COMPLIANCE OF COMMERCIAL MOTORISTS WITH ROAD TRAFFIC REGULATIONS IN THE UNIVERSITY OF IBADAN, OYO STATE, NIGERIA

BY

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DEDICATION

This work is dedicated to the Almighty God.

CERTIFICATION

This research work titled Compliance of Commercial Motorists with Road Traffic Regulations in the University of Ibadan, Oyo State, Nigeria was conducted by Emoruwa, Ayokunle. It has been supervised, certified and approved by me as meeting the requirements for the award of MPH in Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria.

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ABSTRACT

Human factor has been identified as one of the reasons for Road traffic accident (RTA), which is a major cause of death, injuries and disabilities. The University of Ibadan (UI) in recognition of this challenge has instituted an approved Road Traffic Regulations (RTRs). However, compliance with these regulations in the University campus by commercial drivers is not known. This study was therefore designed to assess the knowledge, attitude and compliance of commercial motorists with the approved RTRs in the University of Ibadan.

A cross-sectional survey was carried out among 186 consenting commercial drivers registered within UI. An interviewer-administered questionnaire was used to collect information on socio-demographic characteristics, knowledge (46-point), attitude (15-point) and compliance (24-point) with RTRs. Knowledge scores were categorized as "poor" (<17), "fair" (17-32) and "good" (>32). Attitude scores were rated as "negative" (≤7) and positive (>7). Compliance level was measured as "low" (<9), "fair" (9-16) and "high" (>16). Five In-depth Interviews (IDIs) were conducted with: the Registrar, Chairman of Intra Campus Transport Committee, Chairman of commercial drivers, Chief Security Officer and Student Union President to further explore factors influencing compliance. Descriptive statistics and Chi-square tests were used to analyse the quantitative data at 5% level of significance while the IDI data were analysed using thematic approach.

Age of respondents was 41.1±0.8 years, 73.7% had secondary education and above. Forty-one percent took cigarette or/and alcohol to enhance their driving. Knowledge score on RTRs was 34.6±3.3 with 79.6% having good knowledge. Attitude score was 8.4±3.4 with 58.1% having positive attitude towards regulations. The RTRs compliance score was 17.5±3.7. Regulations with the least compliance were, "wearing of seat belt" (12.4%), not making calls while driving (22.6%) and not exceeding speed limit (27.9%). The respondents identified punishment (97.3%), inability to avoid penalty (89.9%), tendency of passengers to reporting regulatory violations (91.4%) and presence of security officers (83.9%) as major reasons for compliance with UI RTRs. There was a significant relationship between alcohol intake and accident occurrence while the attitude increased significantly with increasing educational qualification ($p<.0.5$). There was no significant relationship between the age of respondents and compliance with RTR ($p>0.5$). The IDI participants unanimously agreed that the attitude of the drivers and low level of knowledge of RTRs is a challenge. It was reported that weekly programmes are being put in place to further educate the members on the importance of safe driving also, as regards enforcement, aside setting up payment of penalty, other structures are

set up such as: Monitoring Squad, Service vehicles and Security unit to enforce the established laws.

Despite high knowledge and compliance with road traffic regulations, negative attitudes still persist. Hence, there is need for road safety education among the commercial drivers in UI with major emphasis on frequently violated traffic regulations to guide their healthy usage of the roads.

Keywords: Commercial motorists, Road traffic accident, Road traffic regulations, Knowledge, Attitude towards compliance

Words count: 464.

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ABBREVIATIONS

BAC - Blood Alcohol Concentration

FRSC - Federal Road Safety Corps

HIV – Human Immunodeficiency Virus

ICTC – Intra Campus Transport Committee

IDI – In-Depth Interview

KII – Key Informant Interview

LGA – Local Government Area

MCA – Motorcycle Accident

NRSS - Nigeria Road Safety Strategy

NURTW - National Union of Road Transport Workers

OECD - Organization for Economic Cooperation and Development

PASW- Predictive Analytics Software

RTA – Road Traffic Accident

RTC - Road Traffic Crashes

RTIs – Road Traffic Injuries

RTRs – Road Traffic Regulations

SPSS – Statistical Package For the Social Sciences

UCH – University College Hospital

UI – University Of Ibadan

VIO - Vehicle Inspection Officers

WHO – World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The transport sector is the main mover of the Nigerian economy and indeed of any economy. The importance of mobility to a nation's economic base cannot be overemphasized. Specifically, transport is central to the developmental process of a healthy economy and societal growth. This is due to the fact that transport influences and is influenced by other sectors that make up, not only the total urban system, but the entire human settlements as well (Daramola, 2003).

Road safety can be described as how societies choose to manage transport systems, land use and urban development in relation to their overall health and safety objectives and how they are balanced with economic, social and environmental considerations (WHO, 2004). Road safety rules can hence be defined as set of regulations for road users to guide their healthy usage of the road so as to prevent or at least put at minimal the occurrence of road traffic accidents leading to loss of life and sustenance of injuries. Road traffic accident (RTA) is an accident which occurred or originated on a way or street open to public traffic; resulting in one or more persons being killed or injured, and at least one moving vehicle was involved. These accidents therefore include collisions between vehicles, between vehicles and pedestrians and between vehicles and animals or fixed obstacles (WHO, 2002). According to World Health Organisation (WHO) data for 2002, road traffic injuries accounted for 2.1% of all global deaths and ranked as the 11th leading cause of death in the world.

In Nigeria, road crashes started in Lagos, in 1906. Ever since, it has been a major cause of death (Arosanyin, Olowosulu and Oyeyemi, 2012). FRSC Report (2009) showed that between 1990 and 2008, 204,525 road traffic accidents occurred on Nigerian roads with almost 87,000 lives lost. In both Nigeria (Oluwasanmi, 1993; Atubi, 2010) and Kenya; for example, a fivefold increase in traffic related fatalities was observed over the last 30 years. In Nigeria, road traffic accident situation over the last three decades has been particularly disturbing. In 1976, there were 53,897 road traffic accidents resulting in 7,717 deaths. Although in 1981, the magnitude reduced to 5,114 accidents, but the fatality increased to 10,236 which mean that there was an average of 96 accidents and 28 deaths for everyday of that year. Situation in subsequent years has not been any better. The number of people killed

in road accidents between 1990 and 2005 rose from 28,253 and the fatality rate remains consistently high (Atubi and Onokala, 2009). In U.I campus, record review shows that RTA is a common occurrence in the campus affecting students and staff members of the institution. Most of these accidents occur due to the absence of specific regulatory framework that will enhance driving behaviours.

