 Risky driving attitudes and behaviours are thoroughly linked to crash possibility among young drivers and overrule the importance of risk perceptions, which calls for licensing reform (Ivers et al., 2009). In fig. 81, it was recorded that majority 29.4% of the drivers in Abuja were between the age of 28-37 while 36.0% of the drivers in Abuja were between the age of 38-47 and 4.1% of the drivers in Abuja were 68 years and above while 0.8% of the drivers in Lagos were also 68 years and above. This showed that although most commercial drives in Abuja and Lagos were youth and adults, they still had few aged commercial drivers in both motor parks. Besides, it was demonstrated that there are more aged drivers in Abuja than in Lagos.

The older driver's problem on health grounds of more significant debility was that they are more likely than other age groups to be killed or injured involved in an accident (Mitchel, 2012). Nevertheless, another version of a research study states the positive mental capacity correlation to drive that there is a positive correlation between increased age and decreases physical (McKnight, 2000-2001). Another research conducted in Osogbo, Osun State Nigeria concludes that commercial bus drivers whatever their age or driving experience need to attend driving training and risk perception programs to improve their driving behaviour (Olonade, 2014).

6.3.2. Gender status

Meanwhile, Nigeria´s driving culture predicated to have only males responded sampled in the participant observation survey conducted in both Abuja and Lagos. Fig. 18 shows that 90.8% and 91.3% of the drivers in Abuja and Lagos were Males. Besides, only 7.8% and 4.7% of female-drivers were studied in Abuja and Lagos. The scarcity of female bus drivers was observed and reflected in the Lagos data. The traffic practitioners should encourage female bus drivers as a way of exploiting their knowledge and driving skills. As women are not exempted from driving and transportation, the sexual harassment and degradation they experience on the wheel should be a significant concern of the authorities towards achieving a society that offers equal standards for all gender (Ercan & Ulug, 2015). Chipman et al., (1992) explain that men have double the number of crashes (per 1,000 drivers) than women. Another study on attitudes and awareness among drivers in Libya (Yahia et al., 2014) showed that gender and age have an essential impact on attitudes and knowledge of traffic laws but not by a large margin.

6.3.3. Educational status

Recent studies have been given priority to drivers' low education status as a predictor of crash fatality due to technological advancements in vehicles and road infrastructures, which calls for improving driver education programs to reduce crash risk (Tafazzoli, 2015). In a research of Tabuk in Saudi Arabia, it was claimed that accidents responsibility decreases with high educated drivers (Issa, 2016).

In each of the motor parks, figure 20 shows that 87(39.9%) of the respondents in Abuja indicated that their highest educational qualification was secondary school, and 132 (52.2%) of the respondents in Lagos indicated that their highest educational qualifications were also secondary school. However, 5 (2.3%) of the respondents in Abuja indicated that they do not have formal educational qualifications.

6.3.4. Accident involvement record

A statistical model of individual accident risk prediction through a self-reported of six years history record of accident involvement by those respondents investigated. It showed that 68 (31.2%) of the respondents in Abuja had never been involved in an accident, and 106 (41.9%) of the respondents in Lagos had also never been involved in an accident in the last six years.

Also, 4 (1.8%) of the respondents in Abuja had been involved in accidents in the last six years, five times, while 2 (0.8%). Besides, in figure 32: Whether the respondent has or know any person or relation that had been affected in a road traffic accident in the last three years: The result showed that majority 190 (87.6%) of the respondents in Abuja had knew some persons or relations that were involved in a road traffic accident in the last three years and 172 (68.0%) of the respondents in Lagos also had or knew some persons or relations that were involved in a road traffic accident in the last three years. On the driver's accident involvement record, Wahlberg & Dorn (2009) in their study concluded that the accident record of drivers was relatively stable over some time "low-risk drivers and short periods equalling low crash means," and it might changes due to the samples and methods. They further suggested training intervention for bus companies (fleet) accident-involved drivers.

6.3.5. Vehicle ownership and maintenance

The vehicle's age directly had impact on its productivity and maintenance costs (Benmaanar, 2003). This was a question on the respondent's economic status and responsibility for vehicle maintenance. In figure 25, 118 (54.1%) of the respondents in Abuja indicated that the driver company vehicle, while 133 (52.6%) of the Lagos respondents indicated that they drive their private vehicles. On the other hand, 3 (1.4%) of the drivers in Abuja drove group or joint vehicles, while 52 (20.6%) of Lagos' respondents drove Company Vehicles. This result showed that commercial drivers drive more company vehicles in Abuja than Lagos while Lagos commercial drivers drove more private vehicles than in Abuja. Kuang et al. (2015) provide in their study on transport's low efficiency that affects driver's behaviours and proposes drivers' economic efficiency with special consideration of their driving conditions.

However, during the participant observation, the respondent's reply to the same question above, and the self-reported reply was almost the same, not receiving enough wages to change their vehicle. On whether they own the "Own the Vehicle they Drive": The result shows that 142 (65.4%) of the respondents in Abuja indicated that they did not own the vehicles that they drove and 154 (60.9%) of the respondents in Lagos. More than half of each park's drivers cannot be financially capable of owning or buying a new vehicle for their jobs. The implication is that most commercial drivers in both locations hire or work for the real owners of vehicles that they drive. Most of the respondents that they had not been able to buy more than a vehicle before.

6.3.6. Religion

The concept of religion provides belief system. Nigeria is the most populous and religious nation in Africa. The way people behave and reasonably assume to have a relationship with their religion. Religion distribution of respondents Fig. 19 showed that 144 (66.1%) of Abuja drivers were Christians. In comparison, 123 (48.6%) of the commercial drivers in Lagos were Christians Besides, 1(0.5%) of the drivers in Abuja and Lagos each practice other religions other than the three main religions in Nigeria. Pourshams & JanFada (2017) concluded on their study that there was a significant relationship between the factors of religious beliefs on the compliance of traffic laws and regulations.

6.3.7. Ethnicity

Fig. 23 gave details of the respondents' ethnicity. The result showed that 140 (64.2%) of the respondents in Abuja were Ibos and 188 (74.3%) of the Lagos respondents indicated that they were Yorubas. It implied that Abuja's commercial drivers were predominantly Igbos, while Yorubas were the dominant ethnic groups among the Lagos´s commercial drivers. Romano, et al., (2010), provided prevalence evidence of impaired driving as a function of age, gender, and race / ethnicity obtained from various selected studies across the USA. Meanwhile, on the other way around, Hamdan (2013) ´s study is inconsistent with the Romano et al., (2010) that support the influence of ethnicity in high risk behaviour.

6.3.8. Marital Status

Marriage is assumed to be requisite for human responsibility. According to fig. 21, the respondents' marital status indicated that 148 (67.9%) of the respondents in Abuja were married while 181(71.5%) of those respondents in Lagos were also married. Also, 6 (2.8%) of the respondents in Abuja were widowed while 5 (2.0%) of the respondents in Lagos were widowed. This result also showed that although both states had married persons as the highest number of commercial drivers, Lagos had the highest number of married commercial drivers. In addition, Abuja had the highest number of widowed commercial drivers. Shawky et al. (2017) admit that marital status among other variables has significant effect on traffic violations and crashes risk. This indicated that even though most commercial drivers in the two states live with their kids and wives, commercial drivers in Lagos live more with their kids and wife than commercial drivers in Abuja.

6.4. Part 1B: Self-Reported Background to Driving History

This section presents questions and results on the background history of the drivers that constituted those respondents investigated. Each question serves as the sub-theme topic for discussion.

6.4.1. Driving License Status

Driving license servers as a certificate of competency in knowledge, attitude, and skills to drive safely. The driver's license also serves as proof of proficiency (Okafor et al., 2013). Unlicensed driving is regarded as a severe problem that is linked to other higher risk driving behaviour (Watson et al., 2011). The most significant shock and revelation in the investigation was that not holding a driving license had become a criminal offense world. It shows that most drivers in both states had a driving license even though Lagos had more drivers that possessed their driving license than Abuja. Ipingbemi, (2008) corroborated these findings in his study at motor parks with commercial drivers attested that driving licenses procurement has been corrupted in Nigeria that individual who do not know how to drive are in possession of driving licence. In the same vein, Lagos also has many drivers who do not even have a driving license than those in Abuja. Fig. 24 presented findings on the driving licence status, 116 (53.2%) and 139 (54.9%) of the respondents in Abuja and Lagos respectively hold a driving license. On the other hand, 4 (1.8%) and 12 (4.7%) of the respondents in Abuja and Lagos respectively do not have any driving license.

6.4.2. Duration of driving a vehicle without a license

Unlicensed vehicle drivers are a high-risk group for crash fatalities and injuries (Blows et al. 2005). This is another wonderful event the researcher observed during the Abuja participant observation with the FRSC patrol team, where a bus driver carrying twenty-six passengers did not have a driving license. The scene was horrible because almost half of the passengers were reported knowing the driver and the law enforcement is delaying them to get their destinations on time. Also, fig. 27 showed that 72 (33.0%) of the respondents in Abuja indicated that they had spent between 4 months one day and seven months driving without driving license in Lagos, 61 (24.1%) of the respondents indicated that they had spent between 10 months one day – 1 year driving without a license before getting one. This result implies that most commercial

drivers in Lagos spend a longer period driving without a driving license in Lagos than those commercial drivers in Abuja had ever done.

6.4.3. How long have you gotten your first driving licence?

Figure 28 implied that in both Abuja and Lagos, the commercials drivers got their driving license between 6-10 years. However, despite the fact the commercial drivers in the two states got their driving license within the same time frame, it is evident that more of the commercial drivers in Abuja got their license within the time frame than those in Lagos. Boets et al., (2017), recommended graduated driving license (GDL) as used in Europe to allow learner drivers to gain expected driving experience and hence reduce their crash risk.

6.4.4. Have you been taught to drive in the night or bad weather or on the highway before getting your driving license?

However, figure 29 showed that 60 (27.5%) and 41 (16.2%) of the respondents in Abuja and Lagos respectively had been taught how to drive in the night or during rainfall or on highway before they got their license. This showed that even though most of the commercial drivers in both locations had not taught them how to drive in the night or daytime. The findings supported the views of Owens et al., (2008) who stressed the importance of educating drivers and all road users about the limitations of night vision and suggest retroreflective markings of the limbs.

6.4.5. Driving school lessons and graduation

Lack of training institutes, unskilled drivers and other factors that cause road traffic accidents (Khan & Tehreem, 2012). Driving task experience is concluded to be as a result of effective and efficient driving education, training and learning acquisition (Pereira da Silva, Santos, & Meireles, 2014)   The question asked was: Do you learn how to drive from Driving Schools. Fig. 30 showed that respondents in Abuja and Lagos learned how to drive from driving school were 110 (50.5%) and 105 (41.5%) respectively. On the other hand, 14 (6.4%) of the respondents in Abuja indicated that they learned how to drive alone (on their own), and 1(0.4%) of the respondents in Lagos indicated that they never learned how to drive. In modern research, apart from the importance of learning basic driving skills from an instructor or a teacher, Markelic, et al., (2012) suggests advanced driver-assistance systems (ADAs) that alerts when detecting inconsistent driving behaviour of a learner.

6.4.6. Duration for learning to drive

Driving is assumed not been giving the principal concern and priority in considering the increasing fatalities and injuries in less developed countries. The drivers investigated in both Abuja and Lagos learned driving in Lagos in less than 14 days with more drivers in Lagos than in Abuja, so also there was more commercial drivers in Lagos who learned their driving in more than one year than there is in Lagos.

6.4.7. Driving for more than two hours without making a stop to rest

´Hours of Service´ (HOS) or ´driving hour and rest time´ is meant to reduce fatigue and fatigue -related accidents if well enforced (Goldenbeld, 2017) Driving, while very tired, is hazardous. The rest time is assumed to reduce the driver's fatigue and crash. Fig.39 showed that 142 (65.7%) and 182 (71.9%) of the respondents in Abuja and Lagos respectively had driven for more than two hours without making a stop or rest. This implied that Lagos had more commercial drivers who drove for two hours without making a stop to rest than there are in Abuja. Most of the drivers did not know the importance of making a stop to rest. They worked all day and had a few travels all night. Some that semi-illiterates do not know how to calculate their mileage as some vehicle's mileage devises are not working.

6.4.8. Satisfaction with daily wages (or salary) and working hours

Commercial drivers´ working hours must be reduced to ensure balanced working / driving arrangement that ensure minimum period of rest (ILO. 2018). The result in Fig.40 showed that 128 (59.3%) and 163 (64.4%) of the respondents in Abuja and Lagos respectively were not satisfied with their daily wages (or salary) compared with your hours of working.

6.4.9. Visual Acuity Test and Ear Test must be done before obtaining a Driving License

Sight is the essential sense of use in driving and through which a driver gains information (Grafftey,1988). To obtain a driving license, a driver should meet vision and hearing screening standards for driving safety. Fig. 35 showed that 181(83.4%) 128 (50.6%) of the respondents in Abuja and Lagos respectively, knew that visual acuity test and ear test must be done before obtaining a driving license, A study carried out in River State, Nigeria, Azuamah et al., (2014) supports annual detailed eye check-ups of commercial drivers before the renewal of the driving license will be granted. The presentation of a certificate of vision acuity test before the renewal

of a driving license, this rule has been in the National Road Traffic Regulation Rule No.24 Driving Test (FRSC/NRTR, 2004). According to (Emerole & Nneli, 2013), most prevailing eye ailments that may reduce visual acuity are pterygium, retinopathy, and glaucoma and these visual impairments and poor visibility are strongly related to road crash tendency among Nigerian vehicle drivers.

6.4.10. Whether combining two jobs or with just a job

The level of economic development in low-and middle-income countries is assumed to force people to engage in more than one job to be able to meet the necessities of life. The result of Fig. 41 showed that respondents who still combined their driving job with another job in Abuja and Lagos were 167 (77.3%) and 150 (59.3%) respectively.

6.4.11. Which of the organizations that conduct driving license practical and test?

The result on Fig. 42 showed that 118 (54.1%) and 156 (61.7%) of the respondents in Abuja and Lagos respectively, indicated that Federal Road Safety Commission (FRSC) is the organization that conducted the driving license Test. This implied that in both Abuja and Lagos, most commercial drivers see the Federal Road Safety Commission (FRSC) as the organization that is conducting the driving license test in Nigeria. It is however surprising, that only a just few of the respondents in Abuja and Lagos knew the organization given the responsibility of conducting a license test. The designated responsibilities for license training, examinations, and procurement include the following: Federal Road Safety Commission (FRSC) is the final place for license issuance after training and examination, the Vehicle Inspection Office (VIO) is where the driving practical and test are conducted, the Motor Licensing Authority is where applicant to obtain driving application forms, the Driver's License Centres and private Driving schools for license renewal and conduct of driving training as approved by Driving Schools Standardization Programme (DSSP) (NRTR, 2012, Akande, 2020).

6.4.12. The maximum speed limit of commercial buses in built-up areas

This is another part of the investigation that showed the level of unawareness of drivers driving on the road without knowing the road's rules and regulations. The road traffic safety policymakers must make an intensive effort to issue motorist's awareness and education in safe driving practices (Issa, 2016). Fig. 43 showed that 50 (22.9%) of the respondents in Abuja

indicated that the maximum speed limit of commercial buses in built-up areas is 30 km/hr and 16 (6.3%) of the respondents in Lagos reported that maximum speed limit of commercial buses in built-up areas is 2 km/hr. This implied that the maximum speed limit of commercial buses in built-up areas in Abuja is15 times higher than what is obtainable in Lagos. Besides, most respondents did not know the maximum speed limit of commercial Buses they were driving on urban and highways. The result showed that 51(23.4%) of the respondents in Abuja indicated that commercial Buses' maximum speed limit on Highways is 60km/hr and 12 (4.7%).

6.4.13. One of the groups that makes extortion of the respondent´s wages

Extortion has been regarded as a long-term parasitic link between the criminal and the victim (Elsenbroich & Badham, 2016). The result on Fig. 45 showed that 86 (39.4%) of the respondents in Abuja indicated that the Police / FRSC is the group that made great extortion of their daily wages and 116 (45.8%) of the respondents in Lagos indicated that the Police / FRSC is the group that makes excellent extortion of their daily wages. This implies that the Police/FRSC is the group that makes extortion of commercial drivers' daily wages in Abuja and Lagos.

6.5. Part 2: Participant Observation and Self-Reported Cognitive Questionnaire Evaluation
6.5.1. Part 2 A. Driver Behaviour Questionnaire (DBQ)
6.5.2. Introduction

Driver Behaviour Questionnaire (DBQ) is a reliable measurement tool used to examine the self-reported of drivers´ errors, lapses and violations (Reason et al., 199) in the four selected motor parks. Behaviour is defined as the way in which an individual behaves or acts (UNESCO, 2000). From the analysis, the links between behaviour and attitudes are assumed to be precise. Attitude is acquired through learning and interaction with our environment. The intention is to define as a person's subjective probability dimension that connects that person to a behaviour Fishbein & Ajzen (1975). The behaviour has been defined to affect a change from one situation to another or maintain an existing one (Ossorio, 2006).

6.5.3. Seat belt use

A seat belt is one of the passive safety devices, and the purpose is to retain and protect the driver and all occupants in the vehicle. Unrestrained passengers in a vehicle become human

projectiles and collide with each other in case of an accident. The first time front-seat occupants restrained policy was introduced in Nigeria was in 2003 (Sangowawa et al., 2003) and rear occupants enforcement took effect in 2015. Researches have said that more than sixty percent of all passengers or occupants' not using safety seat belts or safety restraints are ejected from the vehicle during a crash. As Kamal et al., (2017) state, 95% of road traffic accidents were due to human errors, and there should be two-way communication between humans, machines, and the environment.

However, based on the roadside observations, the result showed that 80% of motorists' in both Abuja and Lagos exhibited their rebellious attitude in not using a seat belt (SBU). This result complements the work of Siviroj et al. (2012), where the study conducted at the 12 petrol stations in four provinces in Thailand, where 28.4% of non-seatbelt use among drivers was found. Also, it indicates that most drivers observed on the Inside-vehicle methods failed to use their seat belts. From table 55, 80% of the drivers in Abuja used seat belts while 80% of Lagos drivers do not care to use seat belts (SBU). NHTSA (2010) provides high-visibility enforcement (HVE) for safety belt programs. It became a success when non-use of remarkable increase from $25 to $100 associated with 7-point increase use on offender's driving license.