Road traffic accident has a negative impact on human and economic development, retracting the poverty reduction process, the economic growth and people's happiness (Labinjo, Julliard, Kobusingye and Hyder, 2009). According to Evans (2003) the human factor appears in the literature as being the most prevalent contributing factor of road traffic crashes. This includes driving behaviours (e.g., speeding, drinking and driving, traffic law violations) these human behaviours are demonstrated in non compliance of road users with the road traffic rules that has been set. Road traffic rules covers: use of speed-limits, use of seat belt, number of passengers carried, making turns, change of direction and stop signals, giving way signs and road markings, traffic roundabouts, level crossings, keeping left, overtaking, driving rules, restrictions on stopping and parking, lights and warning devices, rules for pedestrians, additional rules for bicycle riders, rules for persons travelling in or on vehicles, miscellaneous road rules, exemption for drivers of emergency vehicles, traffic control devices and traffic related items (Road Safety Road Rules, 2009). These imply that if negative human behaviours such as non compliance with the road safety rules and regulations can change, there is bound to be a sharp decrease in the incidence of road traffic accidents.

According to Arosanyin et al., (2012) 'a high compliance rate will lead to improved safety on the roads, which will in turn reduce the destruction of human and material resources required for economic growth and development'. A typical illustration is the case of seat belt; a review of research on the effectiveness of seat-belts found that their use reduces the probability of being killed by 40-50% for drivers and front seat passengers and by about 25% for passengers in rear (Elvik and Vaa, 2004).

The University of Ibadan has 24 approved traffic regulations and penalties to decrease the occurrence of RTAs, which took effect from January 2009 (See Appendix IV)

The thrust of this study therefore, is an in-depth analysis of compliance to these safety rules among commercial motorists within the University of Ibadan. The study has four major sections, Starting from the knowledge, the attitude, the compliance level of the target group

and the factors influencing the compliance with the traffic regulations put in place by the University.

1.2 Statement of the problem

Based on data, Nigeria is a country with a serious and growing road accident problem that is among the worst in the world (Asogwa, 2002). International comparison indicates that the chance of a vehicle killing someone in Nigeria is 47 times higher than in Britain. The proportion of fatalities to injuries reported is also very high. For example, while Czech Republic has only one death in 175 accidents, France one death in 175, South Africa, one death in 47 accidents, Nigeria has one death in 2.65 accidents (Atubi, 2010).

The morbidity and mortality burden of vehicular accidents in developing countries and especially in Nigeria is rising due to a combination of factors. In 2012, FRSC reported that human factor (speed violation, dangerous driving, loss of control, and dangerous overtaking) is the major cause of traffic accidents in the country. In a study by Atubi (2012), over speeding was found to be responsible for 27% of crashes in 2011, more than 90% of road traffic accidents in Lagos State could be attributed to recklessness on the part of drivers, ignorance of high way codes, over speeding etc. other factors such as driving under the influence of alcohol and non-use of safety belts (SB), are also reoccurring causes (Nzegwu, Banjo, Akhiwu, Aligbe, and Nzegwu, 2008). Road traffic accident is the main reason for emergency room visits and is responsible for the majority of deaths (Puri Payal et al, 2013; Chalya et al, 2013). In respect to vehicular accidents, the likely factors that may have contributed to this alarming trend of increase in RTA and road traffic injuries (RTIs) according to WHO (2008) are speeding, drink-driving, not wearing seatbelts, among other factors. All these factors are gearing towards non compliance of road safety rules. In 2012, FRSC stated that "forty percent of road crashes in Nigeria are caused by commercial drivers". Traffic offenders and those driving in a way that is incompatible with decency and respect of social norms are at high risk for road traffic crashes (RTC), (Eze, 2012).

Scholars have discussed the issue of RTRs in so many dimensions, but attention has been focused on cities. Since January 2009 when the University of Ibadan released its 24 approved traffic regulations and penalties, it seems that no study on drivers' compliance to these regulations has been conducted neither are the factors that promote compliance to the regulations documented. Furthermore, it appears that there is a shortage of information as to the level of knowledge of the commercial motorists towards all the traffic rules, their attitude

towards the rules in addition to the level of compliance towards the rules. However, the need to improve RTRs within University of Ibadan campus by the authority concerned through adequate creation of awareness to increase the knowledge, the attitude and the compliance level of the commercial motorists towards all the traffic rules within the University community called for a study of this nature.

1.3 Justification

This study on compliance with RTR in UI will generate new knowledge on the UI commercial drivers' awareness, knowledge and attitudes to the written regulations. It will show the regulations mostly adhered to and the ones that are hardly complied with. The results of this study will help policy makers to understand why commercial motorists within the confine of the University environment comply with traffic rules and this same people may not obey these rules once they step out of the campus environment; those factors that are put in place within the university environment will be clearly spelt out so that if effected will lead to a gross compliance by road users with the road safety rules. The institutional authorities can use findings to revisit or review existing road safety policy in the University, thus the study.

The study findings will be of benefit to the University of Ibadan community in improving those positive factors that are responsible for the compliance with road traffic regulations by commercial transporters and identify factors that will obstruct this compliance. It will likewise be of benefit to road users in the University in improving the understanding of drivers' compliance with traffic rules, the causes of RTAs and ways of minimizing the risks in the institution and use the information for developing key primary and, secondary approaches to facilitating compliance.

Finally, the study will provide answers to the following research questions.

1. What are the levels of knowledge of commercial motorists on U.I road traffic regulations within the campus?
2. What are the attitudes of commercial motorists within the University of Ibadan campus towards the road traffic regulations?
3. What are the levels of compliance of commercial motorist in the University of Ibadan with U.I road traffic regulations?

4. What are the factors that influence the compliance of commercial motorists with U.I road traffic regulations within the campus?

1.4. Broad Objective

The broad objective of this study was to investigate the compliance of commercial motorists with road traffic regulations in the University of Ibadan.

1.5 Specific Objectives

The specific objectives of this study were to:

1. assess the levels of knowledge of commercial motorists on road traffic regulations within the University of Ibadan campus;
2. assess respondents' attitudes towards road traffic regulations;
3. determine respondents' levels of compliance to the University of Ibadan road traffic regulations
4. identify the factors that influence respondents' compliance to U.I road traffic regulations.

1.6 Research Hypothesis

The following null hypotheses were tested:

1. There is no significant association between age of respondents and compliance with the University of Ibadan traffic regulations.
2. There is no significant association between education qualification of respondents and knowledge of the University of Ibadan traffic regulations.
3. There is no significant association b etween education qualification and attitude towards compliance.
4. There is no significant association between alcohol intake and accidental collision

CHAPTER TWO
LITERATURE REVIEW

2.1 Prevalence of Road Traffic Accidents and Injury

Road Traffic Accident (RTA) occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris or other stationary obstruction, such as tress or utility poles. Traffic collision may result in injury, death, vehicle damage and property damage. An injury in road traffic accidents refers to the number of people wounded in road accidents per million populations (Ohakwe, 2011).

2.1.1 Prevalence of Road Traffic Accidents and Injury Globally

Worldwide road-traffic injuries (RTIs) represent 25% of all trauma deaths. Injuries cause 12% of the global disease burden and are the third commonest cause of death globally (Christian, Onyebuchi, Njoku, Omoke, Odion and Chidi Ozo, 2010). In 2002, 1.2 million people died as a result of road traffic accidents and 50 million are injured and disabled. It is also the eleventh cause of death in the world and accounts for 2.1% of all deaths globally (WHO, 2004). The same report further indicates that in the European Region, road traffic injuries are a major public health issue, claiming about 127 thousand lives per year. This is equivalent to the entire population of Grenoble, France; Perugia, Italy; or Norilsk, Russian Federation. The report further revealed that road traffic injuries in the 52 countries of the WHO European Region represent a major public health problem. Each year an estimated 127 thousand people are killed (about 10% of global road traffic deaths) and about 2.4 million are injured on roads in Europe. In Europe, children younger than 15 years represented about 5% of the total estimated deaths from road traffic injuries in 2002. However, road traffic injuries are the leading cause of death among children 5–14 years old (WHO, 2002).

WHO (2002) further reported that:

The WHO Western Pacific Region recorded the highest absolute number of deaths in 2002, with just over 300 000, followed by the WHO South-East Asia Region with just under 300 000. These two regions together account for more than half of all road traffic deaths in the world. As regards death rates, the WHO African Region had the highest mortality rate in 2002, at 28.3 per 100 000 population, followed closely by the low-income and middle-income countries of the WHO Eastern Mediterranean Region, at 26.4 per 100 000 population. The high-income countries in Europe have the lowest road traffic fatality rate (11.0 per 100

000 population) followed by those of the WHO Western Pacific Region (12.0 per 100 000 population. Page 56)

This same view is shared by Lagarde (2007) on his own part stated that while South-East Asia has the highest proportion of global road fatalities (one-third of the 1.4 million occurring each year in the world), the road traffic injury mortality rate is highest in Africa (28.3 per 100,000 population) compared with 11.0 in Europe. Indeed, if major challenges are not made to reverse the trend, it is feared that road traffic crash fatality rate in Africa as a whole is anticipated to increase by 80% between 2000 and 2020 (Paden et al., 2004).

In Saudi Arabia, driver injuries were greater (Bener and El-Sayyad, 1985; Ofosu, Abonammoh and Bener, 1988), while motorcyclists were the most involved in Taiwan (Wu and Malison, 1990). A relatively high proportion of cyclist injuries in South East Asian countries, ranging from 39 to 63%, reflect the effects of traffic mix on the roads in the region (Atubi, 2012).

Similarly, Naghavi (2005) revealed that: "In Iran, the registry data from Ministry of Health and Medical Education shows that, in 23 out of 28 provinces, road traffic injuries (RTIs) caused 31 800 deaths in 2003, which accounted for 9.9% of total deaths and 17.4% of years of life lost. The death rate due to traffic injuries is 47.8 in 100 000 people in Iran."

The Asia–Pacific region alone accounts for up to 44% of global road deaths, although it is currently home to only around 16% of the world's motorized vehicle fleet. According to Cambodia Road Traffic Accident and Victim Information System report in 2004, Cambodia has the second highest road traffic fatality rate (number of fatalities/10,000 vehicles) in the Pacific region hence traffic accidents can now be considered as the second largest catastrophe in the country after AIDS, killing 3 people and injuring many others per day, not considering damages and loss of public or private properties and the moral distress to society. (Cambodia Road Traffic Accident and Victim Information System, 2004)

Christian et al., (2010) documented that trauma is a major problem in both developing and developed countries. Injuries are the third commonest cause of death globally (Peden, McGee and Sharma , 2002). It is the fourth leading cause of death in all age groups and the leading cause in patients between one and 39 years in the USA (Segui-Gomez and MacKenzie, 2003).

2.1.2 Prevalence of Road Traffic Accidents and Injury in Developing Countries

Throughout the world, the growth of the transport system has been and continues to be a key element in economic development. In the developing world, current trends in population growth, industrialization and urbanization are putting heavy pressure on the transport network in general and on road system in particular. Some of the unwanted side-effects of this growth in traffic, such as congestion and noise are immediately obvious to the individual citizen. Others, such as the growing number of deaths and injuries from road traffic accidents (RTAs), are apparent only through aggregated statistics. These reveal a serious and growing problem, with absolute fatality and casualty figures rising rapidly in the majority of developing countries and with death rates considerably higher than in the developed world (Linamar, Srinivasa, Gautam and Jagdish, 2003). In developing countries, trauma is also important, with RTIs being a leading cause of morbidity and mortality (Hofman, Primack, Keusch and Hrynkow, 2005; Razzaka and Luby, 1998). The vast majority (90%) of road traffic deaths were in low-income and middle-income countries. Only 10% of road traffic deaths occurred in high-income countries. Every year, RTIs in low and middle income African countries accounts for 168, 000 deaths and 5.8 million lost disability-adjusted life years (WHO, 2002).

From these reviews, it is evident that the regional averages for low-income and middle-income are much higher than corresponding rates for high-income countries. A review of 38 studies found that pedestrian fatalities were highest in 75% of the studies, accounting for between 41% and 75% of all fatalities (Odero, Garner and Zwi, 1997).