6.5.4. Running or crossing a red traffic light

Traffic lights are essential devices to monitor and control the flow of traffic in all road segments. Running or crossing a red light is prone to accident risk. Fig. 47 showed that respondents have never crossed a junction at a red light in Abuja and Lagos respectively, while 79 (36.2%) and 124 (49.0%). This implied that more Lagos drivers have never crossed a junction at a red light than in Abuja. Ghazal et al. (2017) propose a PIC microcontroller device that evaluates the traffic density using IR sensors for timing slots with different levels and a portable controller for emergency vehicles in their smart light control system.

6.5.5. Drive at night with non-function vehicle headlights and indicator lights

Headlights and vehicle indicators are essential devices that motor-vehicles should have to make it roadworthy. Driving in the night has its limitation, and that is why (Owens et al., 2008) conclude in their study that increased in age and reduced illumination decreased road signs recognition. Findings as shown in Fig. 50 revealed 97 (44.5%) of the respondents in Abuja and 107 (42.3%) of the respondents in Lagos, never drove at night with non-function vehicle headlights and indicator lights. This implied that even though most commercial drives in Abuja

and Lagos never drove at night with non-function vehicle headlights and indicator lights, Lagos had more.

6.6. Part 2 B: Driver Attitudes Questionnaire (DAQ)
6.6.1. Introduction
The DAQ is used to examine the self-reported driving attitudes of the sampled drivers in the four selected motor parks.

6.6.2. Mobile phone use while driving

While on the wheel, the right attitude and behaviour assumed to be essential factors to becoming a good driver. Akande & Ajao, (2006), in their study enumerated the dangers and higher crash risk for using mobile phones while on the wheel. From the observation conducted (see Fig. 87), 80% of Abuja's motorists illegally had made use mobile phones while driving on the roads. Recent research helps safety policymakers develop effective strategies to reduce and discourage mobile use while driving with their investigation based on four phases in understanding mobile use impacts on driving behaviour and performances (Lipovac et al, 2017).

6.6.3. Types and condition of the vehicle at the motor parks

Another obvious observation was on the condition of the vehicles used for commercial purposes. Most the vehicles look deteriorate and lack proper maintenance and services. In Fig. 86 on the vehicle´s types and condition, 70% of the commercial vehicles observed in Lagos were terrible and not conducive and secured for passengers' mobility. Besides, most of the vehicles were not roadworthy. Vargas (2007) reveals that "a social community constructs that meditation by shaping its members' actions to teach other members how to verbalize effectively through the proper forms of action".

In addition, Fig. 79: Condition of the vehicle during the participant observation. Most drivers' negligent attitudes on vehicle maintenance and servicing were observed during the observation exercise in both survey sites. Based on the observations, 60% and 55% of motorists' attitude towards vehicle maintenance was negative in both Abuja and Lagos. Therefore, there were worse condition of vehicles (CV) in Abuja compared to Lagos.

6.7. Part 2 C: Driver Anger Scale (DAS)
6.7.1. Introduction

Skinner (1957) defines verbal behaviour as reinforcement from the reflection of another person´s behaviour. This involves social interaction between the driver and the other road users. According to the participant observation made in Abuja and Lagos, "verbal behaviour" (VB) during participant observation in Fig. 75 recorded 65%, and 60% among the drivers was positive, even though the drivers Abuja had more positive verbal behaviour than those in Lagos state. Anger is associated with aggressive verbal and body behaviour. The bus drivers-respondents in Abuja had more positive verbal behaviour than those in Lagos state (VB) 65% and 60%. This was demonstrated from their physical behaviour and gestures, which reflected in their concentration in driving performances.

Meanwhile, it was the other way around during the inside-vehicle observation. In Fig. 78. it was analysed that 55% of Abuja drivers had negative Physical Behaviour and Gestures (PBG) while 55% of Lagos´ drivers had positive Physical Behaviour and Gestures (PBG).

6.7.2. Over-speeding

Fildes et al (1991) confirm many drivers do not believe that speeding 30 km/h above regulated speed limits is dangerous. This might coincide with the result in Fig. 60 which showed that 66 (30.3%) of the respondents in Abuja indicated that they sometimes over speed when driving because they have excellent driving skills and respondents from Lagos with 70 (27.7%) showed that they sometimes over speed when driving because they have excellent driving skills. The implication of the data from both cities stated that most drivers sometimes over speed because they have excellent driving skills. Ellison & Greaves, (2010) concludes in their speeding study that males speed more than females with marginal age differences, and speeding is more noticeable on weekends at night and weekdays in the mornings.

6.8. Part 2 D: Driving Skills Inventory (DSI)

6.8.1 Introduction

Driving skill refers to perceptual-motor skills and safety skills (Martinussen, Moller, & Prato, 2017) Driving skills is how good an individual in handling a vehicle (Elander, West, & French, 1993). Driving skill, knowledge, and attitude while in control of a vehicle are as well assumed to be determinant of your approach to driving a vehicle safety. It has been established that

drivers exposed to formal driving training have lower crash rates than their informally trained counterparts (Beirsness, 1996) and (Fisher & Shapiro, 2005). Driving involves more than identifying road signs, merging into traffic, keeping safety distance, maintaining proper speed, and in charge of additional controls.

Driving a vehicle is not just holding steering, some of the observed drivers in Abuja and Lagos did not know the right correction of steering holding (see fig. 97). Balasubramanian & Bhardwaj (2018) concludes that the 8-4 position lowers the risk of muscle fatigue and reduces other injuries to drivers on long-distance driving. Besides, the steering-wheel grip is regarded as a function of gender, speed, and road condition (Eksioglu & Kizilaslan, 2008).

6.8.2. FRSC/Police invitation to educate on driving and traffic rules

The result in Fig. 63 revealed that 57 (26.1%) of the respondents in Abuja indicated that they were rarely invited by either the FRSC/Police for education on traffic and driving rules. Onuka & Akinyemi, (2012) in their assessment study of the FRSC educational program for drivers acknowledged the significant difference in behaviour of the drivers is based on the driving experience.

6.8.3. Leaving (2-4 seconds) safe gap between your vehicle and the vehicle ahead

In Fig. 65, findings revealed that 89 (40.8%) of the respondents in Abuja indicated that they do leave a safe-gap between their vehicle and the vehicle ahead all the times and 90 (35.6%) of the respondents in Lagos indicated that they do leave a safe gap between two vehicles. Premaratne & Ravindra (2016) suggest a device to be installed to alert the driver of another vehicle´s being too close.

6.8.4. Whether have seen or read about the Nigerian road traffic codes (rules)

Ogwude (2012) comments about the level of ignorance about the basic facts of road traffic safety among Nigerian transport users. A traffic code handbook of any country is essential for everyone because the rules apply to all road users. The result in fig. 65 showed that 79 (36.4%) of the respondents in Abuja indicated that they have never seen or read and understand Nigeria Traffic code (rules) and 88 (34.8%) respondents in Lagos reported that most times, they have seen or read and understand Nigeria Traffic code (rules). Arosanyin et al., (2012) concluded in their own compliance with road safety regulations that 42 % of motorists investigated were

not aware of the existence of the (Nigeria) Highway code expected to guide their conduct on the roads and the road traffic rules and regulations enforcement is below expectations.

6.9. Part 2 E: Social Climate Questionnaire (SCQ)
6.9.1. Introduction

SCQ is a dependable tool to measure commercial driver's safety driving in the complex, cultured and "work-related" driving environment.

6.9.2. Beliefs and religion distribution

The religious distribution of respondents' in Fig. 19 showed that 144 (66.1%) of the drivers in Abuja were Christians. In comparison, 123 (48.6%) of the commercial drivers in Lagos were Christians. Also, 1 (0.5%) of Abuja and Lagos´ drivers practice other religions other than the three main religions in Nigeria.

Meanwhile, during the inside-vehicle observation survey, this investigation allowed me to witness a scene in Lagos´s buses. It was a short observational journey from Mile 2 to CMS (Lagos Island), where a Pastor prayed inside the bus before we left. After the prayer, some of the passengers donated money for the religious "man of God". (Shook & Bratianu, 2010) state that only forms his or her attitude based on his or her beliefs in the possible outcomes. Some drivers also hang rosaries and place holy books and religious posters on the Vehicle´s inner part. Religion, superstitious, mystical practices, and underlying fatalistic beliefs are rightly potential links with road safety and risk-road use (Kouabenan, 1998: King, 2012; Kayani, et al., (2016). This is the type of predictors that the "westernized" measuring tool cannot effectively and efficiently address in low-and middle-income countries.

6.9.3. Likely to bribe a Police or Traffic officer when you are caught violating traffic rules

According to Oleinik (2015), in his case study of Russian traffic police "corruption on the road", he concludes that corruption subdues economic growth and road use strength where motorists have no incentive for fighting crime. Findings in Fig. 70 showed that 80 (36.7%) of the respondents in Abuja indicated that they rarely likely to bribe a Police or Traffic officer when they are caught violating traffic rules and, 83 (32.8%) of the respondents in Lagos indicated that they are never likely going to bribe a police or traffic warden when they are caught violating traffic rules. The implication of this is that Abuja has more commercial drivers who will likely bribe a Police Traffic officer.

6.9.4. Believe and agree in drivers' union or association.

This is another exciting and surprising thing I came across the two investigated Lagos parks during my two years of investigation going to motor parks. I saw severe loyalty, respect, and trust in the relationship between the motor-park leaders and other colleagues. That is why group dynamics model can be advantageous for policymakers in working and collaborating with those recognized leaders of the commercial drivers in different motor parks. Group dynamics is vital and effective notion of social system practice (Toseland, et al, 2004) as failure to pay attention to the drivers` union or association may affect getting complete compliance of traffic rules and regulations. The result in Fig. 72 showed that 87(65.4%) of the respondents in Abuja indicated that they have never believed and agreed with the driver's union or association and in Lagos, 73 (28.9%).

6.9.5. Whether road traffic accident depends on the will of God

According to Fig. 73, the result showed that 126 (57.8%) of the respondents in Abuja indicated that all the time they believe that traffic accidents on the roads depend on the will of God and 61 (24.1%) of the respondents indicated that they rarely believe that traffic accidents on the roads depend on the will of God at all time. Abuja respondents believe that traffic accidents on the roads depend on God's will than commercial drivers in Lagos. Loimer, et al (1996) indicate that old sovereign nations ruled by religious fundamentalists find it convenient to blame God´s acts for the substantial loss of life and agonizing go with natural disaster.

6.9.6. Whether preaching and prayers serve as protection for all the passengers

The result in Fig. 74 showed that 126 (58.9%) of the respondents in Abuja indicated that they believe that religious preaching and prayers in the bus service as spiritual protection for the passengers all the time traffic and 61(24.1%) of the respondents in Lagos indicated that they rarely believe that religious preaching and prayers in the bus service as spiritual protection for the passengers. This implied that commercial Abuja´s drivers accept more that religious preaching and prayers in the bus service as "spiritual" protection for the passengers than those in Lagos. Old and recent researches demonstrate that fatalistic beliefs, mystical and psychological factors are rightly potential links with road safety and reduction in accidents (Kouabenan, 1988; Ghous et al., 2017).

6.10. Part 3. Review of the Research Questions

This research aims to show the relationship between participants' demographic variables (age, gender, religion, education attainment, marital status, ethnicity and vehicle ownership) and their driving license status (missing license, under-renewal, without license and holder of license).

6.10.1. Research Question One (RQ1)
What are the relationships between Driver's Demographic Characteristics, Self-Reported Background to Driving history, and accidents?

The rationale for this research question explored the need to understand how driver´s demographics characteristics influence their driving behaviour and attitudes. The chi-Square table showed the relationship between Driver's Demographic Characteristics, Self-Reported Background to Driving history, and road accident rate. The result showed that age, religion, ethnicity, driving license status, and vehicle ownership of vehicle driven were among the driver's demographic characteristics that were significantly related to the rate of road accidents in Abuja and Lagos. The studies of Shokouhyar et al., 2017; Ahmed & Alghafli, 2017; Shawky et al., 2017; Alajyaseen et al., 2018) noted that demographic characteristics and psychological factors have significant relationships on traffic violations (Alavi et al., 2017). While among the self-reported background to driving history questions include: "Period used in learning to drive": "Period of driving without driving license"; "Learning to driver from driving school" " relations involvement in accidents in the last six years, participation in the eye and ear examination, miles are driven per day, hours of driving per day and satisfaction with daily wages were significantly related to the rate of road accident in Abuja and Lagos.

6.10.2. Research Question Two (RQ2)
Is there a link between attitudes, beliefs, and behaviours of drivers and the rate of accidents?

The rationale for this research question explained the need to understand the link, effect, and influence of beliefs in driver´s decisions while on the wheel.

It was established the significant correlation between attitudes attitude and the rate of accidents. Pearson correlation Sig. (2-tailed) N was used to find the link. The Correlation is significant at the 0.01 level (2-tailed). The result showed a moderately positive correlation between drivers' attitudes and the rate of accidents. The P-value (significant value), which is 0.000, is less than

0.05 level of significance. This, therefore, means that there is a substantial link between the two variables. Hence, drivers' attitude influences the rate of accident.

-The link between Social Climate factors and the rate of accident

The result shows a weak positive correlation between the social climate and the rate of accidents. The P-value (significant value), which is 0.779, is more than 0.05 level of significance. Therefore, this means that the link between the two variables was not significant; instead, it was a weak but positive link. Hence, the influence of social climate on the rate of accidents is weak and may not be noticeable. This further implied that the influence of variables such as beliefs may not be noticeable on the rate of accidents.

-The link between Driver's Behaviour and the rate of accident

Pearson correlation Sig. (2-detailed) N is used. The result shows a moderately positive correlation between a driver's behaviour and rate of accident. The P-value (significant value), which is 0.000, is less than 0.05 level of significance. This, therefore, means that the link between the two variables was significant. Hence, drivers' behaviour influences the rate of accidents as it also demonstrates by the study of Sabbour & Ibrahim, (2010).

6.10.3. Research Question Three (RQ3)
Is the driver's educational model a useful tool for attitude formation and change to reduce the aberrant driving behaviour?

The main reason for this question research is to find an appropriate measurement instrument and theory suitable and significant for attitude formation, modification and change hence reduce traffic accidents on our roads.

Linear regression results showing the relationship between the driver's educational model and the driving behaviour. The table also shows a coefficient of correlations (R) of 0.579, which indicated a moderate relationship between the two variables, the driver's educational model and the driving behaviour. The adjusted R square of .334. This means the driver's educational model can explain a 33.4% variation in the delivery's behaviour. The independent variable's contribution to the dependent variables was significant (F = 236.417; df =1; p<0.05. Hence, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). Hence, the result showed that the driver's educational model significantly affectsed driving behaviours. Moreover, an appropriate LOMICS behaviour measurement

instrument that consider more important variables of a typical driver from low-and-middle-income countries was adopted.

6.10.4. Research Question Four (RQ4)
What are the basic correlations and significant differences between the risk-driving factors and the rate of accidents among commercial motor vehicle drivers in Abuja and Lagos State?

The rationale for this question came from the need to understand some basic correlations and differences between aberrant driving behaviours and attitudes among drivers in Lagos and Abuja and the rate of accidents in those two areas as a significant sampling representation for the country.

-The link between Drivers Attitudes and the rate of accidents in Abuja

Multiple Regression of Accident is used to analyse the essential correlation and significance between the accident rate in Abuja and Driver's Attitudes. The R^2 on the result of driver's attitudes on accidents in Abuja is 0.6150, indicating that approximately 61% of the variation in an accident in Abuja is explained jointly by its driver's attitudes such as over-speeding; "Receiving a call (or make a call) and text on a mobile phone when driving"; "Drive when you are weak, tired or sleepy"; "My friend always drive on the middle of the road"; "Drinking alcohol and other intoxicants before driving"; "How often do you intend to disobey traffic rules and regulations. This finally indicated that 39% of Abuja's accident variations are explained by some variables not controlled in the model.

The relation is significant on aberrant Over-speeding behaviour reported. Furthermore, our F-statistic is 3.64 and significant at 1% level, indicating that the model is adequate and significant. The over-speeding coefficient is 47.58924, indicating a positive relationship between accidents in Abuja and Over-speeding. "Drive when you are very weak, tired, or sleepy" is -11.40337, indicating a negative relationship with an accident while always drive in the middle of the road is 7.905035, showing a positive and significant relationship with an accident.

-The link between Drivers Attitudes and the rate of accidents in Lagos

Multiple Regression of Accident is used for the analysis. Our R^2 on the result of driver's attitudes on accidents in Lagos is 0.5095, indicating that approximately 50% of the variation in an accident in Lagos are explained jointly by its driver's attitudes such as Over-speeding which according to Alonso et al, (2013) most drivers do aware of breaking the law by over-

speeding.; "Receive call (or make a call) and text on a mobile phone when driving"; "Drive when you are very weak, tired or sleepy; my friend always drives on the middle of the road"; "Drinking alcohol and other intoxicants before driving"; "How often do you intent to disobey traffic rules and regulations" (the joint relationship between the dependent variable and independent variable combined). This indicated that 50% of Lagos´ variations in an accident are explained by some variables not controlled in the model. Finally, "How often you intend to disobey traffic rules and regulations" coefficient is -0.6604573, indicating a negative relationship on accident in Lagos roads. This relationship is statistically significant at 5% level. That indicates that a percentage change in how often you do intent to disobey traffic rules and regulations will cause an accident in Lagos to decrease by 66%.

-The link between the rate of accident in Abuja on the social climate

Multiple regression is also used as a tool of analysis. Our R2 on the result of social climate on accidents in Abuja is 0.33, indicating that approximately 33% of the variation in an accident in Abuja is explained jointly by its social climates when asked such questions: "Likely to bribe a police or traffic officer"; "Blurred vision while driving"; "Workload pressure"; "Belief in drivers' unionism"; "That accident is a will of God" and "Prayer in the bus is accepted as "spiritual" protection". This indicated that some variations in an accident in Abuja FCT are explained by variables not controlled in the model.

-The link between the rate of accident in Lagos on the social climate

With multiple regression statistical calculation, our R2 on the result of social climate on accidents in Lagos is 0.51, indicating that approximately 51% of the variation in an accident in Lagos is explained jointly by its social climates such as likely to bribe a police or traffic officer; blurred vision while driving; workload pressure; belief in drivers' unionism; that accident is a will of God, and prayer in the bus is accepted as "spiritual" protection. Furthermore, our F-statistic is 2.69 and significant at 5% level, indicating that the model is adequate and significant.