In the same vein, Doer Hayes and Heda (2003) posited that: "passengers were the second largest group of road users killed, accounting for between 38% and 51% of fatalities. In Kenya, between1971 and 1990, pedestrians represented 42% of all crash fatalities; pedestrians and passengers combined accounted for approximately 80% of all fatalities in that country each year."

In Africa, road traffic injuries continue to exert a huge burden on the health care system; Kenya has one of the highest road fatality rates in Africa at 68 deaths per 10,000 registered vehicles and between 45-60% of admissions to surgical wards in public hospitals are as a result of road traffic injuries (Odero et al., 2003). Largade, 2007 supporting the above statement stated that in Africa, pedestrians and passengers of public transportation are the most affected.

2.1.3 Prevalence of Road Traffic Accidents and Injury in Nigeria

Nigeria ranked as the country with the second largest road network in Africa in 2011. In Nigeria, RTC death rate is 162 deaths per 100,000 populations (Ogbodo and Nduoma, 2011). This is against the world average of 22 deaths per 100,000 populations (Sukhai, Jones, Love, and Haynes, 2011). Thus, the Nigerian RTC death rate is disproportionately high in comparison to the world average by over 636%. Nigeria continues to feature in the bottom half of WHO country rankings of road traffic accidents. The country is 149th ranking in 2009 out of 178 member states. (Sumaila et.al, 2013)

The above assertion is shared by Ogunsanya (1991) who stated that: "in 1976, there were 53,897 road traffic accidents resulting in 7,717 deaths. Although in 1981, the magnitude reduced to 5,114 accidents, but the fatality increased to 10,236 which mean that there was an average of 96 accidents and 28 deaths for everyday of that year."

The number of people killed in road accidents between 1990 and 2005 rose from 28,253, and the fatality rate remains consistently high (Atubi, 2009c). International comparison indicates that the chance of a vehicle killing someone in Nigeria is 47 times higher than in Britain (Atubi 2012). A study carried out in Abuja Kunihan hospital from 2005 to 2008 showed that out of a total of 4,623 deaths occurred in the hospitals. Overall, the top five causes of death reported by Nykiconia et al., (2012) were: HIV 951 (21%), road traffic accidents 422 (9%), malaria 264 (6%), septicaemia 206 (5%), and hypertension 194 (4%).

In Nigeria, trauma is the main reason for emergency room visits and road traffic accidents are responsible for the majority of deaths (Elechi and Etawo, 1990). According to Eze (2012) the overall road traffic injury rate is about 41 per 1000 population and mortality from road traffic injuries is about 1.6 per 1000 population with an increasing incidence. The significance of the effect of RTA to individuals, societies and nations at large call for an intense investigation of the menace across our neighbourhoods.

Prevalence of Road Traffic Accidents and Injury in Oyo State

The occurrence of Road Traffic Crashes (RTC) at close localities are a function of higher levels of traffic, which in turn are a product of higher concentration of social activities such as residential, employment or employment - related namely, shopping and entertainment (Levine, Kim and Nitz, 1995). Of the total casualties of RTC in Nigeria between 2001 and 2011, 3.75% constitute cases from Oyo State. Furthermore, 3.76% and 3.72% constitute the

proportion of number injured and number killed respectively. The highest concentration of RTC is across Ibadan North, Ibadan North East, Ibadan North West, Ibadan South East, Ibadan South West, Egbeda, Oluyole, Ona Ara and Akinyele LGA. Thus, the black spots include Oyo West, Oyo East, Afijio, Akinyele, Lagelu, Egbeda, Ona Ara, Oluyole, Ido, Ibadan North, Ibadan North East, Ibadan North West, Ibadan South East and Ibadan South West LGA. (Grace, Olusanya and Afees, 2014)

Prevalence of Road Traffic Accidents and Injury in Campuses of Learning

In a study carried out in the University of Benin campus by Urnebese and Okukpo, 2001, it was shown that motorcycle accidents (MCA) patients constituted 14.4% of the total number of 918 in road traffic accident. Males were more involved than females in the ratio of 2.2 to 1. The mean age of MCA victims was 30 years and the major cause of accident was collision with automobiles. Accounting for 54%.49% percent of the patients were motorcycle riders, making them the highest risk group. They further reported that: collision with automobiles ranked highest among the causes of motorcycle accidents. Some contributory factors may include poor vehicle maintenance, lack of concentration and/or undisclosed or unestablished medical problems on the part of the rider. In a document published by Syracuse University (2014), traffic rules and regulations are established in the interest of the entire University community to reduce traffic congestion on campus, providing faculty, staff, and students reasonable access to the buildings in which they carry out their major University functions.

According to the report by the security unit of the University of Ibadan, accident rate is about 1% of the total emergency cases recorded in the last 1 year among commercial motorists and they are minimal such as vehicle scratch. The security department reported that there are some of the road safety rules they have tried to ensure their compliance but has not yielded positive result. Some of the rules are right parking and use of seatbelt hence, this study will help to uncover underlying reasons from the perspective of the drivers why they have not been complying. RTA is an alarming Public Health issue that calls for urgency in action from all coordinated quarter to show concern and take appropriate steps in halting the impending pandemic in this current phase of life and even in years to come.

Road Network within U.I Campus

From the main gate of the U.I campus, the road is linked to several other roads within the campus, they are: Awolowo Hall from which there is an exit to Polytechnic of Ibadan, Abadina-Ajibode road and postgraduate school road from where there is an exit outside of the

campus to the outside community. There are bus stops located at different spots within the campus where people are supposed to wait to take cabs/buses and alight from them. The University of Ibadan operates a Faculty system where they currently have the following Faculties with road linkages to them: Arts, Education, Law, Pharmacy, Veterinary Medicine, Technology, Agricultural Sciences, Science and Social Sciences. There are also road networks to all the thirteen units within the institution which are: Registry, Careers Placement and Units, Foreign Student Units, Sport councils, Library, Computing Centre, Press, Bookshop, Botanical Garden, Zoological Garden, University Media Centre, Advancement Centre, and University Health Services. There are other facilities like the swimming pool in the Student Union building, U and I Restaurant, Chapel Hall, Mosque, Keggites' Club. The establishment of all these locations makes transportation a necessity.