-The link between the rate of accident in Abuja on Driver's behaviour

 Multiple Regression analysis puts the figures in the parentheses are the t ratios; the parameters are significant at 10 %. Our R2 on the result of driver's behaviour on accidents in Abuja is 0.482, indicating that approximately 48% of the variation in an accident in Abuja is explained jointly by its driver's behaviour questions; "Risk overtaking at the curve and narrow roads"; "Crossing a junction at a red light; using of the seat belt"; "Driving while distracted or thinking

about other things; driving at the night with non-function vehicle headlights and indicator lights"; and "Unplanned overtaking on the right or left lane" (the joint relationship between the dependent and independent variables combined). This indicates that 52% of the variations in an accident in Abuja are explained by some variables not controlled in the model. Furthermore, "Driving while distracted or thinking about other things" coefficient is 5.497762 showing a positive relationship with an accident on Abuja roads, and this relationship is not statistically significant. Driving at the night with non-functional vehicle headlights coefficient is -15.61419, indicating a negative relationship between the accident in Abuja and drive at the night with non-functional vehicle headlights and indicator lights. This relationship is statistically significant at 1% level.

-The link between the rate of accident in Lagos on Driver's behaviour

Multiple Regression of Accident in Lagos on Driver's behaviour explains that Our R2 on the result of driver's behaviour on accidents in Abuja is 0.4007, indicating that approximately 40% of the variation in an accident in Lagos is explained jointly by its driver's behaviour such as "Risk overtaking at the curve and narrow roads"; "Crossing a junction at a red light"; "Using of the seat belt"; "Driving while distracted or thinking about other things"; "Drive at the night with non-function vehicle headlights and indicator lights; unplanned overtaking on the right or on the left lane" (the joint relationship between the dependent variable and independent variable combined). This indicates that 60% of the variations in Lagos´ accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.10 and significant at 5% level, indicating that the model is adequate and significant. "Risk overtaking at the curve and narrow roads" coefficient is –1.490896, indicating a negative relationship between accidents in Lagos and risk overtaking at the curve and narrow roads. And this relationship is significant at 5% level. Finally, "Unplanned overtaking on the right or on the left lane" coefficient is -6.483069, indicating a negative relationship on accident in Lagos roads, and this relationship is statistically significant at 5% level.

-The link between the rate of accident in Abuja on Driver's skills.

Multiple Regression of Accident in Abuja on Driver's Skills. Our R2 on the result of driver's skills on accidents in Abuja is 0.22, indicating that approximately 22% of the variation in an accident in Abuja is explained jointly by its driver's skills with such questions as: "Is your

driving knowledge, skills and abilities are as good as they could be"; "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe"; "Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror"; "Have you seen or read and understand Nigeria Traffic code (rules); "Do you believe that people that went for driving training and driving education before acquiring driving license are better drivers"; "Do you check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents" (the joint relationship between the dependent variable and independent variable combined). This indicates that 78% of Abuja's accident variations are explained by some variables not controlled in the model.

-The link between the rate of accident in Lagos on Driver´s skills.

Multiple Regression of Accident in Lagos on Driver's Skills. Our R2 on the result of driver's skills on accidents in Lagos is 0.57, indicating that approximately 57% of the variation in an accident in Lagos is explained jointly by its driver's skills such as: "Is your driving knowledge, skills and abilities are as good as they could be"; "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead to be safe; "Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror"; "Have you seen or read and understand Nigeria Traffic code (rules)"; "Do you believe that people that went for driving training and driving education before acquiring driving license are better drivers"; "Do you check your vehicle tyres before starting your vehicle engine because of the probability of getting accidents" (the joint relationship between the dependent variable and independent variable combined). This indicates that 43% of Lagos´ variations in an accident are explained by some variables not controlled in the model.

Furthermore, our F-statistic is 2.48 and significant at 5% level, indicating that the model is adequate and significant. "Is your driving knowledge, skills, and abilities are as good as they could be?" The coefficient is 4.553756, indicating a positive relationship between accidents in Lagos and respondents driving knowledge, skills and abilities are as good as they could be. And this relationship is not statistically significant. Moreover, "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead so as to be safe" coefficient is 1.387962, indicates that there is a positive relationship between the accident in Lagos and "You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead so as to be safe" and "texting on a mobile phone when driving" and not statistically significant.

"Do you believe that people that went for driving training and driving education before acquiring driving license are better drivers" coefficient is 6.22509, indicating a negative relationship between the accident in Lagos and "Do you believe that people that went for driving training and driving education before acquiring driving license are better drivers". This relationship is statistically significant at 1% level. Finally, "Do you check your vehicle tyres before starting your vehicle engine because the probability of getting an accident" coefficient is -1.277834, indicating a negative relationship on accident in Lagos roads? This relationship is statistically significant at 10% level.

6.11. Summary

This chapter in this study explains the research results and provide a comprehensive highlight of the study data. The discussion detail assumes that the Nigerian policymakers and road safety personal have discovered a lot of loopholes in managing and controlling aberrant behaviour to reduce accident crash risk tendency.

Chapter 7: Implications of the Research Study

7.1. Introduction

This chapter explains the significant implications of this research findings to respond to the study´s research questions and help achieve the objectives of this study: "understand the trends, roles, and characteristics of passenger transport drivers". Besides, to "investigate what extend enforcement and attitude formation and change intervention to minimize risk driving behaviour" and impact all these findings on future research and policy decisions on the road safety sector.

This study demonstrates that road traffic safety culture and discipline significantly effect on risky driving attitudes and behaviours in all ramifications. This study's findings show an urgent implication for the improvements of driving culture, driving behaviour and disciple, and general enforcement of traffic rules and regulation and road safety management standards in Nigeria. Researchers revealed the absence of good driving culture on most Nigerian roads (Uzondu, 2019; Balogun, 2006, & Oyeyemi, 2003). Moreover, with details analysis in this study will significantly impact future research on driver behaviour evaluation with the introduction and adaptation of an instrument called LOMICS-DBQ capable of giving an adequate and valid behavioural measurement of a typical driver from low-and middle-income countries of the world. The new measuring tool called LOMICS explores complete cognitive and psychometric variables summation of before of a typical commercial driver from least developed countries.

7.2. Adaptation of new behavioural measuring instrument for least developed countries

 The investigation opens many gaps to fill on the issue of aberrant behaviours. It suggests that a driver should be placed as the main target of intervention and traffic systems, and infrastructures should be designed to accommodate human errors. With a high volume of drivers as the population increases, this simultaneously increases the probability of a crash or an accident, injury, and fatalities that cause grief and pain to the victim's family and health and economic loss to the government.

This makes it vital to provide potential and sustainable countermeasures such as education and training, awareness campaigns, and road infrastructures, as explained with sustainable theories and models suitable for low-medium-income countries (LOMICS). The research involves a quantitative method of items adopted out of the structured cognitive and psychometric

variables of 30 items and 28 questions on driving license status and socio-demographic characteristics.

7.3. Justification for the new instrument and contribution to existing knowledge

This new instrument is an expected development that will give new insights to academia and policymakers in terms of validity and variability in the behavioral investigation, most notably in low- and middle-income countries with characteristic complex socio-economic, cultural, political, and religious beliefs. A number of social questions were included in the questionnaire to determine participant age, gender, driving history (years of experience, a note of traffic offenses and crashes), weekly driving exposure (types of car, driving hour, etc.) Self-reporting and self-administered questionnaires were used to retrieve data from the respondents. The new measuring adopted tool called LOMICS-DBQ is an expected development that will give new insights and add value to the transport sector and specialists, key stakeholders, academia, and policymakers over the old "westernized" measuring tools. These tools do not take adequate consideration for low-and medium-income countries with complex characteristics in socio-economic, cultural, political, and religious beliefs. These five adopted tools have been tested and used in terms of validity and variability in behavioural investigations.

7.4. Filling the existing gaps in driving education and risky driving behaviour

There is a huge gap existing between licensing procurement and evidence available on the rate of accidents. The gaps include driving education, driving procurement and certification, and risk factors associated with abnormal driving behaviour. A recent study proves that drivers play a significant role in road traffic accidents in Africa (Deme, 2019). This investigation aims to fill this gap by considering the intricacies of license procurement and safe driving behaviour. Approximately, 93% of the world's fatalities on the roads occur in low-and middle-income countries, and these countries dominantly approximately 60% of the world's vehicles (WHO, 2020). A road traffic accident is predicted to become the 7th leading cause of death by 2030 (WHO Factsheets, 2018). The UN World Population Prospects in 2017 had predicted the world's population would hit an astonishing 9.8 billion by 2050 and that Nigeria will catch up with the United States to set off the third most populous nation in the world and surpass the 300 million people mark by 2050 (CNN- Inside Africa, 2017).

7.5. The economic burden on the rate of accidents in Abuja and Lagos

Road traffic accidents have become everyday affairs in which lives are lost every day in Nigeria (Ovuwori et al., 2010). Besides, 65 billion dollars that are more than the total amount of all foreign aids and donations to developing countries were calculated lost due to pervasive road traffic crashes and injuries (Nantulya et al.,2003) while 518 billion dollars was wasted on a global estimate of the direct economic cost in crashes and injuries (Penden et al.,2004).

The increasing rate of accidents on the highway roads in Nigeria has a severe adverse effect on its socio-economic development (Oyeyemi, 2003). A report from the lead-traffic agency in Nigeria explained that the yearly average of 1,457 cases recorded and a monthly average of 121 crashes involving mini-buses with passengers and trucks on Nigerian roads, and other low-income countries increasing the morbidity and mortality rates (Mock et al., 1999).

7.6. Strategies for Driver's Behavioural Change and Learning

This study has demonstrated that modern scientists have agreed on the three cardinal factors that determine driving attitudes and risky driving behavior are personal attitude and behaviour; cognitive variables, situational cultural factors, and socio-economic demographic factors. Furthermore, it is evident in other literature discussed in this thesis that changes in attitudes can be evident if it is measured. Attitudes predict many aspects of our driving behavior. Rosenberg & Hovland, (1960) demonstrated that attitude is regarded as a simple unitary concept with a complex of classical components: affect (emotions and feelings towards the target); cognition (beliefs or stereotypes about the target) and behavior (overt actions – the past and future behavioral intentions about the target).

Another school of thought, by Insko (1967), explained that learning takes place on the formation of attitudes, and O´Keefe (1990) supports Insko´s argument that the effect of new stimuli (event) creates an emotional response to individual learning processes. The theory of reasoned action (TRA) by Ajzen & Fishbein (1980) explained the attitude-behavior relationships, as a product of rational will and that human behavior can be predicted from behavioral intentions. The Theory of Planned Behaviour (TPB) took its origin from the Theory of Reason Action (Ajzen & Fishbein, 1980). It is accredited as one of the best-studied and applied theories on human behaviours. The theory is considered the most effective and most influential for explaining and predicting different behavior (Armitage & Conner, 2001). The

theory was widely chosen on the road traffic sector by researchers and safety specialists as it demonstrates that the construct that most affects behaviour is the intention. In contrast, the rest of the constructs have a lower impact on behaviour.

Meanwhile, aberrant risk driving, and behaviour can be modelled and controlled if necessary, measures and learning strategies are taken. Most theories discussed in this study (Chapter, 2) attest to modelling of behaviour. (Festinger, 1957), claims that dissonance will be resolved by changing beliefs, changing action, and change the perception of action. Stephen & Ukpere (2011), also argue in their study that attitude can be re-adjusted to favor how we have already behaved. In his famous theory of Risk Homeostasis, Gerald J. S. Wilde suggests four components to individual calculations relating to risk; expected benefits of risky behaviour; expected costs of risky behaviour; expected benefits of safe behaviour; and expected costs of safe behaviour (Wilde, 1982). Social Cognitive Theory (SCT), by Albert Bandura develops in 1986, explains the concept of learning as a dynamic and reciprocal interaction of "person", "behavior" and "environment". Hovland popularizes Re-enforcement learning theory, is in line with (SCT) with the principles of learning produced through reinforcement with interactions of learners with their environment (Hovland et al, 1953).

Finally, to achieve behavioural change changes and needs in education and training environments because of advances in information technology. The standardized instructional design helps to make the task of learning and a new method of instruction more possible and necessary. The present age instructional curriculum of modelling or changing individual behaviour assume to address all the three domains of cognitive (thinking), psychomotor (doing), and affective (feeling) should be integrated or consolidated. Uzondu (2019) concluded that road safety measures such as education and information campaigns could succeed in Nigeria compared to other interventions. Lastly, good teaching and learning require a mastery of techniques that produces excellent imagination, versatility, and understanding (Owen et al. 1978).

7.7. Summary

This chapter has thoroughly discussed the new behaviour measuring instrument (LOMICS-DBQ), the implication for the behaviour scientists to look inward of those complex variables in low-and middle-income countries, and field study trips to Bangkok and London bus transport

management and professional competency. The study also contributes to existing knowledge in behavioural change and learning with improved and sustainable driving education and training instructions and strategies to fit modern civilization and technology. This discussion above will have a considerable impact on future research and policy decisions on road traffic safety.

Chapter 8: Limitations of the Study

8.1. Introduction

This chapter discusses the overall limit of these research results. This will include some limitations in the research design, and data analysis methods are to be addressed. This study is limited in scope as it streamlined to human behaviour as an essential factor in accident causation. Such other aspects, like technology and environment, are not within the scope of the investigation. This section also demonstrates the study´s problems and how it has been addressed (Olufowote, 2017) to make the conduct and construct of future similar research study valid and comparable.

8.2. Adequacy of the data collection

Moreover, the adequacy of the data collection is the first subject on the study limitation. National Bureau of Statistics (NBS) and Federal Road Traffic Corps (FRSC) study data sources. It was later established that the NBS depends on the data facilitated by the FRSC. The full year of road traffic accidents (RTA) data of 2019 could not be facilitated until May 2020. The study must use the 3rd quarter RTA (January -September 2019) to complete the data investigation analysis. Most traffic accidents in Nigeria are underreporting and incomplete accident records. Habitually, missing relevant data is a critical problem for qualitative and quantitative researches in all developing countries (Jacobs & Sayer, 1983).

8.3. Adequacy of the self-report method

The self-report method is classified to facilitate a significant advantage that all crashes can be reported by supposed respondents (James, et al., 1993). The only slight problem the study had was with the semi-illiterate respondents present in all the four motor parks. It took more time to explain to some of them in local languages despite using the opportunity of their break-time to administer the questionnaire. All the research assistants from Abuja and Lagos explained various issues during the first day the Questionnaire administration training and rehearsals meetings was organized. Respondents might have withheld personal information and personal in-depth road traffic experiences due to the event´s circumstances and unfamiliarity. Some self-report responses that biases on self-evidently socially desirable (Parker et al., (1992). Groeger, (1990) concluded that self-report assessment without corroboration of a behaviour index is insufficient to answer questions. In the possibility of measuring attitude of an individual,

opinions do not necessarily mean the prediction of what the same individual will do (Thurstone, 1928).

8.4. Extension of population sampling

Measurement in road user behaviour, more significant insights, factual and enormous self-reported behaviour responses, and extended population sampling could have been achieved if the study sites were extended to four places to cover more than two regions. This could have made it an elaborate and accurate reflection of a cross-sectional survey study of a country with exogenous multi-cultural diversity. Research evidence shows that religion and cultural beliefs significantly influence what people think and do (Rashid & Ibrahim, 2007). Besides, this could have also help to determine where bias exists to generalize the research findings (Datta, 2018).

8.5. Limitation of the research method used

The limitation is related to the method adopted. Specific problems were note as respondents' response biases on noticing the road traffic safety officers. Another measuring tool like a car simulator or GPS camera could have been used even though it will involve much red-tape bureaucratic approval and time-consuming processes.   The participant observation aspect could have been done with a car simulator device considering the survey site population´s factors.

8.6. Academic versus virus pandemic

Finally, the second part of Bangkok´s observation investigation journey was marred by the COVID-19 pandemic that got the researcher stranded in Bangkok for almost three months because of cancelled flights. The epidemic disrupted most of the researcher's academic appointment dates, interview with the transport agencies officers, and possible presentation of my academic research article to the transport department of the Asian Institute of Technology (AIT) in Bangkok, Thailand.

8.7. Summary

This chapter explains the few limits that might influence the results´ interpretations, most especially some variables that were not in control in this study´s methodology. Most limits and flaws will be the theoretical and empirical base, guide, and need in future research.

Chapter 9: Conclusion and Recommendations for Future Research

9.1. Introduction

This chapter is categorized into two sections: conclusion and recommendations. The concluding section summarized and reflects on the relationships among the results and related coverage of literature reviews on this study and gives feasible and practical recommendations to reduce auto-crash carnage revamping the most populous nation in Africa and others.

The second section is the recommendations for extension and improving future research quality, most especially in scope, design, data collection tools and methods.

9.2. Overview of the study and recommendations for the policymakers

In terms of achieving the general and specific objectives (in Chapter 1.6.1 and 1.6.2) of this study with comprehensive literature review coverage on behavioural models and theories, changing attitudes through learning and skills development and proactive interventions was made to provide solution frameworks for the low-and middle-income countries. Past research has demonstrated that effective interventions in developed countries in reducing road crashes may not be effective in low-middle-income countries and vice versa (Hill & Jacobs, 1981) and that is the main reason that this study adopted a reliable and valid instrument called (LOMICS-DBQ). Besides, as stated in this study, risk driving is rapidly increasing and estimated to be a significant cause of vehicle accidents in Nigeria. The research archived the study goal to utilize the adaptation of five prominent driving measurement instruments to investigate the relationship between self-reported attitudes, behaviours, and crash involvement.

Moreover, with the findings in this study, humans' errors play a role in such a large percentage of crashes in Nigeria. Risky driving behaviour contributes significantly to the enormous burden of injury and death worldwide (WHO, 2004). This road carnage in Nigeria is not farfetched as some researchers blame it on the absence of good driving culture (Uzondu, 2019; Balogun, 2006; Oyeyemi, 2003). Since the advent of the Ministry of Transport in Nigeria, many interventions and countermeasures must have been taken to reduce road traffic accidents in Nigeria by the policymakers. Those steps and measures might have been with unclear or unrealistic aims, poorly and weakly evaluated and executed (Sullman, & Dorn, 2015). There is a need for a safe systems method for evidence-based and systematically implemented interventions that positively impact driver behaviour. To make this possible, the government

policymakers must make road traffic safety an issue of political priority and recommendations regarding policy, legislation, enforcement, and development of an institutional capacity to improve road safety (Peden et al., 2004). The Nigerian policymakers should also prioritize recruiting well-trained road safety officers for an appropriate information system to carry out research and evaluation studies of remedial measures on road traffic accidents (Atubi & Gbadamosi, 2015).

9.3. Overhauling and modification of the old traffic rules and codes.

Substantive review and changes in Traffic codes, regulations, and standardized driving training and education should prioritize policymakers to reduce the carnage on Nigerian roads. Most developed countries have approved by law some road traffic violations as criminal offenses with huge fines and imprisonment. This is the time to review road traffic rules and regulations consistently. We have a bunch of rules which the motorists do not understand talk of compliance. Most motorists cannot read road signs and markings correctly, thereby increasing accident risk (Ipingbemi, 2008). This development explains the pervasive ignorance of basic traffic rules and regulations widespread among illiterate and educated Nigerian road transport users (Ogwude, 2012). This is to be followed up with high-visibility enforcement and adequate road traffic safety enforcement, sanctions, motivation incentives, and offenders´ rehabilitation. The road traffic safety authority should incorporate and carry along with the National Union of Road Transport Workers (NURTW) responsible for drivers' placement, discipline establishment of driving training institutes and 'testing ground' for driving training. (Ipingbemi, 2008). Transportation rules, regulations, policies and traffic codes should be updated and make know to all road users. The lead agency (FRSC) should introduce better deterrent measures that should be taken against traffic laws offenders and the possibility of a robust professional identity within the Nigerian Police Force (Ogeleyinbo, 2015).

9.4. Driving license as a legal tender and criminality of dangerous traffic offenses and violation.

A driving license serves as a legal tender, a certificate of competency in knowledge, attitude, and skills to drive safely. Driver's license also serves as proof of proficiency (Okafor et al., 2013). Professional competence assessment (PCA) in the road safety sector is a welcomed intervention as this competency-based approach to assessing professionals is potentially more valid than traditional methods (Gonczi, 1994). The concerned policymakers must educate

drivers and driver's license procurement management with proper road safety education to improve traffic safety in Nigeria (Uzondu et al., 2018). A previous study from Jariot & Rodriguez (2007) during the formation of one-hundred driving instructors in Spain concluded a vital need for theoretical models of professional competences on-road formation of driving schools' instructors/teachers.

On the driver's accident involvement record, Wahlberg & Dorn (2009) conclude that drivers´ accident record is relatively stable over a period when "low-risk drivers and short periods equalling low crash means" and it might change due to the samples and methods. They further suggested driving training intervention for bus companies (fleet) accident-involved drivers.

9.5. Driving theory and practical as a compulsory national examination.

The policymakers have to make a driving license and practical a national mandatory examination to be organized and conducted with a trio of FRSC, National Transport Institute/University and Certified Driving Schools quarterly in a year and being written in English or other chosen approved Nigerian regional languages. (Stephens & Ukpere, 2011) in their study, 500 respondents concluded that intelligence level is emotional and that driving behaviour is not a function of the level of formal education but remarkably affected by the standards of driver training undergone before obtaining a driving license. The country can take clues to form other African countries who have started nationwide driving theory and practical examinations. This will stop issuing a "license to kill" instead of a license to drive to impending drivers.

9.6. Introduction to road traffic education in primary schools.

Previous research in Nigeria on accident and intelligence level concludes that driving activity requires safe journeys and arrivals to destinations (Stephens & Ukpere, 2011). Road traffic education should be introduced in both the primary and junior secondary schools' curriculum (Sumaila, 2013) and the parents' and guardians' collaboration on driving training and certification. (Sagberg, 2013) suggested that road crash reduced by increase the amount of accompanied driving in guiding the learning phase, which may have yielded an additional risk decrease.

With thirty-two years of existence of FRSC as at 16th of February 2020, a country like Nigeria should have a vision of zero or reduction policy of road traffic accidents fatalities with such step of traffic awareness and development from the youth level. Besides, the lead agency

(FRSC) should encourage female bus drivers as the previous study indicated that men have double the number of crashes than women (Chipman et al. 1992).

9.7. Digitalizing the vehicle plate number and driving license in a database

The two items, vehicle plate number, and driving license, should be credible source identification of the driver and the vehicle and its owner. For security purposes, the lead agency should embark on a genuine digitalization and biometric of all registered vehicle plate numbers. The plastic "credit card type" driving license for more excellent protection against forgery and illegal procurement of a driving license. This countermeasure will ease and facilitate drivers' mobility across Africa for unity, security, and socio-economic development. Balogun et al., (2015) suggest a time model for undertaking forecast and structures that the observed road traffic accident data and fit a model and proceed to forecast, monitoring, and feedback control. The digitalization of the plate number and driving license will be advantageous according to Balogun et al., confirmation and suggestion.

The digitalization of the plate number and license will facilitate reducing risk driving behaviours with introduction of driving licence point -system and safe driving workshops for drivers with repeat offenses and traffic violations (Arnau, & Montane, 2010).

9.8. A critical review of the exploratory literature

A comprehensive literature review was given in this study as probable models and theories with psycho-educational and skills development programmes for poor and risky driving behaviour (see Chapter 2. Sections: 13 & 14) adaptable for inventions and countermeasures in low- and middle-income countries. Most importantly, according to Ajzen (1991), the Theory of Planned Behaviour (TPB) connects human behaviour and intention and it encompasses individual both internal factors (skills, knowledge, and adequate planning) and external variables (facilitating conditions and availability of resources). This determines and influences behaviour in two ways, meditating the role of intentions (internal) and effect on behaviour (direct). The relevance of these cognitive questions and statements were developed and constructed within the 30 item-questionnaire of constructs of the Theory of Planned Behaviour (TPB), Behavioural Belief (BB), Normative Beliefs (NB), Control Beliefs (CB), Past Behaviour (PB), Intention (INT) and Descriptive Norm (DN).

Past research assumes that individual behaviour could be predicted and achieved by understanding and measuring of cognitive variables as our attitudes influence, direct or predict

our behaviour (Holdershaw & Gendall, 2008). However, while attitude is acquired through learning and interaction with our environment while the intention is defined as a person´s subjective probability dimension that connects that person to a behaviour (Fishbein & Ajzen (1975).

9.9. Recommendation for future research study

9.9.1. Introduction

This chapter built upon the study´s findings and suggestions to address the few limitations in this investigation for future research considerations. This chapter further explains the essential ideas for the future research investigation in the continuation of the long-term development of the newly adapted-low-and middle-income countries' behaviour measuring tool in the areas not adequately explored in this study. The time has come for the adoption of this kind of behaviour measuring instrument in developing countries with conflicting traffic cultures and environments. The traffic mix and the driver are different, where vulnerable road users share roads with vehicles. An environment with individual country variations, and different socio-political, policy economic contexts (Nantulya & Reich, 2002). Given the detailed results of the research and the study limitations identified, the following recommended as future research subjects are necessary, while an extension of this study should cover strategies for using an approach in improving compliance with road safety rules.

9.10. Recommendations for future research

Driving is a task that involves knowledge and skills for the driver and other road users' safety. A single error of a driver can have life or death consequences. The study emphasizes that extending enforcement and behavioural change and learning intervention could minimize risk driving behaviour. The study´s literature (chapter, 2), references made, and the frameworks, expanding theories, and sustainable modes discussed in this thesis could be of great advantage for future research. Moreover, it is evident and in supports of the study`s finding that characterization of driving behaviour increases crash risk and reorientation of drivers with driving models to meet up with smart cars in a smart environment (Fugiglando et al., 2017). The researcher prefer'e future research to be effective, efficient, and sustainable strategies and countermeasures in behavioural change of dangerous driving tendency put in place. On talking about drivers´ characterization, it is suggested that the concerned authority and policymakers

introduce road safety curriculum and subjects in primary and secondary schools for children road safety awareness and characterization build-up. Traffic regulatory bodies and authorities must be with up-to-date equipment, transparency, high proportion of traffic enforcement officers coupled with efficient surveillance programs and zero corruption.

9.11. Summary

Hopefully, this research contributed to an understanding of the link between attitudes and behaviour constructs. The findings and recommendations can serve as a basis for future research projects and road traffic safety standards management in Nigeria. This is so considering the fact that many of accidents injuries and deaths on the Nigerian roads can be prevented when necessary precautions are made.

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APPENDICES

Appendix A: Adapted LOMICS-DBQ cognitive 30 item-variables self-report questionnaires

Appendix B: Socio-demographic characteristics and driving background questions

Appendix C: Inside-vehicle participant observation template

Appendix D: Participant Observation template for observing drivers during FRSC patrol team surveillance.

Appendix E: Research Investigation Plan

Appendix F: Stakeholders semi-structured interview-questions template

Appendix G: Stakeholders NVivo analysed response

APPENDIX 1 A: ADAPTED LOMICS-DBQ COGNITIVE 30 ITEM-VARIABLES SELF-REPORT QUESTIONNAIRES

Instrument	Factors	No.	Items	Never	Rarely	Some of the time	Most of the time	All of the time	Remarks/ Note
DRIVER BEHAVIOUR QQUESTIONNAIRE (DBQ) 6 Items	Violation Errors And lapses	1	Risk overtaking at the curve and narrow roads						
		2	Crossing a junction at a red light						
		3	Using of seat belt						
		4	Driving while distracted or thinking about other things						
		5	Drive at the night with non-function vehicle head-lights and indicator lights						
		6	Unplanned Overtaking on the right or on the left lane						
DRIVER ATTITUDES QUESTIONNAIRE (DAQ) 6 Items	Drink-driving Mobile use, Speeding, Fatigue risk, Dangerous driving	7	Over-speeding						
		8	Receive call (or make a call) and text on a mobile phone when driving						
		9	Drive when you are very weak, tired or sleepy						
		10	Always drive on the middle of the road						
		11	Drinking alcohol and other intoxicants before driving						
		12	Disobey traffic rules and regulations						
DRIVER ANGER SCALE (DAS) 6 Items	Aggressiveness, Stubbornness, Disrespectful, Bad driving behavior	13	You tend to be irritable when you are waiting for a green light or in traffic jams						
		14	You drive so close to the car in front that it would be difficult to stop in an emergency						
		15	If you have good driving skills, over-speeding is not a problem						
		16							

Appendix A: Adapted LOMICS-DBQ cognitive 30 item-variables self-report questionnaires cont'd

		17	Often make obscene gestures, sound your horn and say bad things to other road users (e.g. other driver, passenger)							
		18	Do you stop for pedestrians when you are much in a hurry?							
DRIVER SKILL IINVENTORY (DSI) 6 Items	Road Traffic Skills, Driving training, Traffic education, Competence, Hazard perception	19	Is your driving knowledge, skills and abilities are as good as they could be?							
		20	You leave (2-4 seconds) safe gap between your vehicle and the vehicle ahead							
		21	Perceiving hazards in traffic by visual scanning and checking of the side mirrors and the rear-view mirror							
		22	Have you seen or read and understand Nigeria Traffic code (rules)							
		23	Do you believe that people that went for driving training and driving education before acquire driving license are better drivers?							
		24	Do you check your vehicle tyres before starting your vehicle engine							
SOCIAL CLIMATE QQUESTIONNAIRE (SCQ) – 6 Items	Cultural and Religious Beliefs, Physical and Psychological health, Drivers Union loyalty, First Aid skills, Work-load	25	It is more likely to bribe a Police of Traffic officer when you are caught violating traffic rules							
		26	You have had blurred vision while driving or unable to judge distances on the road.							
		27	Always under time, work-load pressure and economic stress							
		28	You believe and agree in drivers' union or association							
		29	Are traffic accidents on our roads depend on the will of God							
		30	Religious preaching and prayers in the bus serve as a "spiritual" protection for the passengers							

Socio-Demographics Characteristics and Driving Background Questions

This is a semi-structured question interview to assess and measure drivers' attitudes in terms of behavioural miss-fit decisions taken. It contains 20 statement items and three sections (demographics Characteristics and Driving Background. Participants must be ensured that all information given in this exercise will remain confidential and anonymity. This questionnaire will be administered with the adapted LOMICS-DBQ cognitive variables questionnaire.

Identification Code: ………………Date: ……………….………

Section 1: Driver´s Demographic Characteristics

(a) Age……….	**(c) Religion:**	**(d)Educational Attainment /status:**	**e) Marital Status**
	Muslim…….	1. None …………	Single …..
(b) Gender	Christian…	2. Primary …………….	Married ….
Male……	Traditional…	3. Secondary…………...	Divorced ….
Female…….	Others……...	4. Tertiary (Polytechnic/University) …….	Widowed …

(f) Do you live with your kids and/or with your wife?	**(g) Ethnicity:**	**(h) Driving License Status:**	**Ownership of Vehicle Driving:**
	Hausa……	Missing…	CompanyVehicle
	Ibo …….	Under Renewal….	….
Yes….	Yoruba……	No License…	Private-Vehicle
No ……	Other………	Holder of License….	….

Section 2: Self-Reported Background to Driving History

1. How many hours or days or weeks or years you used in learning first to drive a vehicle?...
2. How many months have you been driving without driving license before you get your license?...............
3. How long have you gotten your first driving license?...................
4. Have you been taught to drive in the night/during rainfall or on the highway before getting your license? Yes …   No………...
5. Do you learn how to drive from Driving Schools………?   by Friends…… by Parents/ relatives………alone?..................
6. How many times you have been involved in an accident in the last six years?........................
7. Do you have or know of any person or relation involved in a road traffic accident in the last three years? Yes……………. No…………………..

8. Are you the owner of the vehicle you are driving? Yes………No…….

9. If Yes, have you been able to buy more than a vehicle before?) Yes……...No………

10. Do you know that the Visual Acuity Test and Ear Test should be done before obtaining a Driving License? Yes…... No……...

11. Have you ever done both eye and ear examination test before driving? Yes …. No…….

12. How many kilometers (or miles) do you drive in a day?........

13. How many hours do you drive in a day?......

14. Have you been used to be driving for more than two hours without making a stop to rest? Yes…...No……

15. Are you satisfied with your daily wages (or salary) with your hours of work? Yes…...No……

16. Do you still combine this driving job with another job? Yes…… No……...

17. Which of the following origination conducted the driving license Test Motor Licensing Authority (MLO), Vehicle Inspection Office (VIO) or Federal Road Safety Commission (FRSC)? MLO…...VIO……. FRSC……

18. What is the maximum speed limit of commercial Buses in built-up areas…? (50km/hr.)

19. What is the maximum speed limit of commercial Buses on Highways …….? (90km/hr.)

20. Choose one of these groups that makes much extortion of your daily wages? (i) Police/FRSC…... (2) Union/Park/Road rates from colleagues… (3) Government Taxes……

APPENDIX 3 C: INSIDE-VEHICLE PARTICIPANT OBSERVATION TEMPLATE

INSIDE-VEHICLE PARTICIPANT OBSERVATION TEMPLATE

EACH DRIVER IS OBSERVED WITH NUMERICAL IDENTITY: …………………………………………………………

TITLE OF THE INVESTIGATION: ……………………………………………………………………………………

DATE OF THE PARTICIPANT OBSERVATION: ……………………………………………………………………

SITE OF THE OBSERVATION: ……………………………………………………………………………………..

MECHANISM USED IN THE OBSERVATION: ………………………………………………………………………

WHAT TO OBSERVE?   ATTITUDES AND RISK-FACTORS

DIMENSIONS AND CATEGORIES OF OBSERVATION

APPEARANCE OF THE DRIVERS: Age, Gender and Physical Appearance: ……………………………………………

COMMENTS: …….

VERBAL BEHAVIOUR: ………………………………………………………………………………………………

COMMENTS: ……

INTERACTION WITH OTHER MOTORISTS: ………………………………………………………………………..

COMMENTS: ……

INTERACTION WITH TRAFFIC OFFICERS: …………………………………………………………………………

COMMENTS: ………………………………………………………………………………………………………...

PHYSICAL BEHAVIOUR AND GESTURES: ………………………………………………………………………

COMMENTS: ……

CONDITION OF THE VEHICLE: (If it is roadworthy): ……………………………………………………………..

COMMENTS: ……

VELOCITY / EXCESS- SPEED: ………………………………………………………………………………………

COMMENTS: ……

DRIVING WITH MOBILE PHONE: ……………………………………………………………………………………

COMMENTS: ……

MAINTENANCE OF TWO SECOND SECURITY GAP: …………………………………………………………………...

COMMENTS: ……

TAILGATING: ………………………………………………………………………………………………………..

COMMENTS: ……

DRINK and DRUG DRIVING: …………………………………………………………………………………………

COMMENTS: ………………………………………………………………………………………………………..

NONE USE OF SEAT BELT: …………………………………………………………………………………………

COMMENTS: ……

NONE USE OF CHILD RESTRAINS: ……………………………………………………………………………….

COMMENTS: ……

TRAFFIC RULES AND SIGNS COMPLIANCE: ………………………………………………………………………

COMMENTS: ……

OVER-TAKING: ……

COMMENTS: ……

OTHER FACTOR INFLUENCING EXPOSURE TO RISK AND CRASH INVOLVEMENT: ………………………..

COMMENTS: ……

APPENDIX 4 D: PARTICIPANT OBSERVATION TEMPLATE FOR OBSERVING DRIVERS DURING FRSC PATROL TEAM.

TEMPLATE FOR THE PARTICIPANT OBSERVATION WITH THE ROAD TRAFFIC PATROL TEAM

OBSERVED DRIVER WITH NUMERICAL NUMBER: …………………………………………………….……………

NAME OF THE PATROL TEAM: …………………………………………………………………………………

SITE OF THE PATROL/CONTROL: ……………………………………………………………………………….

TRAFFIC OFFICERS INVOLVED: ………………………………………………………………………………..

DATE OF PATROL: ………………………………………………………………………………………………..

MECHANISM USED IN PATROL: …………………………………………………………………………………

WHAT TO OBSERVE?   ATTITUDES AND RISK-FACTORS

DIMENSIONS AND CATEGORIES OF WHAT TO OBSERVE

APPEARANCE OF THE DRIVERS: Age, Gender and Physical Appearance: ……………………………………………………………

COMMENTS: ……………………………………………………………………………………………………

VERBAL BEHAVIOUR: …………………………………………………………………………………………...

COMMENTS: ……………………………………………………………………………………………………

INTERACTION WITH OTHER MOTORISTS: …………………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………

INTERACTION WITH TRAFFIC OFFICERS: …………………………………………………….............................

COMMENTS: ……………………………………………………………………………………………………

PHYSICAL BEHAVIOUR AND GESTURES: ……………………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………

CONDITION OF THE VEHICLE: (If it is roadworthy): ……………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………

VELOCITY /EXCESS- SPEED: ……………………………………………………………………………………..

COMMENTS: ……………………………………………………………………………………………………

DRIVING WITH MOBILE PHONE: …………………………………………………………………………………

COMMENTS: …………………………………………………………………………………………………..

MAINTENANCE OF TWO SECOND SECURITY GAP: ……………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………

TAILGATING: ……………………………………………………………………………………………………..