2.2 Factors Contributing to Road Traffic Accidents

The three major causes of road traffic accidents are human factors, vehicular factor and environmental factor. Accidents can be caused by individual factors or a combination of these factors (Lum and Reagan, 1995). These three factors are further explored below

2.2.1. Environmental Factor

Road design and maintenance is a factor that contributes to road traffic accidents; highway infrastructure defects such as potholes, sharp bends and generally poor road conditions also have significant effect and contribute to road crashes (Aderamo, 2012). According to Eze, (2012) Nigerian highways are arguably one of the worst and most dangerous in the world. Poor governance and corrupt practices in most sub-Saharan African countries had led to poor standards in construction and maintenance of social amenities like roads amongst others. There have been many cases of road traffic accidents (RTAs) resulting from low construction standards and poor road maintenance (Nwadiaro, 2004 and FRSC, 2009). Road accidents appear to occur regularly at some flash points such as where there are sharp bends, potholes and at bad sections of the highways. At such points over speeding drivers usually find it difficult to control their vehicles, which then result to fatal traffic accidents, especially at night (Atubi, 2009b).

However; there seem to be a level of uncertainty as to whether good roads have a positive influence on compliance with road safety rules or not because according to Onakomaiya (1988), Filani and Gbadamosi (2007), they found out that the better the quality of the roads

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in Nigeria, the higher the level of road traffic accidents in the country because drivers most likely over speed on good roads, leading to more frequent and fatal crashes. This contradicts the findings of Atubi (2009b) who suggested that poor roads are responsible for road traffic accidents.

Amazingly, according to (Atubi, 2012) he suggested that constructing more roads will lead to increased road traffic accidents- "Since increasing the number of roads may be beneficial in other ways, especially as government increases the road network as part of increasing the nation's infrastructure base, the benefits of such developments will have to be balanced with the expected increase in road traffic accidents" he further found out that the greater the areal extent and length of highways, the higher the number of accident occurrences in Lagos State where the study was carried out in 2010, on Determinants Of Road Traffic Accident Occurrences in Lagos State.

Roadside Objects

Impacts between vehicles leaving the road and solid roadside objects such as trees, poles and road signs are a major road safety problem worldwide. According to research in Australia and several European Union countries, roadside hazards contribute to between 18% and 42% of fatal crashes. These collisions are usually single-vehicle crashes and frequently involve young drivers, excess or inappropriate speed, the use of alcohol or driver fatigue (Colden et al, 1998). Another problem related to impacts with objects off the road is the occurrence of crashes caused by restricted visibility, due to the poor sitting of these objects (WHO, 2003).

2.2.2 Human/Driver Factors

Eleni and Maria (2000) identified human causes of RTA as: Reduce capability to meet traffic contingencies, inexperience, old age, disease and disability, accident proneness, alcoholism and drug abuse, drowsiness, fatigue, acute alcohol intoxication, short-term drug effects, binge eating, acute psychological stress, temporary distraction, modulate risk taking while driving, long-term overestimation of capabilities, `macho' attitude, habitual speeding, habitual disregard of traffic regulations, indecent driving behaviour, non-use of seat belt or helmet, inappropriate sitting while driving, accident proneness, alcoholism. Driver factors solely contribute to about 57% of road traffic accidents and 93% either alone or in combination with other factors (Lum and Reagan, 1995). In the works of Yankson, Browne, Tagbor, Donkor, Quansah, Asare, Mock and Ebel (2010) in Ghana titled 'Reporting on Road Traffic Injury:

Content Analysis of Injuries and Prevention Opportunities in Ghanaian Newspapers' they found out that "papers reported contributing factors including excessive speeding (34%), alcohol-impaired driving (13%); wrongful overtaking (12%), overloaded vehicle (6.6%), and driver fatigue (1.7%)." According to FRSC 2012; human factor (speed violation, dangerous driving, loss of control, and dangerous overtaking) is the major cause of traffic accidents in the country. In the study, over speeding was found to be responsible for 27% of crashes in 2011.

Similarly. more than 90% of road traffic accidents in Lagos State could be attributed to recklessness on the part of drivers, ignorance of high way codes, over speeding etc. (Atubi, 2012). Amongst the three factors, the human factors including road users' behaviour and incapacitation have been found to account for more than 85% (Odero et al., 2003). Among them, the two-best-known contributing factors are speeding and drink-driving (Chen, 2010; Afukaar, 2003). Human incapacitation, such as visual acuteness and driver fatigue has also been identified among the human factors (Onabolu, Otulana and Avvodein, 2008) and use of Hand-held mobile telephones (WHO, 2004). Below are some of the human factors:

Speed

Speed has an exponentially detrimental effect on safety. As speed increases, so does the number and severity of injuries. Studies show that the higher the impact speed, the greater the likelihood of serious and fatal injury (Mackay and Hassan 2000) due to and transfer of kinetic energy (Tingvall, 1995). According to Eze (2012) speeding, travelling too fast for prevailing conditions or above the speed limit, is also a driver factor that contributes to road traffic accidents.

Alcohol

Drug and alcohol use while driving is an obvious predictor of road traffic accident, road traffic injury and death (Adogu, Ilika and Asuzu, 2009). A case–control study carried out in Michigan, United States, in 1964, known as the Grand Rapids study Borkenstein et al., (1964) showed that: drivers who had consumed alcohol had a higher risk of involvement in crashes than those with a zero Blood alcohol concentration (BAC) and that this risk increased rapidly with BAC. These results provided the basis for the future setting of legal blood alcohol limits and breath content limits in many countries around the world, typically at 0.08 g/dl.

Non-use of Seat-belts and Child Restraints in Motor Vehicles

Failure to use seat-belts is a major risk factor for vehicle occupants (WHO, 2003). The most frequent and most serious injuries occurring in frontal impacts to occupants unrestrained by seat-belts are to the head (Mackay, 1997). The effectiveness of seat-belts depends upon the type and severity of the crash and the seating position of the occupant (WHO, 2003).

Age of Drivers

Older drivers are more likely than younger ones to have cognitive, motor and sensor-perceptual deficits that could affect their driving performance even in the absence of overt disease (Eleni et al., 2000). The risk of a crash with alcohol varies with age and drinking experience. Zador (1991) estimated that crash rates of male drivers aged 16–20 years were at least three times the estimated crash rate of male drivers aged 25 years and above, for every BAC level. With few exceptions, the relative risk of being fatally injured in a single-vehicle crash was found to decrease with increasing driver age for every BAC level, for both men and women (Zador, Krawchuk and Voas, 2000).