COMMENTS: ……………………………………………………………………………………………………

DRINK and DRUG DRIVING: ………………………………………………………………………………………..

COMMENTS: ………………………………………………………………………………………………………..

NONE USE OF SEAT BELT: ………………………………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………….

NONE USE OF CHILD RESTRAINS: ………………………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………..

TRAFFIC RULES AND SIGNS COMPLIANCE: …………………………………………………………………………

COMMENTS: ……………………………………………………………………………………………………….

OVER-TAKING: ……………………………………………………………………………………………………….

COMMENTS: ………………………………………………………………………………………………………..

OTHER   FACTOR   INFLUENCING   EXPOSURE   TO   RISK   AND   CRASH   INVOLVEMENT: …………………………………………………………………………………………………..

APPENDIX 5 E: RESEARCH INVESTIGATION PLAN
TIME-TABLE PLAN FOR THE INVESTIGATION

Doctorate Research Study Timetable (2016-2020) Adewale Tajudeen AKANDE			
Department of Applied Education, Road Traffic Education and Training, University of Autonomy, Bellaterra, Barcelona. Spain			
PHASES	**WORK DONE**	**TIME**	**NOTE / REMARK**
Elaboration of Literature Review		October 2016 to December 2016	
Research letters	Preparing Introduction letters	December, 2016	
Observation Participation with Road Traffic Safety (FRSC) visit to Bureau of Statistics and Stakeholders	ABUJA (with Patrol Team of FRSC, Abuja)	January, 2017	
	LAGOS (with the Patrol Team of the FRSC, Lagos)	February, 2017	
Back to Spain	Preparation for the First Presentation (Literature Review)	From March, 2017	
First Presentation	Power Point Presentation	June, 2017	
Reading, Preparation of Thesis	Formation of Questionnaire and Stakeholders questions	August to November, 2017	
Sending Letters of Introduction	To Stakeholders and the Four Bus Stations Executives (leaders)	December, 2017	
Travel	Preparation and travel to Nigeria for proper Study Investigation	December, 25, 2017	
Site Survey	Lagos Investigation (at Oshodi Bus Terminus and Mile 2 Bus Station)	From 10th of January till 25th of January, 2018	
Site Survey	Abuja (Capital City) Investigation (at Peace Transit Bus Station and Utako Motor Parks)	2nd of February till 15th of February, 2018	

Federal Road Safety Corps (FRSC) 30th Anniversary Event / One- Man Protest	Staged a Peaceful One-Man Protest (Operation Zero Pot-holes Policy in Nigeria) at the Event with all Nigeria Road Traffic Safety Agents /Professionals/Stakeholders in atendance. Took advantage to distribute my Stakeholders questionnaires.	19th of February, 2018	
Media Invitation	Invitation to two radio stations (Splash FM and Voice of Nigeria (federal government radio) all situated in Ibadan, Oyo State, Nigeria for a live talk- program to discuss on the Zero Pot-holes Policy Idea in Nigeria	21-26 of February, 2018	
Travel	Travel back to Spain	27th of February, 2018	
Compilation and Introduction of Data	Raw Data introduction and re-sending of Stakeholders Structured Questions mails	March-May, 2018	
Second Presentation	Still with voluminous data introduction.	June, 2018	Postponed till September, 2018
Academy Research Plan	Use of telephone Mobile while on a Traffic Stop in Barcelona (Draft tòpic). An aademic research for publication.	October, 2018	Wish to conduct this research with one of my supervisors
Travel proposal	Research travel to Thailand or India (higly populated city with complicated bus transportation)	November. 2018	
Travel	To Britain (British Library / Road Safety Department) and Nigeria (FRSC and Stakeholders audio interviews). Academic Research on the issue of road traffic safety.	December, 2018 till February, 2019	With an academician while in Nigeria and it is also for publication.
Back to Spain	With a load of dependent variables Data	End of February, 2019	

Pre-Third Presentation	Realization, Preparation and Analysing of Data	March to May, 2019	
Third Presentation	Getting ready for presentation	Septembre, 2019	
Observation Investigation to London, United Kingdom	Transport for London & Drrivers Vehicle Standard Authority (DVSA)	October, 21st to November , 2019	
Observation Investigation to Bangkok, Thailand	Bangkok Mass Transit Authority & Ministry of Transport	February 18, 2020 To come back May,4 2020 (Covid 19 delay)	
Final Presentation	Final realization and defending of study research	10th September, 2020	

SEMI-STRUCTURED INTERVIEW QUESTIONS FOR THE STAKEHOLDERS IN ROAD TRAFFIC SAFETY

Stakeholder Name: …………………………………………………………………………………

Name of the Organization: …………………………………………………………………………

Position in the Organization: ………………………………………………………………………..

Contact Information: ………………………………………………………………………………

Date…………………………………………………………………………

Aim of the Study

This study interview will focus on the human factor issue concerning the increasing rate of accidents and development or modelling of applicable new interventions to reduce injuries and deaths on our roads.

Introduction

Ultimately, stakeholders are becoming recognized and respected as an essential part of any policy decision-making process and project development in all ramifications. This is more important to adapt and apply new Instrument of the construct of psychometric and cognitive variables to give accurate and trusted behavioural measurement of a typical driver from a low-and middle-income countries (LOMICS) as against "westernized" instruments.

The study style is a semi-structured interview that engages the interviewer and

respondent in a formal interview through electronic mail (e-mail). The questions are only meant to address the salient issue of the 'human factor' concerning the accident rate. I promise that the research findings' results will be communicated at the end of my study program.

Interview Questions

1. How best could we separate the reality of road traffic safety from personal myths,

taboo, and religious beliefs in some commercial drivers' minds?

2,We pick our bags to a bus station to meet an "unknown" vehicle driver that all passengers will entrust their lives with during the journey? How can passengers who are

sometimes the victims of crashes in commercial vehicles could help reduce

accidents (without being distracted) within and outside the vehicle in question?

…………………………………………………………………………………………

3. Most commercial drivers have demonstrated poor knowledge of traffic rules and safety measures in last year-January 2017 observation study in Abuja and Lagos conducted by me (researcher): What are the best measures to educate these drivers considering their age, language, educational background, and religious beliefs?

----

4. Alcohol-related driving is a severe and long-standing problem in Nigeria. There has been an outcry for removing the selling of alcoholic products in motor parks throughout the country. How could this vital issue be taken seriously and recognized to save more lives on Nigerian roads?

----

5. It is very relatively easy for anybody in Nigeria to get a driving license without proper driving training, skills, and education. The practical driving assessment resulting from many hours of supervised driving experience is better prepared for a lifetime of safe driving and is less likely to be involved in severe crashes (Drive Safe, 2016). Is there any effective logical way (or ways) to make sure that a driving license is given to the appropriate individual that has been trained, tested, and fit to drive?

……………………………………………………………………………………………

……………………………………………………………………………………………

6. Does persuading road users adopt safer attitudes and behaviour that can significantly reduce road crashes and injuries in Nigeria? How can this be resolved as attitudes and behaviour are a phenomenon of cognition, beliefs, norms, and past behaviour?

…………………………………………………………………………………………..

----

7. Considering the two main salient factors when modelling and developing road safety

advertisements, making the target audience to decode, understand

, and accept the message; Making the message content to address appropriate action or

problem. Can this be possible with a low educational level among those commercial drivers?

....

……………………………………………………………………………………………

8. Road traffic crashes and injuries can place a heavy burden on the family, relatives, friends, and even the injured person's community. With this in mind: How could community participation and driver's unions' passengers be of help for the informational feedback program as a behavioural tool for positive behaviour change?

....

……………………………………………………………………………………………

9. Are there better ways considering our socio-economic development in this country to make better use of available road crash data and improve the technical capacity to analyse data, identify problems, and implement the necessary prevention strategies?

………………………………………………………………………………………….

……………………………………………………………………………………………

10. Road safety is an issue of social equity. It is a known fact that public corruption affects the extent of traffic rules observance, enforcement, and risk driving (and riding) behaviours by all classes of road users in Nigeria? What are the essential steps to be taken to stop Police-Traffic officers and Touts from extorting drivers?

………………………………………………………………………………………….

…………………………………………………………………………………………..

11. The World Health Organization (Peden et al. 2004) had called for governments of the world nations (most especially developing countries) to make road safety a political priority to develop institutional capacity to

improve road safety. In what ways can the stakeholders and traffic professionals collaborate and participate in making this call reality in Nigeria?

……………………………………………………………………………………..

……………………………………………………………………………………..

12. Several research studies have shown the importance of enforcement to be related to the perceived risk of being caught and punished (Homel, 1990), and enforcement efforts should be random and widespread to increase the chances of detection (ETSC, 1999). How can we make enforcement effective and efficient with Police and Federal Road Safety Corps (FRSC)?

………………………………………………………………………………….

…………………………………………………………………………………..

13. Lastly, driving is a serious responsibility with physical and mental abilities impacting the driver's driving activities (Akande, 2010). Have your establishment collaborated on the ways of finding solutions to the magnitude of carnage on our roads? Are there any suggestions or opinions to give to find a lasting solution to this predictable and preventable age-long epidemic of road crash injury?

…………………………………………………………………………………

APPENDIX **7** G: STAKEHOLDERS NVIVO ANALYSED RESPONSE
STAKEHOLDERS RESPONSES NVIVO ANALYSIS
Qualitative Analysis
The qualitative analysis was presented thematically.

Theme 1: Religious Belief

Q5: How best could we separate the reality of road traffic safety from personal myths, taboo, and religious beliefs in some commercial drivers' minds?

The reality of road traffic safety is determined by the state of the road corridor, condition/roadworthiness of drivers' vehicle, and attitude.
<Internals\\Response 1 reference coded [5.55% Coverage]
Education remains the most potent tool for behavioral change and eradication of false beliefs and myths. FRSC educates commercial drivers in Ogun State weekly on the reality of road safety and the falseness of myths, taboos, and religious beliefs.

<Internals\\Response 2 reference coded [5.25% Coverage]
As professionals, commercial drivers should be very aware of the attitudes behind the wheel and observe all traffic rules and engage in safe driving skills. Drivers should inculcate good driving habits because they would fall into habit formation syndrome if they started with unsafe driving habits. Habit formation results from the repetition of a specific behavior until the behavior becomes automatic and hard to break.
Safety driving should not depend on one's myths, societal taboos, or religious beliefs because automobile accidents of the crash have three factors the exist sui generis. The crash factors include the environment, the vehicle, and the driver. These factors contribute in unique ways in one's driving experience.

<Internals\\ - Response 3 reference coded [14.66% Coverage]

Through public enlightenment and education
<Internals\\ Response 4 reference coded [3.65% Coverage]

This will be a bit difficult but be done through education, re-orientation, and awareness. We may have to start with opinion leaders, religious leaders, and traditional rulers that people listen to and hold in high regard. We also have to ensure that the commercial drivers association, the private car owners and their drivers, the commuters, and the society are informed and made aware that every one of us is responsible for keeping the road safe.

<Internals\\ Response 5 reference coded [7.70% Coverage]

Through a convincing and empirical method of relating cases occurrences with scientifically proven facts of the causes of the crash.

<Internals\\ Response 6 reference coded [3.35% Coverage]

In Nigeria, Some Myths Cannot Be Wished Away As They Are Rooted In Cultural

Beliefs.

<Internals\\ Response 7 reference coded [3.77% Coverage]

Through the Public Enlightenment Campaign and Education

<Internals\\ Response 8 reference coded [3.29% Coverage]

The government, agencies, and NGOs should collaborate and conduct consistent campaigns and sensitization of the citizenry, mainly commercial drivers.

<Internals\\ Response 9 reference coded [5.00% Coverage]

Educating them will orientate them, and their thinking will change for better; their perception of the use of roads will also change.

<Internals\\ Response 10 reference coded [4.68% Coverage]

Advertisement On Billboards and Good Road Signs

<Internals\\ Response 11 reference coded [3.26% Coverage]

They are to Realize That Once the Motor Engine Is Running they Have Less Than 20% Control Over What Happens; While They Can 'Trust' Their Instincts, They Can Say the Same for Other Road Users.

<Internals\\ Response 12 reference coded [5.26% Coverage]

It Can Be Done Through Sensitization and Rigorous Enlightenment to Commercial Drivers, Making Them Understand That Road Hazards Has Nothing to Do with Mythology and Religious Beliefs or Sentiments But Has More To Do With Human Error And Ignorance.

<Internals\\ Response 13 reference coded [4.67% Coverage]

By Educating the Road Users and Drivers in Both Local Language and English. And More Jingles in Broken English

<Internals\\ Response 14 reference coded [4.35% Coverage]

This can best be done through continuous education and reorientation of commercial drivers in the language they can understand on the causes of RTC-

<Internals\\ Response 15 reference coded [3.74% Coverage]

Through: Education, General Road Safety Enlightenment, Training and Re-Training of Road Users

<Internals\\ Response 16 reference coded [4.00% Coverage]

Through regular education of Commercial drivers on traffic rules and

regulations via workshops by relevant Government organizations and the commercial drivers Unions' leaderships.

<Internals\\ Response 17 reference coded [5.43% Coverage]

The reality of road traffic safety is determined by state of the road corridor, condition/road worthiness of the vehicle and attitude of drivers

<Internals\\ Response 18 reference coded [5.53% Coverage]

Many people in Nigeria believe that God or gods protect people irrespective of one's attitude to driving.

<Internals\\ Response 19 reference coded [4.69% Coverage]

Road carnages are the occurrence of both human and mechanical errors. Mechanical in the sense that unworthy vehicles, bad roads, etc. on one part and wicked and careless drivers, drivers with health challenges, like bad eye sights and seizures, all add up to usually cause road mishaps. These can be divorced from personal myths, taboo, and religious beliefs. Some people believe is "what will happen, will happen." I do not believe in this sermon. A little carefulness here and there could avert catastrophes on our roads.

<Internals\\ Response 20 reference coded [5.40% Coverage]

Personal myths, taboo, and religious beliefs do not cause road traffic accidents. Instead, human errors of omission or commission are the significant causes of road traffic crashes.

<Internals\ Response 21 reference coded [4.49% Coverage]

In Nigeria, some myths cannot be wished away as they are rooted in cultural beliefs.

<Internals\\ Response 22 reference coded [3.76% Coverage]

Through enlightenment i.e., radio jingles, road safety officers, billboards, etc

<Internals\\ Response 23 reference coded [3.59% Coverage]

Theme 2: Passengers Feed

Q6: As usual, we pick our bags to a bus station to meet an "unknown" vehicle driver that all passengers will entrust their lives with during the journey? How can passengers who are sometimes the victims of crashes in commercial vehicles could help reduce accidents (without being distracted) within and outside the vehicle in question?

Knowing the driver's experience
Knowing the driver's state of health
Knowing the driver's level of alcoholism

<Internals\\ Response 24 reference coded [8.09% Coverage]

*FRSC has an initiative called **"Passenger Watch"** It aims to encourage passenger, vigilance, cautioning of reckless drivers by passenger or report of reckless drivers to FRSC patrol teams for arrest and appropriate sanctions.*

<Internals\\ Response 25 reference coded [7.01% Coverage]

Passengers should be aware that distracting the driver in various ways tends to affect the driver's judgment and driving behaviour. Drivers should be allowed to have the presence of mind to make crucial split-second judgment and avoid getting into accidents that could have been avoided.

<Internals\\ Response 26 reference coded [9.75% Coverage]

The full concentration of passengers as well as the driver

<Internals\\ Response 27 reference coded [6.98% Coverage]

Passengers need to demand that the drivers do not drink and drive. This is a common thing in Nigeria. The right proportion of people driving on the road is drunk. They also need to keep an eye on the speed of the driver. If the driver is speeding, the need to let him know that they are not okay with driving above a safe speed limit.

<Internals\\ Response 28 reference coded [8.05% Coverage]

It is for them to realize that their lives are at risk and use the power to influence behavioral change in the drivers. This can be achieved through reporting to appropriate authorities such as the FRSC and Police wrong driving attitudes such as drunk driving, speed violations, dangerous driving, etc. and insisting to withdraw their patronage from such motor park(s) or fleet operator will be significant knowing that "the Customer is King."

<Internals\\ Response 29 reference coded [8.89% Coverage]

Passengers will do well not to distract the driver's attention while driving and behave well amongst themselves.

<Internals\\ Response 30 reference coded [7.08% Coverage]

By Ensuring That the Driver Observe Adequate Driving Etiquette, No Smoking, and Driving Rules And To Ensure That The Vehicle Is In order Before Commencement Of The Journey

<Internals\\ Response 31 reference coded [7.88% Coverage]

Passengers should caution or rebuke the driver when he is over-speeding or driving recklessly. Since their lives are involved, the passengers should be vigilant and active all through the journey.

<Internals\\ Response 32 reference coded [8.57% Coverage]

Insist on an alcohol-free driver. Insist on a driver with a driver's license

<Internals\\ Response 33 reference coded [6.77% Coverage]

Make Sure Goods Are Properly Packed and Be On Time. Be Friendly to Others Passengers

<Internals\\ Response 34 reference coded [6.68% Coverage]

Engage the driver in pre journey discussion and win their trust and confidence; leverage on this rapport to make observations on his driving during the trip.

<Internals\\ Response 35 reference coded [7.56% Coverage]

First and foremost, the driver must have a conducive atmosphere free of distractions. Also, the passengers need to make the driver feel comfortable and avoid engaging him or her in unnecessary discussions to afford him maximum concentration while on wheels.

<Internals\\ Response 36 reference coded [6.82% Coverage]

The Commercial Drivers Union Association Needs to invest on more educative posters at all car parks. They need to map out and conduct more local training by Local trainers that understand the issues of Nigerian Road Transport Workers and the Road Transport Union Need to create their own road on Marshall on patrol as a way of ensuring safety.

<Internals\\ Response 37 reference coded [10.65% Coverage]

Passengers should adopt the principle of "passengers watch," i.e., passengers consciously monitoring their driver in the cause their journey. They should be made to understand that they have a role to play by raising their voice rather than keeping quiet while the driver is endangering their life. The rule should be "if you see something, say something"

<Internals\\ Response 38 reference coded [8.37% Coverage]

By SPEAKING OUT. Never Condoning the Drivers Excesses and Inadequacies While Driving.

<Internals\\ Response 39 reference coded [6.71% Coverage]

Passengers should correct the drivers when they are going astray such as not obeying traffic rules and regulations during the trip. The Commercial Drivers' Unions should also make available for each trip a performance evaluating questionnaire for passengers. Passengers could submit this in a secured box at the end of the trip.

<Internals\\ Response 40 reference coded [8.08% Coverage]

> *Be alert always and understand the traffic signs and rules.*

<Internals\\ Response 41 reference coded [7.03% Coverage]

> *Travelers and commuters entrust their lives in the hands of drivers and vehicles they board. Passengers could help avert road carnage by being very vigilant. Passengers must take stock of the driver and the vehicle they are about to board. Watch the driver's mannerism and the vehicle's roadworthiness. Check for abnormal behavior occasioned by drunkenness on the part of the driver. Check the tyres of the vehicle and other mechanical devices for faults. If not convinced, please do not enter. Wait for the next available alternative. Our lack of observations of these situations, most of the time, causing passengers to be involved in road accidents. Also, be very observant while on transit. Caution the driver if the speed limit is exceeded. Caution the driver if he becomes sleepy and perhaps capable of dosing off.*

<Internals\\ Response 42 reference coded [9.36% Coverage]

> *Passengers could help reduce road accidents when the driver is over-speeding; he can be cautioned to reduce the speed of the vehicle or law enforcement agents on the road could be alerted about the driver's behavior.*

<Internals\\ Response 43 reference coded [7.28% Coverage]

> *Passengers will do well not to distract the driver's attention while driving, as well as behave well amongst themselves.*

<Internals\\ Response 44 reference coded [7.07% Coverage]

> *Passengers should not distract the driver by discussing or quarreling with him when the vehicle is in motion. Passengers should caution the driver when he is over speeding or not obeying traffic rules; passengers should report the driver to the bus company if he does not listen to caution.*

<Internals\\ Response 45 reference coded [9.34% Coverage]

Theme 3: Educational Measure

Q7: Most of the commercial drivers have demonstrated poor knowledge of traffic rules and safety measures in last year- January 2017 observation study in Abuja and Lagos conducted by the researcher: What are the best measures to educate these drivers considering their age, language, educational background, and religious beliefs?

> *Teach them in their native language*
> *Make the road signs conspicuous*

<Internals\\ Response 46 reference coded [7.18% Coverage]

Localization and domestication of driver education would address this issue. FRSC carries out its public education, especially to those commercial drivers in local languages, including Pidgin English. FRSC also collaborates with religious leaders to educate members of the public on road safety.

<Internals\\ Response 47 reference coded [8.02% Coverage]

The entity that issues driver licenses should require some form of driver safety program training before a license is issued. The training program should be designed to instruct in a language or languages common to the population.

<Internals\\ Response 48 reference coded [8.89% Coverage]

Strict enforcement.

<Internals\\ Response 49 reference coded [6.54% Coverage]

The authorities can demand that the license be renewed only after the drivers attend mandatory traffic rules and safety courses. They can also ensure that the road transport workers association is organized and supported with educational materials to create awareness. The commercial driver training can also be standardized to include a specialized license that requires training on traffic rules and safety.

<Internals\\ Response 50 reference coded [8.84% Coverage]

Regrettably, educating these classes of drivers is an uphill task, which may be only 20%-30% effective. What is most effective is to make policies are relevant to reducing traffic crashes on Nigerian Highways such as speed limiting Device installations. The most feasible way of addressing this problem is to upscale enforcement of traffic laws nationwide through concerted efforts by all law enforcement agencies.

<Internals\\ Response 51 reference coded [8.41% Coverage]

Recertification of drivers is essential as well as on-road enlightenment use, traffic laws amongst others

<Internals\\ Response 52 reference coded [6.65% Coverage]

By Making Driving Test Compulsory For All Drivers Where They Will Be Appropriately Guided In The Best Language And Where Age test Can Be Conducted On Them For Driving Purpose.

<Internals\\ Response 53 reference coded [7.71% Coverage]

The best way to educate the driver is through videos or visual campaign and in their native languages. The campaign should highlight the consequences of bad driving, including death and the fact that their children and family will suffer in life due to their demise.

<Internals\\ Response 54 reference coded [9.54% Coverage]

Create awareness first on the need to understand traffic rules. Conduct a practical driving test before the issuance of a driver's license. Educate the park leaders to enable

them to educate their boys in a language they understand

<Internals\\ Response 55 reference coded [8.74% Coverage]

Both More Hours of Driving Lessons Practical Theories.

<Internals\\ Response 56 reference coded [6.00% Coverage]

Use the drivers' union to educate them on a continuous bases; traffic agencies should establish outposts in major motor park for purpose of enlightenment and monitoring.

<Internals\\ Response 57 reference coded [7.50% Coverage]

The drivers are to be educated in a familiar and easy to understand languages, public enlightenment, use of fliers and jingles, paid adverts in different local languages spoken across the country, etc.

<Internals\\ Response 58 reference coded [6.01% Coverage]

Mentioned above the Union has a lot to do but the target of most Union is to get more levies instead of educating the road transport drivers

<Internals\\ Response 59 reference coded [7.47% Coverage]

Public enlightenment in their garages using local dialect has proved to be very effective. Equally very important is the use of audio-visuals during which live crash scenes can be shown to drive the message home.

<Internals\\ Response 60 reference coded [6.51% Coverage]

Peer Review Through Trade Unions

<Internals\\ Response 61 reference coded [5.65% Coverage]

Regular workshops for the drivers in their native language and the leadership of the Unions should make attendance compulsory at least twice a year. The Union leaders, not FRSC or other organizations, should enforce a penalty of withdrawal of driving license.

<Internals\\ Response 62 reference coded [9.29% Coverage]

Teach Them In Their Native Language
Make The Road Signs Conspicuous

<Internals\\ Response 63 reference coded [7.16% Coverage]

Educate them using trade associations, religious beliefs as platforms to transform them.

<Internals\\ Response 64 reference coded [7.45% Coverage]

Most drivers on our roads have demonstrated a poor understanding of traffic rules and safety measures. I advocate strict compliance with rules of issuing drivers' licenses. Most drivers' licenses are issued by proxy. No tests are conducted on the potential passengers as to his ability to read and understand road signs. Some have lousy eye sights that could have been denied driver's license or advised to have corrective lenses. I advocate strict compliance with the rules of drivers' license issuance by the government issuing authorities and also continuous education of road users via the very language they best understand, be it Pidgin English, Yoruba, Hausa, Edo, Ibo, etc. The use of the local language is advocated to educate drivers of the road's best use as far as traffic and motoring are concerned.

<Internals\\ Response 65 reference coded [9.09% Coverage]

Drivers can be educated/enlightened in local languages of the dangers on the road. Rigorous/continuous enlightenment can help drivers to know traffic dos and don'ts to prevent crashes.

<Internals\\ Response 66 reference coded [6.65% Coverage]

Recertification of drivers is essential as well as on-road enlightenment use, traffic laws, amongst others.

<Internals\\ Response 67 reference coded [6.64% Coverage]

Institutes in charge of issuing driver's licenses should make drivers' tests compulsory before issuing licenses. This should comprise of the practical and theory aspects. Manuals on a Highway code should be made readily available in different languages.

<Internals\\ Response 68 reference coded [8.88% Coverage]

Theme 4: Banning of Alcohol

Q8: Alcohol-related driving is a long-standing and severe problem in Nigeria. There has been an outcry for the removal of the selling of alcoholic products in motor parks throughout the country. How could this vital issue be taken seriously and recognized to save more lives on Nigerian roads?

A total ban on the sale of alcohol sachet is the solution as it's done in Tanzania and some African countries.

<Internals\\ Response 69 reference coded [7.28% Coverage]

Education is key. FRSC is collaborating with the Transport Union, such as the National Union of Road Transport Workers (NURTW) and the Road Transport Employees Association of Nigeria (RTEAN), to eliminate alcoholic beverages in motor parks.

<Internals\\ Response 70 reference coded [6.86% Coverage]

There should be a law against driving while under the influence of alcohol. If the penalty I stiff enough, such as license suspension for some time, the problem may

decline

<Internals\\ Response 71 reference coded [7.52% Coverage]

Enforcement and severe penalty on drugs and alcohol sellers at the park

<Internals\\ Response 72 reference coded [6.66% Coverage]

All commercial drivers should be educated and made aware of the danger of drunk driving. There should also be rules against drunk driving. Besides, the government should have an enforcement mechanism requiring breathalyzing commercial drivers randomly or strictly before starting and at the end of a journey. The society has to be sensitized to the dangers of drunk driving. Not selling alcoholic beverages at motor parks solve no problem. They can always buy it and bring it in from outside the motor parks.

<Internals\\ Response 73 reference coded [9.71% Coverage]

The ban on alcohol and beverages sale at motor parks is apt. However, you cannot restrain drivers from drinking secretly in their privacy. What is most effective is to employ technology in ending this behavior by ensuring that at every loading point or station, breath testing is carried out before each journey is embarked upon. The use of evidence-based breathalyzers is essential in this pursuit.

<Internals\\ Response 74 reference coded [7.89% Coverage]

Proscription of alcoholic beverages at motor parks is well overdue. Drivers unions, law enforcement officers, should also help ensure compliance of the 'do not drink, do not drive' propaganda. Drivers should also attend seminars and watch the video, which highlights the harmful consequences of drunk driving.

<Internals\\ Response 75 reference coded [9.18% Coverage]

The Traffic Law Officers Should Ensure Strict Compliance That Alcohol Is Not Sold At The Motor Park And Suspicious Drunk Driver Should Be Fined If Caught

<Internals\\ Response 76 reference coded [6.97% Coverage]

Consistent education of drivers. Enforcement of policy of non-alcoholic products in motor parks.

<Internals\\ Response 77 reference coded [6.29% Coverage]

Consistent education of drivers. Enforcement of policy of non-alcoholic products in motor parks.

<Internals\\ Response 78 reference coded [6.28% Coverage]

Selling of alcoholic drinks should be prohibited in parks--if FRSC could develop a method of detecting drunk drivers on the road, they should be arrested when caught.

<Internals\\ Response 79 reference coded [7.51% Coverage]

Government Has To Spend Money To Recruit Law Enforcement Officers To Do This Job. Alcohol Risk In Driving Should Be a Topic In The Driving Lessons.

<Internals\\ Response 80 reference coded [7.01% Coverage]

Introduce Random Alcohol Testing Of Drivers On The Road

<Internals\\ Response 81 reference coded [5.37% Coverage]

Road Safety Officials, As Well As Traffic Management Officials, Should Be Provided With Machines/Gadgets With Which They Can Use To Detect Any Driver Driving Under The Influence Of Alcohol (DUI) Or Any Intoxicants. Also, Motor Parks Should Be Sealed If They Violate The Order Of Not Selling Alcoholic Beverages And Other Intoxicants In Motor Parks.

<Internals\\ Response 82 reference coded [7.33% Coverage]

Alcohol Should Be Banned In All Garage Or Bus Depot And Road Safety Should Be Supplied Alcohol Testing Kits At Random If They Notice Some Kind Of Dangerous Driving

<Internals\\ Response 83 reference coded [7.41% Coverage]

Strict Enforcement On The Ban On The Sale Of Alcohol In Our Garages And Strict Enforcement On Driver Under The Influence Of Alcohol By Road Safety Officials And The Police.

<Internals\\ Response 84 reference coded [5.64% Coverage]

By Bringing To Justice The Drink-Driving Drivers As Well As Legally Penalized Owners Of Alcohol Selling Points In And Around Motor Park (I.E. Strict Enforcement Of Safety Rules)

<Internals\\ Response 85 reference coded [7.50% Coverage]

Enforcement of regulations in collaboration with the leadership of the Unions. The law enforcement agencies cannot do it alone.

<Internals\\ Response 86 reference coded [6.66% Coverage]

Total ban on sale of alcohol sachet is the solution as its done in Tanzania and some African countries

<Internals\\ Response 87 reference coded [7.31% Coverage]

Alcohol testing device should be developing on drivers by the traffic and safety managers.

<Internals\\ Response 88 reference coded [6.54% Coverage]

Really, alcohol usage and misuse are among the great causes of road carnages. It had been advocated several, and I am still advocating that drivers should be discouraged from taking alcohol before or during journeys. Efforts should be

geared up to eradicate alcohol from motor parts. It is something that is very imperative.

<Internals\\ Response 89 reference coded [4.91% Coverage]

Alcohol usage and misuse are among the high causes of road carnages. It had been advocated against severally, and I am still advocating that drivers should be discouraged from taking alcohol before or during journeys. Efforts should be geared up to eradicate alcohol from motor parts. It is something that is very imperative.

<Internals\\ Response 90 reference coded [4.91% Coverage]

This is the role of the state governments because they own the parks where alcoholic products are sold. The governments should be firm on this by stopping/outlawing all forms of alcoholic products from being sold in the motor parks.

<Internals\\ Response 91 reference coded [6.91% Coverage]

Proscription of alcoholic beverages at motor parks is well overdue. Drivers unions, law enforcement officers, should also help ensure compliance of the 'do not drink, do not drive' propaganda. Drivers should also attend seminars and watch a video which highlights the harmful consequences of drink driving.

<Internals\\ Response 92 reference coded [9.18% Coverage]

In addition to the removal of the selling of alcoholic products in motor parks, there should be a stiff penalty on defaulters. Anyone caught driving while drunk should be penalized. Road safety officers should do random breath checks on drivers.

<Internals\\ Response 93 reference coded [7.96% Coverage]

Theme 5: Legal Procurement of Driving License

Q9: In Nigeria, it is very relatively easy for anybody to get a driving license without proper driving training, skills, and education. The practical driving assessment resulting from many hours of supervised driving experience is better prepared for a lifetime of safe driving and is less likely to be involved in severe crashes (Drive Safe, 2016). Is there any effective logical way (or ways) to make sure that a driving license is given to the appropriate individual that has been trained, tested, and fit to drive?

Applicants should be tested.

<Internals\\ Response 94 reference coded [9.92% Coverage]

The Drivers licensing procedure in Nigeria has undergone a lot of changes; it is now mandatory for first-time applicants to attend a Driving School and undertake driving lessons for a minimum of 26 hours of one hour per day. FRSC is also working with Vehicle Inspection Officers of various States to ensure that first-time applicants are properly tested before their biometrics are captured by FRSC.

<Internals\\ Response 95 reference coded [11.54% Coverage]

Driver education should be a requirement and a prerequisite to obtaining a driver license

<Internals\\ Response 96 reference coded [11.23% Coverage]

All potential and intending drivers must go through a driving school, and the school is a government certified.

<Internals\\ Response 97 reference coded [9.56% Coverage]

The establishment of minimum educational requirements for drivers of commercial buses, written tests, and formal training requirements will be a good start.

<Internals\\ Response 98 reference coded [8.13% Coverage]

First, the narration above was the experience in Nigeria before the formulation of the driving school standardization program (DSSP) by the FRSC. The DSSP has improved the driver licensing system and enhanced the integrity of the NIGERIA driver license. Following the DSSP, other commitments from stakeholders have made it impossible to acquire the driver's license without completing the mandatory training sessions and tests. The DFSSP is action-driven, and it monitors the activities of driving schools and operators of the institutions as well.

<Internals\\ Response 99 reference coded [12.13% Coverage]

Until corruption amongst licensing authorities are removed, the evil associated with the wrongful award of driving license to unqualified drivers will remain.

<Internals\\ Response 100 reference coded [10.31% Coverage]

Yes, Potential Driver Seeking Driving License Are Asked To Produce Driving Training Certificate From Accredited Training School Before License Could Be Issued

<Internals\\ Response 101 reference coded [10.46% Coverage]

Corruption will have to be eradicated in FRSC and the society at large.

<Internals\\ Response 102 reference coded [9.41% Coverage]

Corruption will have to be eradicated in FRSC and the society at large.

<Internals\\ Response 103 reference coded [9.40% Coverage]
Issuance of driver's license should be based on a successful practical driving test

<Internals\\ Response 104 reference coded [9.63% Coverage]

A proper database should be created using modern technology. this includes pictures, blood tests, and fingerprint.

<Internals\\ Response 105 reference coded [9.96% Coverage]

Conduct mandatory driving test for all driver's license applicants; do not rely on certification by driving schools.

<Internals\\ Response 106 reference coded [9.58% Coverage]

Yes, and one of such ways is to ask first time license applicants to present a driving certificate from a reputable driving school. Also, driving schools across the country should be compelled to register with appropriate authorities so as to allow for proper monitoring of such driving schools to ascertain they uphold and not compromise required standard.

<Internals\\ Response 107 reference coded [9.96% Coverage]

There Should Be More Stringent Method On This

<Internals\\ Response 108 reference coded [9.01% Coverage]

Today in Nigeria all fresh applicants of driver's license must go through the driving school under the Driving School Standardization Programme (DSSP). Applicants are expected under this programme to have minimum of 26 days contact session of not less than one hour daily.

<Internals\\ Response 109 reference coded [9.57% Coverage]

Appropriate Coordination Of Driving Schools Across The Country By FRSC Would Engender Safer Road Environment Now And In The Future.

<Internals\\ Response 110 reference coded [10.19% Coverage]

Without proper driving training, the issuance of license, skills, and education is not peculiar to Nigeria but mostly in African countries. Pay appropriate wages to officers in charge of issuance of licenses regularly. I believe this will eliminate the practice.

<Internals\\ Response 111 reference coded [12.23% Coverage]

Applicants Should Be Tested

<Internals\\ Response 112 reference coded [9.90% Coverage]

The only logical is by going back to the bases where the driver's license is given based on the outcome of the driving test conducted by the authority.

<Internals\\ Response 113 reference coded [11.31% Coverage]

As I have already observed above, the issuance of drivers' licenses by the issuing authorities is very lackadaisical. The exercise is riddled with corruption. Driver's licenses can be gotten by proxy across the counter through gratification. Tests and capabilities are not considered—this account for why

we have unexplainable road carnages. I advocate the government agencies issuing driver's license should be re-invigorated. Strict measures should be put in place to make it practically impossible for drivers licenses to be issued quickly without the applicant undergoing strict and practical lessons and tests. If a prospective candidate did not pass the lessons and subsequent tests, such applicants should be denied a license until they can pass through.

<Internals\\ Response 114 reference coded [10.33% Coverage]

The most logical way to reduce untrained drivers from getting a license is for the relevant agency involved in the testing of drivers' license applicants to step-up by encouraging applicants to go through proper training before getting a license.

<Internals\\ Response 115 reference coded [9.84% Coverage]

Until corruption amongst licensing authorities are removed, the evil associated with the wrongful award of driving license to unqualified drivers will remain

<Internals\\ Response 116 reference coded [10.32% Coverage]

Yes, the law on the practical driving assessment before issuance of driver's license should be enforced and made compulsory to all individuals, irrespective of class and status.