2.2.3 Vehicle Factor

The vehicle factor relates to the how fit or intact a vehicle is for the road. Vehicle failure resulting from vehicle defects, lack of maintenance and using low quality spare parts also contribute to road crashes and fatalities (Odero, 2003).

Vehicle factors can be divided into vehicle design and vehicle maintenance. Vehicle design contributes to crashes, through vehicle defects, is generally about 5% in Kenya (Odero, Garner and Zwi, 1997) and 3% in South Africa (O'Neill, 2002). Some safety features of vehicles like seatbelts and airbags are likely to reduce the risk of death and serious injuries. A well-designed and maintained vehicle is less likely to be involved in accidents. If the brakes and tires are good and the suspension well-adjusted, the vehicle is more controllable in an emergency and thus, better equipped to avoid accidents (Eze, 2012).

In conclusion, World Health Organization (2003) in her article on World Report on Road Traffic Injury Prevention listed the factors influencing exposure to risk as:

- Rapid motorization;
- Demographic factors e.g. Transport, land use and road network Planning;

- Increased need for travel;
- Choice of less safe forms of travel;
- Risk factors influencing crash involvement.

In summary, well-established risk factors that contribute to the severity of a crash include: Inadequate in-vehicle crash protection; inadequate roadside protection; the non-use of protective devices in vehicles; the non-use of protective crash helmets; excessive and inappropriate speed; the presence of alcohol.

2.3 Impact of Road Traffic Accidents

Estimating the impact to society of road traffic accident is important for several reasons. First, it is essential for raising awareness of the seriousness of road crashes as a social problem. Second, it serves to make proper comparisons between road traffic crashes and other causes of death and injury. Third, since the social cost of road traffic crashes is a reflection of the social benefits of reducing crashes through safety interventions, scientific assessments of the costs enables priorities between different interventions to be made, using cost–benefit methods (WHO, 2004). The following are impacts of road traffic accidents:

Health and Social Impacts

Statistics from Global Burden of Disease by WHO in 2002 showed that injuries sustained by victims of a road traffic crash vary in type and severity. Motor vehicle accidents represent 45% of the causes of head injuries and occur more frequently in young adults (Youngerman, 2004). Data from the WHO 2002 project showed that almost a quarter of those injured severely enough to require admission to a health facility sustain a traumatic brain injury; 10% suffer open wounds, such as lacerations, and nearly 20% experience fractures to the lower limbs. A review of studies in low-income and middle-income countries revealed that road traffic-related injury accounted for between 30% and 86% of trauma admissions in these countries (Odero, Garner and Zwi, 1997). They further found out that: Road traffic injury patients comprised between 13% and 31% of all injury-related attendees in hospitals, they represented 48% of bed occupancy in surgical wards in some countries; they were the most frequent users of operating theatres and intensive care units in United Arab Emirates where the study was carried out.

Psychosocial Impact

There is a huge psychological effect of RTI on the family of those involved in it; if the cost of the loss could be quantified, this cost might possibly exceed the productivity losses and medical costs associated with premature death (Andersson, Bunketorp and Allebeck, 1997). The social effect exacts a heavy toll on victims, their families, friends and communities, hindering them from performing their roles and responsibilities in the different groups they belong in. The death of a breadwinner often pushes a family into poverty (WHO, 2004).

Economic Impact

Global research and development funding for road traffic injuries were estimated in 1996 to range from US$24 to US$33 million, compared with more than US$900 million for HIV/AIDS (WHO, 1996). According to Lagarade (1996), the overwhelming majority of this money is spent in developed countries. This implies that there is an enormous demand and urgency for interventions to cause a massive reversal in the sharp rise in RTAs. Road traffic crashes cost governments, on average, between 1% and 2% of their gross national product (WHO, 2004). Nigeria loses about eighty billion naira annually to road accidents. Of all subjects that are involved in road traffic accidents in Nigeria, 29.1% suffer disability and 13.5% are unable to return to work (Labinjo, Julliard, Kobusingye and Hyder, 2010). This indicates that the cost of road traffic accidents consist of the cost of both private property and public amenities damaged, the cost of medical treatment and the cost of productivity lost due to the accident.

Traffic-Related Air Pollution

The world health report 2003 stated that transport-related air pollution has become a major public concern in most countries, and estimates of the impact of air pollution on health indicate that this concern is justified. In addition, transport related emissions of gases that cause climate change which are expected to increase by more than 30% in Europe by 2010 are expected to contribute to extreme weather events (Environmental signals, 2002). These include floods and droughts and changes in the habitat of disease vectors such as mosquitoes, with major health effects (WHO, 2002).

Other Consequences

In a recent study, 55% of those attending an accident and emergency unit following a road traffic crash reported significant medical, psychiatric, social or legal consequences one year later (WHO, 2003).

2.4. Importance of Road Safety to Injury Prevention

The issue of prevention of road traffic accidents is important because of the prediction that in 2020, road traffic deaths and injuries will exceed HIV/AIDS as a burden of death and disability (United Nations, 2005). Injury prevention is a public health priority with a potentially high return on the investment (Petridov and Antonopoulos, 2008). We can reduce deaths and injuries due to road traffic accidents in Nigeria by; control of drivers' speeding, not drinking and driving, wearing seatbelt and obeying traffic rules (Rafindadi, 2000), The reasons for higher rate of RTIs amongst young drivers are minimal information about road safety and limited practice, immaturity and inexperience particularly in the necessary driving skills and capabilities (Malhotra, 1990). There are various factors that can help in the prevention of injury and road traffic accident as a whole.

In a study carried out by Ashish and Devang (2011) revealed the importance of road safety, they found out that: safe driving practices like use of Seat belt while driving was less followed by 40.2% while unsafe practices like use of mobile while driving was practiced by 42.4% of drivers and it was related with high prevalence of RTAs. Unsafe driving practices like high driving speed and non use of seatbelts while driving and using mobile phones while driving are very common among young drivers and higher prevalence of RTAs was observed among drivers with this kind of unsafe driving practices.