<Internals\\ Response 117 reference coded [10.33% Coverage]

Theme 6: Adoption of Safe Attitudes

Q10: Persuading road users to adopt safer attitudes and behavior can significantly reduce road crashes and injuries in Nigeria, how can this be resolved considering that attitudes and behavior are a phenomenon of cognition, beliefs, norms, and past behavior?

Road users should set out on time and not rush while on the road.

<Internals\\ Response 118 reference coded [5.62% Coverage]

With systematic and well-channeled education, attitudes and behaviors of road users will be appropriately adjusted.

<Internals\\ Response 119 reference coded [4.54% Coverage]

Since most Nigerians adhere to some religious group canons, the leaders of such groups can be encouraged by government to pass on the information dealing with safety driving attitudes.

<Internals\\ Response 120 reference coded [6.79% Coverage]

Continuous public enlightenment and strict enforcement of traffic rules and regulations

<Internals\\ Response 121 reference coded [5.94% Coverage]

You have to combine moral suasion with enforcement mechanisms and establish a less

corrupt society where traffic law enforcement can be relied upon to do their job with integrity without corruption.

<Internals\\ Response 122 reference coded [5.47% Coverage]

Altering the behavior of the older generation is a hard thing. The most effective way of changing attitudes and norms is by introducing the younger generation to road safety education. Interestingly, Nigeria has taken steps in this regard by the government's approval for the infusion of road traffic safety to be taught as a subject in Primary and Secondary Schools in Nigeria.

<Internals\\ Response 123 reference coded [6.99% Coverage]

Public enlightenment programs, seminars, recertification are amongst various ways of achieving this.

<Internals\\ Response 124 reference coded [5.26% Coverage]

The Passengers Can Be Enlightened To Report Any Erratic Behavior Or Attitude When Noticed From A Driver To Nearest Law Enforcement Officers

<Internals\\ Response 125 reference coded [5.91% Coverage]

The relentless campaign, sensitization, and education are beginning from primary schools, churches, mosques, etc.

<Internals\\ Response 126 reference coded [5.48% Coverage]

The constant campaign, sensitization, and education beginning from primary schools, churches, mosques etc.

<Internals\\ Response 127 reference coded [5.52% Coverage]

Penalties/punishments should be attached to the rules as the case may be

<Internals\\ Response 128 reference coded [5.08% Coverage]

It is very difficult to persuade people in a society with a huge number of people but the best way to resolve this issue to train locals who speak the same language and belong to the same community. They can educate their tribesmen.

<Internals\\ Response 129 reference coded [7.49% Coverage]

Driving attitudes on roads reflect the general attitude to the life of the people. A more robust National campaign on the value of life (on/off the road) is required.

<Internals\\ Response 130 reference coded [6.13% Coverage]

Considering our society where people always like easy and fast route to almost everything and wanting to boycott due process at-will, it will be advised that violators be made to face and pay stringent fines and also have their vehicles impounded for a certain period of time due to their failure to adhere to road

safety rules. also, they should be instructed to go back and take up driving lessons to ensure they understand the need to adhere to these safety rules.

<Internals\\ Response 131 reference coded [8.09% Coverage]

More educative posters at the car parks and motor parks

<Internals\\ Response 132 reference coded [4.76% Coverage]

Continuous education of people on the causes, effects, and prevention of road traffic crashes will help achieve this. Using a victim to pass the message could equally do the magic as the person will be sharing his or her experiences which the drivers can identify with.

<Internals\\ Response 133 reference coded [6.44% Coverage]

Use informal education approach through jingles, street drama, etc

<Internals\\ Response 134 reference coded [4.83% Coverage]

Road Users Should Set Out On Time And Not Rush While On The Road

<Internals\\ Response 135 reference coded [5.56% Coverage]

It is by a continuous advocate.

<Internals\\ Response 136 reference coded [4.66% Coverage]

Persuasion and attitudinal change are to be encouraged. Drivers should be made or dissuaded to believe that "what will happen will happen." Accidents are caused by carelessness and failures to observe road traffic rules and regulations. Accidents are not myths and magical, or spiritual. They are a physical phenomenon caused solely by human and mechanical deficiencies. These should be impacted by drivers to dis-abuse their minds away from making beliefs, norms, and religious beliefs.

<Internals\\ Response 137 reference coded [5.80% Coverage]

One of the very best ways to reduce road crashes is continuous enlightenment to change drivers' attitudes and beliefs to emphasize that human, mechanical and environmental factors cause road accidents and not other beliefs or norms.

<Internals\\ Response 138 reference coded [6.24% Coverage]

Public enlightenment programs, seminars, recertification are amongst various ways of achieving this.

<Internals\\ Response 139 reference coded [5.30% Coverage]

Through enlightenment

<Internals\\ Response 140 reference coded [4.01% Coverage]

Theme 7: Advertisement understanding

Q11: Considering the two main salient factors when modelling and developing road safety advertisements, which are 1. Making the target audience to be able to decode, understand, and accept the message. 2. Making the message content to address appropriate action or problem. How can this be done with the present low educational level among those commercial drivers?

Communicate to them INB their native language
De-militarize the FRSC

<Internals\\ Response 141 reference coded [7.86% Coverage]

A nice picture is worth more than a thousand words. The use of pictures and audio-visuals in relaying road safety messages would ensure better understanding by public members.

<Internals\\ Response 142 reference coded [6.76% Coverage]

Increase in pictorial education of drivers.

<Internals\\ Response 143 reference coded [7.25% Coverage]

Enlist the support of musicians, comedians, road transport union leaders, show videos of accidents, and the impacts on the families left behind. We can also enlist some churches, mosques, and traditional religions since Nigerians listen to anything said by their religious leaders.

<Internals\\ Response 144 reference coded [7.91% Coverage]

There are quite several literate persons in commercial driving business in Nigeria at the fleet operators' end. Recognizing that a huge percentage of commercial drivers are not too educated, the adverts' contents can be communicated in local languages and pidgin for ease of communication.

<Internals\\ Response 145 reference coded [7.45% Coverage]

Enlightenment through the mass media in local languages and drama skits at motor parks could be of help.

<Internals\\ Response 146 reference coded [7.33% Coverage]

More Symbols Should Be Used In A Clear Manner, And Messages Can Be Recorded In Local Languages That People Can Listening To Through Audio

<Internals\\ Response 147 reference coded [7.71% Coverage]

One on one counseling and sensitization.

<Internals\\ Response 148 reference coded [6.48% Coverage]

Speak the language they understand. Go through the head of parks. Let messages be passed to them through these heads as they are well respected by their boys and seen as mini gods

<Internals\\ Response 149 reference coded [8.62% Coverage]

Make road signs in local languages; information should reach the people through the radio.

<Internals\\ Response 150 reference coded [7.17% Coverage]

If the message is conveyed in the appropriate language/medium and at appropriate location and time. This should be a consistent and continual exercise.

<Internals\\ Response 151 reference coded [7.76% Coverage]

These adverts should involve every major stakeholder. also, these adverts should be done in several local languages that could be understood by those staying in the rural areas and to make short movies with these adverts to show the implications of not taking road safety cautions.

<Internals\\ Response 152 reference coded [7.33% Coverage]

More Jingles In Local Languages Yoruba Ibo And Hausa, Efik

<Internals\\ Response 153 reference coded [6.74% Coverage]

Methodologies such as use of drama and role play can help overcome this challenge. However, most importantly is the fact that the message should be in the language the driver can understand (local dialect).

<Internals\\ Response 154 reference coded [6.89% Coverage]

The use of modern communication platforms such as radio, TV, sms, electronic bill boards, smart work zone, infra-red camera (CCTV), sensors etc are capable of compliment current manual approaches.

<Internals\\ Response 155 reference coded [8.78% Coverage]

Use informal education approach as highlighted in the previous sections

<Internals\\ Response 156 reference coded [6.83% Coverage]

Communicate to them in their native language
De-Militarize The FRSC

<Internals\\ Response 157 reference coded [7.85% Coverage]

Authorities should appreciate the short comings of the environment and come down to their level.

<Internals\\ Response 158 reference coded [7.77% Coverage]

As I advocated above earlier, I will still advocate using local languages to educate our drivers on road signs, applications, and observance. The use of pidgin English, Yoruba, Ibo, Hausa, Edo, and the very primary local language can help pass the information and educate and educate the illiterate, and semi-illiterate drivers dot our roads.

<Internals\\ Response 159 reference coded [5.75% Coverage]

It can be done by taking the advertisements to the targeted audience in the language they understand.

<Internals\\ Response 160 reference coded [6.03% Coverage]

Enlightenment through the mass media in local languages and drama skits at motor parks could be of help.

<Internals\\ Response 161 reference coded [7.28% Coverage]

Mode of enlightenment should take into cognizance, the educational level. There will be a need to come down to their level. Jingles should be in different languages, including Pidgin English

<Internals\\ Response 162 reference coded [8.24% Coverage]

Theme 8: Community and Driver's Union Participation

Q12: Road traffic crashes and injuries can place a heavy burden on the family, relatives, friends, and even the community of the injured person. With this in mind: How could community participation and driver's unions/ association passengers could be of help for informational feedback program as a behavioral tool for favorable behavior modification?

Sensitization and orientation of the driver
<Internals\\ Response 163 reference coded [7.07% Coverage]

FRSC's stakeholder meetings, public education sessions, and other public engagements serve as viable platforms for receiving feedback that guides the operations, activities, and policy formation by FRSC.

<Internals\\ Response 164 reference coded [6.90% Coverage]

Strong collaboration amongst the stakeholders (committed voluntarism)
<Internals\\ Response 165 reference coded [7.48% Coverage]

If the politicians can co-opt the road transport unions in their political campaign, they surely can use them to educate and create awareness on road safety.
<Internals\\ Response 166 reference coded [6.13% Coverage]

Road Safety must be seen as a personal and collective responsibility. Forming a volunteer group at society levels and mainly the community level is critical in achieving

an effective information feedback mechanism.
<Internals\\ Response 167 reference coded [6.37% Coverage]

Community meetings, unions, and family gatherings could help disseminate the dangers which reckless road use causes and enforce character change amongst members.

<Internals\\ Response 168 reference coded [8.04% Coverage]

Passengers and union should always watch out for a bad habit among the drivers and report it to superior authority for sanctions as deterrent can be of help

<Internals\\ Response 169 reference coded [7.83% Coverage]

Passengers, drivers' associations, and the community should have a constant interactive forum.

<Internals\\ Response 170 reference coded [6.99% Coverage]

Passengers, drivers' associations, and communities should have a constant interactive

forum.

<Internals\\ Response 171 reference coded [6.98% Coverage]

Drivers union should be used as a vehicle to pass information across to drivers' passengers should help by cooperating, report reckless driving to appropriate authority Report drivers that drink and drive, and, if possible, resist being driven by a drunk driver.

<Internals\\ Response 172 reference coded [9.73% Coverage]

Trained People from The Local Community Can Take The Task Of Getting The Feedback.
<Internals\\ Response 173 reference coded [6.85% Coverage]

Communities/families should be educated on their rights and how to achieve them in the event of deaths/injuries resulting from accidents and drivers/those responsible for the accident be made to pay appropriate compensation. Unions should be encouraged to sanction reckless members.

<Internals\\ Response 174 reference coded [9.55% Coverage]

They need to take these campaigns to homes, take it as a core objective of Community Development Associations (CDAS) to ensure a safe and crash free environment and also discourage and dissuade driving under the influence of alcohol.

<Internals\\ Response 175 reference coded [6.78% Coverage]

They suggested union road Marshall will also carry out surveys they must be educated people, and it can also be contracted out to reassert companied by

union

<Internals\\ Response 176 reference coded [8.06% Coverage]

To a great extent, the people must understand that road safety is a collective responsibility in which all has a role to play. when the people begin to take their destiny and that of their families in their hand they can start interventions on their own which will produce positive road safety behavioural change.

<Internals\\ Response 177 reference coded [8.20% Coverage]

Peer review program within the driver trade union participation of religious centres and traditional institutions on sensitizing there community about the danger and implication of road crashes

<Internals\\ Response 178 reference coded [8.53% Coverage]

Engage relevant communities and organizations regularly

<Internals\\ Response 179 reference coded [6.36% Coverage]

Sensitization and orientation of drivers

<Internals\\ Response 180 reference coded [7.09% Coverage]

Continuous communal efforts of advocate by sustained.

<Internals\\ Response 181 reference coded [6.84% Coverage]

Road accidents and after-effects have been devastating to our society. Many people have been injured and incapacitated permanently, have died, and property (motor vehicle) have been lost to road traffic accidents by the individual, community, corporate organizations, and government. It has been devastating. So, it is incumbent on all the groups mentioned above to step up education and enlightenment to drivers and other vulnerable road users on the need for carefulness and observations of road traffic rules and regulations on our roads. This, I believe, will help reduce road traffic mishaps and shape the behavior of drivers on our road in Nigeria.

<Internals\\ Response 182 reference coded [8.01% Coverage]

Government agencies vested with road traffic administration and management should allow commercial vehicle owners and drivers unions and communities to participate in road traffic advocacy by understanding that road safety or accident reduction is a shared responsibility. That road users' actions can cause great havoc/danger to other people.

<Internals\\ Response 183 reference coded [9.16% Coverage]

Community meetings, unions, as well as family gatherings, could help disseminate the dangers which reckless road use causes, as well as enforce

character change amongst members.

<Internals\\ Response 184 reference coded [8.08% Coverage]

Theme 9: Road Crash Data Improvement

Q13: Are there better ways considering our socio-economic development in this country to make better use of available road crash data and improve the technical capacity to analyze data, identify problems and implement the necessary solutions and prevention strategies?

Centralize data

<Internals\\ Response 185 reference coded [5.17% Coverage]

Data analysis and problem identification vis-à-vis road traffic management have not been a problem in Nigeria. The challenge is in the implementation of most of our well-thought and properly developed strategies.

<Internals\\ Response 186 reference coded [6.04% Coverage]

The use of ICT and automated platforms and tools for data analysis.

<Internals\\ Response 187 reference coded [6.01% Coverage]

You can make better use of the social media and create apps that show road conditions and accidents. Road crash data can be made available to users so they can know where the most accidents occur of each road since the government cannot maintain the road adequately. The apps can be private, and road users can supply the information as they pass through accidents or an unsafe part of the road.

<Internals\\ Response 188 reference coded [8.13% Coverage]

Making government know and feel the direct economic impact of 3% annual GDP lost to Road Traffic Crash would be useful. Data collection should be automated to obtain realistic data for effective policies and decisions.

<Internals\\ Response 189 reference coded [5.53% Coverage]

Unfortunately, statistical data, where available, are not readily available or accurate and, therefore, not reliable.

<Internals\\ Response 190 reference coded [5.92% Coverage]

Yes, Relevant Data Can Be Codified For Properly Legislation In The Country

<Internals\\ Response 191 reference coded [5.30% Coverage]

There must be education of all stakeholders on the importance and application of data.

<Internals\\ Response 192 reference coded [5.70% Coverage]

There must be education of all stakeholders on the importance and application of data.

<Internals\\ Response 193 reference coded [5.70% Coverage]

Use Global Positioning System (GPS), EDRS, and Video Recording Systems. These technologies currently available provide an opportunity to perform this study in a way that could have been only be imagined just a few years ago

<Internals\\ Response 194 reference coded [7.59% Coverage]

Development of software that factors the peculiar road usage situation in Nigeria; analysis of data should specify the economic/social imports of the crashes.

<Internals\\ Response 195 reference coded [6.48% Coverage]

Yes. After compiling these data, the most common causes should be looked into and set up plans and models with which these crashes can be reduced to the barest minimum.

<Internals\\ Response 196 reference coded [5.00% Coverage]

More educative posters and jingles and they should also create sometime to show real accident videos/film at the Motor Parks in the night-time as a way of passing good messages to them

<Internals\\ Response 197 reference coded [7.25% Coverage]

I must admit here that in the area of data collection and analysis we still have a long way to go. Our data is not robust enough. Under reporting is a major problem. Secondly, data harmonization is very important. We have data from various sources that are not and ca not be harmonized. There is need for a unified simple instrument for data collection and analysis. Only then can our data become a veritable tool for effective problem analysis and intervention.

<Internals\\ Response 198 reference coded [8.85% Coverage]

Institutions Collaboration Will Engender Better Use Of Available Road Accident Data.

<Internals\\ Response 199 reference coded [5.56% Coverage]

Improve on relevant officer's capacity through on the job training and provide a conducive working environment for them

<Internals\\ Response 200 reference coded [6.08% Coverage]

Centralize Data

<Internals\\ Response 201 reference coded [5.18% Coverage]

Authorities should develop the non-challant altitude of both road users and some traffic personnel in relod keeping digitalization.

<Internals\\ Response 202 reference coded [6.88% Coverage]

Yes, we need to do more. The various government organizations charged with monitoring road usage and gathering data on road crashes should work harder. Very competent hands should man such a database. Computers and other data collection machinery should be put in place to gather data for analysis by competent bodies towards proper applications by relevant bodies to prevent constant road carnages.

<Internals\\ Response 203 reference coded [5.46% Coverage]

Road crash data are analyzed for informed decision management and in advising government departments in areas to improve or work on.

<Internals\\ Response 204 reference coded [5.22% Coverage]

Unfortunately, statistical data, where available, are not readily available or accurate and therefore not reliable.

<Internals\\ Response 205 reference coded [5.89% Coverage]

Theme 10: Steps to Stop Extorting Drivers

Q14: Road safety is an issue of social equity. It is a known fact that public corruption affects the extent of traffic rules observance, enforcement, and risk driving (and riding) behaviors by all classes of road users in Nigeria? What are the essential steps to stop Police, Traffic officers, and Touts from extorting drivers?

Legislation institution of the social security program to eradicate poverty

<Internals\\ Response 206 reference coded [7.48% Coverage]

FRSC has stringent regulations against extortion by its personnel. FRSC also carries out surveillance to fish out its personnel who engage in corrupt practices; such personnel are appropriately sanctioned.

<Internals\\ Response 207 reference coded [6.85% Coverage]

The commitment of the leadership to eradicating corruption
The driver should be educated on not giving bribe by having all their particulars intact (poverty) Adequate remuneration for the personnel involved.

<Internals\\ Response 208 reference coded [9.83% Coverage]

Leadership must come from the top. Corruption of law enforcement officers can be stopped if the will is there from the top. Investigation and detective work can be used to root out the rotten eggs among and the corrupt officers.

<Internals\\ Response 209 reference coded [6.82% Coverage]

Have the right leadership in place and build institutions that will ensure that the right thing is done. Technology and automation of processes will be vital in this accomplishment.

<Internals\\ Response 210 reference coded [6.00% Coverage]

Corruption is endemic in our societal fabric due to poverty and greed. Security agencies and local governments, and motor union officials need to be adequately remunerated, educated, and disciplined to stop extorting drivers.