Haddon (1980) on his own part observed that injuries can be prevented by addressing the causes of the injuries which include; human factor, vehicle factor and environmental/ roadway factor. Rafindadi (2000) concluded that vehicle factor can be improved through better vehicle design and maintenance; roadway factors through better road design and maintenance and human factors through compliance with the road safety rules. These deaths are largely preventable through the concerted efforts of institutions and civil society and by implementing effective road safety measures that tackle leading risk factors and enable a comprehensive and safe road traffic system all over the world (Ashish et al.,

2011). This study will be useful in 'injury prevention' in University of Ibadan as a whole. Injury prevention is a public health priority with a potentially high return on the investment.

2.5 Regulations for Improving Road Safety in Nigeria

From inception, several principles have been established to improve road safety in Nigeria. Below is a sequential trend of those principles according to Analysis of Government Documents, (2012)

1913 - Promulgation of the Highway (Motor Traffic) Ordinance of Lagos Colony and Southern Protectorate.

1916 - Ordinance for nationwide applicability following Amalgamation of Northern and Southern Protectorates in 1914.

1940 - 1945 - Revisions of the Ordinance. - Road Traffic Act, Federal Highway Act, and Law of Carriage were passed. - Motor Vehicle Inspection was transferred to Nigeria police.

1960 - Establishment of the Traffic Police Unit of Nigeria Police Force

1962 - Establishment of Motor Transport Departments in all the Regions of the Federation.

1963 -Establishment of Vehicle /Inspection Officers in Northern Nigeria through Road Traffic Act Cap 118.

1965 - Establishment of VIOs for Western Nigeria through cap 115.

1967 - Establishment of VIOs for Eastern Nigeria through cap 116.

1974 - Federal Government declaration as National Road Safety year. -Establishment of Road Safety Advisory Commission under the Federal Ministry of Works and Housing.

1977 - Establishment of Oyo State Road Safety Corps.

1980 -Creation of National Road Safety Commission under the Federal Ministry of Works and Housing and in all States of the Federation under State Ministry of Works and Transport.

1988 -Establishment of Federal Road Safety Commission vide Decree 45 of 1988

1999 - Merger of FRSC and Nigeria Police.

2003 - De-merger of FRSC and Nigeria Police.

2007 - Enactment of the Federal Road Safety Corps Act

2.5.1 Federal Road Safety Commission (FRSC)

In 1989, the Federal Government of Nigeria established the Federal Road Safety Commission (FRSC) under Act 45. The FRSC set highway safety standards, educates the public and enforces safety rules and regulations, when enforcing, the corps marshals operate on the legal maxim that ignorance is not an excuse.

Traffic Regulations and Road Traffic Accidents

Road safety rules can be grouped into the following according to FRSC 2008:

1. Before and during take-off rules
2. Breaking, reversing and making U-turns rules
3. Rules that border on parking

Before take-off

- The driver should fasten the safety or seat belt.
- Ensure that the gear is in neutral before turning-on the ignition.
- Check the rear-view mirrors and fuel level.
- Have someone check your rear lights and trafficators.

During take-off

- Ensure that the road is clear
- Clutch, engage gear and gradually move forward.
- Keep your eyes on the road while the vehicle moves on

This work focuses on the following traffic regulations as they have been reported as commonly violated in the University of Ibadan campus by commercial drivers:

Parking rules

When a driver wishes to park, he or she must remember the look-signal move routine. After parking as close as possible to the edge of the road, the engine must be switched off and parking breaks or hand break put on. At night, parked vehicles should switch off head lights and may leave parking lights only. A vehicle should not be parked where there is a 'No PARKING, sign. In addition, parked vehicles should not constitute a danger to other road users. It is dangerous parking if the vehicle is at or near: road junction, bends or corners, brow or crest of a hill/knoll, narrow bridge, level crossing, bus-stop, pedestrian crossing, entrances, the left hand side of the road at night (except in a one-way street), on a narrow road, on flyovers, in tunnels or underpass (except where there is a parking sign), on expressways (except on the hard shoulder when there is an emergency), alongside another parked vehicle, opposite another parked vehicle if this would narrow the road to less than the width of two vehicles (avoid double parking), near road works.

Speeding

The most common violations of traffic laws have been observed to be speeding, red light running, non-use of seatbelts, aggressive driving and road rage, and driving under the influence of drugs or alcohol (Inciadi, 2007). Ashish and Devang (2011) in India concluded in their study that if we compare the average driving speed with prevalence of major accident, it was significantly higher among drivers with higher speed of driving.

Seat belt use

Houston and Richardson (2005) reported that safety belt use reduces the morbidity and mortality of drivers and passengers in motor vehicle crashes and mandatory seat belt laws are effective in reducing fatal and incapacitating injury rates. No behaviour affects the severity of injuries in a more than non-use of car restraint systems, particularly when structural vehicle safety is limited (Eleni et al., 2000). Sanaei-Zadeh, Vahabi R, Nazparvar eta al. (2002) showed that due to a lack of seat belt use, the most common cause of death from RTIs in Iran is head injury (49.8%), and they recommended the obligatory use of seat belts. Seat belts and child restraint systems have been shown to be effective in reducing death and serious injuries in road traffic crashes. Studies have shown that, when used, seat belts reduce serious and fatal injuries by 40-65% (United Nations Economic Commission for Europe, 2010). The protective effectiveness of seat belts, conditional on RTC, has been estimated between 30 and

46% from USA data, whereas the respective estimates from Greece data range around 50% (Petridou, Skalkidis, Ioannou and Trichopoulos, 1994).

Internationally, the seat belt is one of the most common protective equipments designed to reduce the deaths or injuries of vehicle occupants in a crash. Seat belt use for drivers and front seat passengers has been a legal requirement in Iran since 2005. Iranian authorities anticipate an improvement in traffic safety with a drop in deaths and injuries due to traffic accidents by enacting seat belt law (Ghorbanali, 2011). In a study carried out by (Abdulrahman, Zulkifli, Subramaniam and Law, 2005) on Car Occupants Accidents And Injuries Among Adolescents In A State In Malaysia the reasons given for seat belt usage were prevention of injuries (35.1%) and fear of being fined (21.3%), it is a habit (17.0%), because it is the regulation (18.5%). Reasons for Not Using Seat Belt among the Respondents were Driving for short distance (52.2%), forgetfulness (45.6%), seat belts are uncomfortable (29.5%), in a hurry, driving in a non busy area (26.6%), Chances of accident is low (20.1%), do not want clothes creased (13.5%) were the reasons for not using the seat belts. According to United Nations Economic Commission for Europe (2010) the level of seat belt use is influenced by:

(a) Mandatory legislation and;

(b) Enforcement accompanied by publicity campaigns.