<Internals\\ Response 211 reference coded [8.81% Coverage]

Road Cameras Should Be Placed Along Most Of Our Roads To Watch The Drivers And The Law Enforcers, And More Spies Should Be Position Along Our Roads To Observe And Report Their Activities

<Internals\\ Response 212 reference coded [8.08% Coverage]

The authorities should sanction erring or corrupt traffic officers and police heavily to serve as deterrence to others. Secondly, the entire Police and FRSC should be cleansed of corruption.

<Internals\\ Response 213 reference coded [8.57% Coverage]

Install cameras on our roads Officers caught in the act should not go unpunished.

<Internals\\ Response 214 reference coded [6.74% Coverage]

Salaries must be paid on time. the police to investigate cases should use a good data system. Payments to cover fines should be paid to banks to avoid cash payment to the police. educate the police about the risk of accepting bribes from drunken drivers. -

<Internals\\ Response 215 reference coded [9.43% Coverage]

Provide drivers credible/formidable platforms for lodging complains which should be investigated and sanctioned.

<Internals\\ Response 216 reference coded [6.83% Coverage]

First of all, these road enforcement and transport management authorities must always conduct regular in-house auditing and checking of their officers to assure they are not involved in sharp and corrupt practices. Anyone found wanting should be severely punished. Also, unauthorized persons and touts are also to be punished severely if caught.

<Internals\\ Response 217 reference coded [7.77% Coverage]

They should stand alone intelligence agency to tackle that and reports to the ministry of information, and they should provide with body videos recorders

<Internals\\ Response 218 reference coded [7.85% Coverage]

The condition of service of the police and all other traffic officers needs to be improved upon. By condition of service, i am not just referring to salaries. No it goes beyond that. Total welfare package considering the risk inherent in their job. Secondly, the corruption index of the traffic officers is a reflection of the corruption index of the society. So corruption should be tackled holistically in the country. Finally, if there is no giver there will be no taker. Drivers should resist being extorted.

<Internals\\ Response 219 reference coded [10.25% Coverage]

Traffic officers and touts from extorting drivers? By upgrading the quality of the road environment in Nigeria through the deployment of contemporary innovative technology, will limit the amount of personnel enforcing and /or extorting money from the motorists

<Internals\\ Response 220 reference coded [8.59% Coverage]

Pay appropriate wages and salaries regularly.

<Internals\\ Response 221 reference coded [6.03% Coverage]

Legislation Institution of Social Security Programme to eradicate poverty

<Internals\\ Response 222 reference coded [7.49% Coverage]

Drivers and road users to know their rights. Enforcement and monitoring units should work by the effective installation of CCTV on our roads.

<Internals\\ Response 223 reference coded [7.99% Coverage]

Corruption from the Police, traffic law enforcement officers, touts, is a significant factor in road traffic accidents. The Police, traffic officers, and touts should be dissuaded from extorting monies from road traffic users. These law enforcement officers will see bad tyres, underage drivers, mechanical faults, etc, and will turn a blind eye, especially if they are gratified. These bad behaviors, culminating in the causing road accidents. I think it is time that the government should step up efforts to prevent Police and other road traffic officers from taking bribes. Touts and touting should be weeded out from our motor parks.

Our motor parks should be sanitized. The government, in short, has a lot to do in this regard.

<Internals\\ Response 224 reference coded [8.44% Coverage]

Proper monitoring and remuneration/funding of enforcement agencies can go a long way in the reduction of corruption among enforcement agents.

<Internals\\ Response 225 reference coded [6.20% Coverage]

Corruption is endemic in our societal fabric due to poverty and greed. Security agencies and local governments, and motor union officials need to be

> *adequately remunerated, educated, and disciplined to be able to stop extorting drivers.*

<Internals\\ Response 226 reference coded [8.83% Coverage]

> *Corrupt officers that are caught should be penalized; they should also be given a right welfare package so that they will not be tempted. Only qualified officers should be employed; training should be conducted for police and traffic officers to orientate them from time to time.*

<Internals\\ Response 227 reference coded [9.19% Coverage]

Theme 11: Road safety as a political priority

Q15: The World Health Organization (Peden, M., Scurfield, R., Sleet, D. A., Mohan, D., Hyder, A. A., Jarawan, E., & Mathers, C. (Eds). (2004) has called for governments of the world nations (most especially developing countries) to make road safety a political priority to develop institutional capacity to improve road safety. In what ways can the stakeholders and traffic professionals collaborate and participate in making this call reality in Nigeria?

> *It is a reality in Nigeria. On 16 February 2017, The Vice President, Prof. Yemi Osibajo GCON inaugurated the National Road Safety Advisory Council (NaRSAC), consisting of six State Governors (of Lagos, Anambra, Delta, Kwara, Gombe and Kaduna) representing each of the six geo-political zone in the country. The council also has a member's Secretary to the Government of the Federation (SGF, the National Security Adviser, Ministers of Finance, Budget and National Planning, Transportation, Health, and Interior. Other members are FRSC Corps Marshal, President – Nigerian Society of Engineers (NSC), and president- National Association of Chambers of Commerce and Industry (NACCIMA).*

<Internals\\ Response 228 reference coded [13.30% Coverage]

> *Placing the burden of road safety at the doorstep of politician leaders (strong political will)*

<Internals\\ Response 229 reference coded [8.56% Coverage]

> *The civil society and the NGOs can work together to make this a reality.*

<Internals\\ Response 230 reference coded [5.51% Coverage]

> *The Nigerian government has done a lot in this regard by establishing a Lead Agency (FRSC). A partnership for road safety advancement is in place under the Nigeria Road Safety Partnership (NRSP), which has seen stakeholders and multinationals team up for road safety through sponsorship, partnership, and awareness creation.*

<Internals\\ Response 231 reference coded [7.95% Coverage]

> *Political parties need to inculcate this into their party manifestoes and campaigns, as*

well as the promulgation of appropriate laws by legislative bodies

<Internals\\ Response 232 reference coded [8.25% Coverage]

By Encouraging Law Makers To Make Enabling Laws That Will Help Road Usage And By Through Voluntary Effort Assist In Placing Road Signs At Our Roads

<Internals\\ Response 233 reference coded [8.22% Coverage]

There must be a regular forum to discuss traffic and safety issues, which will lead to legislation, policy formulation, and enforcement.

<Internals\ Response 234 reference coded [15.22% Coverage]

There must be a regular forum to discuss traffic and safety issues, which will lead to legislation, policy formulation, and enforcement.

<Internals\\ Response 235 reference coded [8.26% Coverage]

Invest in road construction. reduce the volume of traffic. Vehicles should have a proper technical test.

<Internals\\ Response 236 reference coded [7.65% Coverage]

Ensure equality before the law for all road users…. (politically powerful. Law enforcement agent are also major traffic rule violators

<Internals\\ Response 237 reference coded [7.85% Coverage]

Holding regular stakeholders' meetings with concerned bodies, deliberating on causes, and brainstorming on lasting solutions. This must be through the private and public sector participation programs. Also, involving corporate bodies and civil societies as well as CDAS.

<Internals\\ Response 238 reference coded [7.43% Coverage]

They need to embark on same goals

<Internals\\ Response 239 reference coded [6.68% Coverage]

Traffic professionals and stakeholders should lobby government officials at all levels to see reason why road safety should be a political priority. One of the main responsibilities of government is that of protection of lives and property of the people.

<Internals\\ Response 240 reference coded [7.74% Coverage]

Consistent Capacity Building and Funding of the supply Road Infrastructure.

<Internals\\ Response 241 reference coded [7.41% Coverage]

Constant engagement of lawmakers at the State and National Assembly

members to implement the decision.

<Internals\\ Response 242 reference coded [7.64% Coverage]

Private and public participation in road business and management should be encouraged.

<Internals\\ Response 243 reference coded [7.95% Coverage]

The call by WHO on governments in the developing countries to buckle up towards eradicating road crashes is very timely. Politicians in these countries should make it campaign strategy and work towards garnering all executive and legislative efforts to involve all stakeholders to work towards the eradication of road carnage. New laws should be formulated that will lower road carnage, Strict enforcement strategy should be embarked upon by all stakeholders, to make sure road users observe speed limit, become careful while using the road and observe all rules and regulations. This can be done in Nigeria, especially if all stakeholders consider it a priority toward drastic reduction of road traffic accidents in Nigeria.

<Internals\\r Response 244 reference coded [8.81% Coverage]

Aggressive advocacy and lobbying of appropriate government departments and the National Assembly by civil society organizations, professional and trade groups, and organized private sectors and communities can pressurize government to take appropriate steps. Also, any of those groups can sponsor the preparation and consideration of appropriate Bill through the National Assembly.

<Internals\\ Response 245 reference coded [10.44% Coverage]

Political parties need to inculcate this into their party manifestoes and campaigns and the promulgation of appropriate laws by legislative bodies.

<Internals\\ Response 246 reference coded [8.28% Coverage]

Those at the helm of affairs (the policy makers) have to be interested to make road safety work. They should not just pay lip service

<Internals\\ Response 247 reference coded [7.42% Coverage]

Theme 12: Effectiveness of Traffic Law enforcement

Q16: Several research studies have shown the effectiveness of enforcement to be related of the perceived risk of being caught and punished (Homel, 1990) and enforcement efforts should be random and widespread to increase the chances of detection (ETSC, 1999). How can we make enforcement effective and efficient with Police and Federal Road Safety Corps (FRSC)?

Collaboration with religious and traditional heads

<Internals\\ Response 248 reference coded [7.46% Coverage]

The robust deployment of enforcement and record-matching technologies would ensure effective enforcement of traffic regulations.

<Internals\\ Response 249 reference coded [6.14% Coverage]

There is a need for enactment of stronger measures.

<Internals\\ Response 250 reference coded [7.37% Coverage]

Reduce corruption and the practice in which most police officers are on the road to collect bribes.

<Internals\\ Response 251 reference coded [5.55% Coverage]

Through equipping law enforcement agencies with requisite skills and capacity for full enforcement. Exposure to global best practices is equally vital.

<Internals\\ Response 252 reference coded [5.79% Coverage]

Proper equipping of these bodies, enacting relevant laws to aid their operations and adequate staffing

<Internals\\ Response 253 reference coded [7.14% Coverage]

By Recruiting More Officers And Equipment That Can Detect Infractions Should Be Deployed

<Internals\\ Response 254 reference coded [6.94% Coverage]

By institutional restructuring and cleaning of the police force and FRSC.

<Internals\\ Response 255 reference coded [6.96% Coverage]

Attach penalty

<Internals\\ Response 256 reference coded [6.04% Coverage]

The Law Enforcement Officers Should use modern Technology. Streets Should Have Modern Cameras.

<Internals\\ Response 257 reference coded [7.29% Coverage]

Payment of fines should be made on the spot/point at which offense was committed/or arrest

<Internals\\ Response 258 reference coded [6.86% Coverage]

Traffic management and transport authority officers needs to be diligent at discharging their duties. Offenders should have their licenses suspended for a

given period as well as having their vehicles impounded for a given period and compelled to go on some weeks driving lessons before they can get back their licenses. Adequate fines should also be imposed on traffic offenders.

<Internals\\ Response 259 reference coded [8.43% Coverage]

Mentioned Above Separate Body Reporting To The Ministry Of Information Should Be Set Up

<Internals\\ Response 260 reference coded [7.19% Coverage]

Let them be well equipped with latest enforcement tools. Police and road safety enforcement today should be technologically driven. Operational vehicles should sound and well maintained.

<Internals\\ Response 261 reference coded [6.63% Coverage]

Prioritizing investment in innovative technology for a better, safer and smarter road environment

<Internals\\ Response 262 reference coded [7.22% Coverage]

Pay them well and regularly too. The attitude will change over time.

<Internals\\ Response 263 reference coded [6.75% Coverage]

Collaboration With Religious And Traditional Heads

<Internals\\ Response 264 reference coded [7.52% Coverage]

The personnel should be well-compensated training be pernoscalty conducted for the personnel.

<Internals\\ Response 265 reference coded [7.70% Coverage]

Yes, enforcement of all traffic rules and regulations and subsequent punishment by offenders by the Police and the FRSC is essential. As I said earlier, once these enforcement agencies stop collecting bribes, they will be useful. These government officials should be well monitored to do their work. These should be no laxities on their parts. Any offender should be tried and summarily dismissed from the Police or FRSC, to serve as a deterrent to would be the culprit. By so doing, enforcement of traffic rules and regulations will be stepped up, with the ultimate reduction in road crashes as our goal.

<Internals\\ Response 266 reference coded [7.77% Coverage]

a. Effective enforcement can be achieved when adequate, appropriate, and necessary equipment and facilities for enforcement are provided.
b. Adequate training and re-training of operatives in line with global best practices.

<Internals\\ Response 267 reference coded [7.63% Coverage]

Proper equipping of these bodies, enacting relevant laws to aid their operations

and adequate staffing

<Internals\\ Response 268 reference coded [7.13% Coverage]

There should be no exception to the rule of law; corrupt road safety officers should be weeded out of the establishment, there should be a penalty for non-compliance to traffic rules

<Internals\\ Response 269 reference coded [7.99% Coverage]

Theme 13: Responsibility and collaboration to improve road safety

Q17: Lastly, driving is a serious responsibility with physical and mental abilities impacting on the driving activities of a driver (Akande, 2010). Have your establishment collaborated or participate jointly with the road traffic safety or public transportation ministry on the ways of brokering solutions to the magnitude of carnage on our roads? Are there any suggestions or opinions or advice to include to find a lasting solution to this age-long epidemic that is preventable?

Road maintenance and repair
Ensure quality control on vehicles imported into the country

<Internals\\ Response 270 reference coded [10.47% Coverage]

Road Safety is a shared responsibility. FRSC works very closely with all stakeholders to eliminated road traffic deaths on highways in Nigeria.

<Internals\\ Response 271 reference coded [7.76% Coverage]

My establishment has no collaboration with the ministry or road traffic safety. Awareness, enforcement, reduced drunk driving, the involvement of opinion and religious leaders, civil society's involvement, and Non-Governmental Organizations such as Women against drunk driving, etc can be of assistance.

<Internals\\ Response 272 reference coded [9.59% Coverage]

Reference 1 - 9.59% Coverage

The FRSC regularly engages relevant Agencies and interfaces for necessary actions on improving road safety in Nigeria. There is a regular briefing made by the FRSC to the Ministry of Works through its comprehensive Road Safety Audits (RSA) and working hard to get government involved through annual lecture series. The ultimate strategy is to create self-consciousness on personal responsibility for road safety and consideration for all road users in the country.

<Internals\\ Response 273 reference coded [10.73% Coverage]

Our organization has embarked on roads sensitization campaigns at various times

<Internals\\ Response 274 reference coded [8.74% Coverage]

Yes, Proper Maintenance Of Vehicle, Good Road Signs And Proper

Behavior From Drivers

<Internals\\ Response 275 reference coded [8.89% Coverage]
Constant education of all stakeholders and policy implementation and enforcement by government and its agencies.
<Internals\\ Response 276 reference coded [9.49% Coverage]

Continuous education of all stakeholders and policy implementation and enforcement by govt and its agencies.

<Internals\\ Response 277 reference coded [9.52% Coverage]

No. My organization never collaborated or joined in preferring solutions before now drivers training is still essential, and it should now be diversified from driving skills to attitudinal factors that can influence their decision making. Organizations must be encouraged to send their drivers for training

<Internals\\ Response 278 reference coded [12.87% Coverage]
Road Signs Should On Display On The Roads. Some Areas Along Roads Should Be Protected With Railings To Avoid Dangerous Road Crossing As Human Factor Causes Road Accidents.

<Internals\\ Response 279 reference coded [10.38% Coverage]

Private Schools Under My Purview Engage The Road Safety Corps In Training Of Their Drivers.

<Internals\\ Response 280 reference coded [8.78% Coverage]
Well, As Said Earlier, There Is Need For A Rigorous Enlightenment Campaigns And Proper Sensitization, Calling All Stakeholders I.E Police, FRSC,

Transport/Traffic Management Bodies, Civil Organizations, Cdas And The General Public, Involving Them In The Campaign On Safe Driving. And Also Using Every Medium Possible I.E Social Media, Press And Print Media, Jingles And Paid Adverts In Various Local Languages For Easier Understanding. Making Sure Safety And Traffic Rules Are Efficient And Strictly Adhered To.
<Internals\\ Response 281 reference coded [11.33% Coverage]

A Continuous Educative Programs And Trainings In The 3 Prominent Languages
<Internals\\ Response 282 reference coded [9.03% Coverage]

There Is Collaboration Between The FRSC And Ministry Of Works. One Of The Challenges Of Road Safety Is That Of Poor Funding. Our Roads Also Need To Be Rehabilitated Fully.
<Internals\\ Response 283 reference coded [8.11% Coverage]

Yes. The Conscientious Implementation of FRSC Road Safety Strategic Plan Would Go A Long Way At Minimizing Road Crashes On Nigerian Roads.

<Internals\\ Response 284 reference coded [9.85% Coverage]

Yes. As highlighted in previous questions

<Internals\\r Response 285 reference coded [8.34% Coverage]

Road Maintenance and Repair Ensure Quality Control On Vehicles Imported Into The Country

<Internals\\ Response 286 reference coded [10.48% Coverage]

We have not collaborated with only of the agencies before now on the safety.

<Internals\\ Response 287 reference coded [9.35% Coverage]

Our organization is as concerned as everybody else on the rate of road traffic carnages on our roads. We have actively participated and collaborated with the Ministry of Transport, Police, and FRSC and other relevant government and private organizations to promote road user awareness. I will suggest that more and more corporate organizations and individuals should get more involved. They should be involved in organizing programs that will educate, enlighten, and cause enforcement of proper road traffic usage. In these directions, efforts will help reduce carnages on our roads with the consequent financial, material, and human catastrophes.

<Internals\\ Response 288 reference coded [9.15% Coverage]

FRSC is making many efforts in this area:
a. Any commercial drivers' license applicant must undergo a medical fitness examination before issuing the drivers' license.
b. Drivers who drive in the wrong lane or direction, or through a one-way drive are also subjected to medical examination after the arrest.

<Internals\\ Response 289 reference coded [10.84% Coverage]

Our organization has embarked on road sensitization campaigns at various times.

<Internals\\ Response 290 reference coded [8.73% Coverage]

No, to my knowledge, my establishment has not collaborated with the road safety on solutions, but I am aware that some staff members volunteer to assist the road safety corp. From time to time.

<Internals\\ Response 291 reference coded [10.23% Coverage]