Drivers who violate the seat belt laws are likely to violate other traffic rules and regulations (e.g. speeding, red light running, etc) and thus, have a higher likelihood for accident involvement (Rathbone et al., and Koushki, et al., 1999).

2.6 Knowledge of Drivers on Road Traffic Regulations

There are important gaps in knowledge among drivers concerning the interaction of multiple risk factors that precede or precipitate road crashes, particularly in the context of developing countries where the confluence of different risk factors or causes may be distinct from those in high-income countries (WHO, 2008). A study carried out in Lagos State among commercial bus drivers revealed that only 1% of the drivers had correct knowledge of the driver's license authorities in Nigeria. The drivers had poor knowledge of road signs (59.0%) and poor knowledge of maximum speed limits (100%). The oldest, least educated and least experienced drivers had the poorest level of knowledge (Ifeoma et al., 2013).

In a study carried out in Nigeria, Umuahia urban among commercial drivers, it was discovered that correct knowledge of speed limit was demonstrated by 47.9% of the drivers. More than half (55.8%) did not use their seatbelts always. Wrong overtaking, over speeding and driving when fatigued were common among the respondents. Majority (79.9%) admitted to the use of social drugs like alcohol, cigarette, kola nut or snuffs, out of this 41.7% were involved in multidrug use (Ukegbu, Nwamoh, Nwokocha and Ebenebe, 2012). There are many gaps in the knowledge of road safety that need to be filled through research and the establishment of a training institute for drivers where there would be a special training for intending drivers and also provide retraining for older drivers so as to refresh their knowledge and also keeping them abreast of new development in road safety all over the world. This will go a long way in tackling the menace of road traffic crashes in Nigeria at (Aworemi, Remi, Adegoke, Olabode, and Oluwaseun, 2010).

2.7 Attitudes of Commercial Drivers to Road Traffic Regulations

Studies have shown clearly that the single most important contributing factor to road traffic accidents in Nigeria is the attitude of the driver to driving code and etiquette (Gungul, 2012). Drivers' behaviour and attitude refer to the way and manner a driver handles the vehicle and uses the road without due consideration to other road users. Generally, Nigerians have been found to exhibit nonchalant attitudes to traffic regulations. As such, traffic offence has become a regular behavioural tendency among various classes of road users (Atubi, 2012). The pre-crash driver behaviour and attitude is very important in judging the driver's actions. These include; inattention, cigarette smoking, medical conditions, alcohol and drug abuse; inattention to the roadway and surrounding traffic, speeding and disregarding traffic law and/or traffic control devices, which could result from confusion or unfamiliarity with the roadway (Aworemi, Joshua, Abdul-Azeez, Ibraheem, Olabode and Segun, 2010). Driver's attitude such as impatience, time urgency, and hostility, is also associated with risky driving behaviours leading to increased risks in road traffic accidents (Hermann, Silla, Jean-Francxois, Mireille, Sylviane and Lagarde, 2005). Basic training in the understanding of traffic signs, road user attitudes, causes of accidents and methods of prevention are important in building a safety consciousness in the youth (National Transport Policy, 2010). Governments should formulate broad-based programmes, research and data, public awareness and campaigns, which should target the relevant aspects of attitudes that determine a specific type of behaviour. Correct attitudes for safe driving and accident factors in traffic

can be taught with the use of audio-visual aids, drawings and illustrations (United Nations Economic Commission for Europe, 2010).

2.8 Drivers' Compliance to Road Traffic Regulations

Generally, Nigerians have been found to exhibit nonchalant attitudes to traffic regulations. As such, traffic offence has become a regular behavioural tendency among various classes of road users. Thus, an obvious policy question is how to increase the level of compliance of road users with traffic regulations so as to reduce the level of traffic offences. There is need to create avenues through which road users' behaviour can be improved upon in other to conform to existing road safety norms (Atubi, 2012).

The major reductions in RTA would occur from a high degree of compliance with road traffic regulations (Foss and Goodwin, 2003). The road users' non compliance and incapacitation have been found to account for more than 85 % of traffic accident (Odero, Khayes and Heda, 2003), among them, the two-best-known contributing behaviours are speeding, drinking and driving (Chen, 2010 and Afukaar, 2003). Moreover, poor police practices, regional disparities in traffic police strength and inadequate facilities have limited their ability to effectively enforce compliance with traffic regulations, and by extension, their ability to be effective road safety agents (Atubi, 2012).

Compliance with key road safety rules can be significantly increased using a combination of legislation, enforcement of the laws, and information and education (WHO, 2004), however since the introduction of the public education programme was seen as an innovation that will improve drivers' compliance to traffic rules on roads and highways, the extent to which the programme is effective in improving driving culture of drivers in general and that of the commercial vehicle drivers in particular on Nigeria roads and highways need to be known (Onuka, 2012).

2.9 Factors Influencing Drivers Compliance to Traffic Regulations

Education and Training

In the WHO 2004 publication on world report on road traffic injury prevention, public education and information can clearly improve knowledge about the rules of the road and increase compliance. Education is about the only instrument that can be used to change people's behaviour and attitudes. 'In Nigeria, driver training has remained largely at the

informal level'. Majority of drivers especially those operating public transport acquire the skills through apprenticeship system. This is because they are mostly illiterates who cannot cope with formal driver training. (Sumaila, 2013)

He further observed that: it is generally acknowledged that Nigeria has poor driving culture. This is seen in the utter disregard by operators for traffic laws underlined by deep belief by Nigerians that accidents are acts of God, while punishments for traffic offences can be waived through negotiation or amicable settlement. This is the root cause of the poor driving culture in the country.

With the growing demands on the road as a major mode of transport, the highway management and administration could not function efficiently due to stress and neglect of traffic education and training programmes for the operators/drivers and the managers most especially in the developing world like Nigeria. Traffic education entails the conscious training of all road users, most especially drivers of motor vehicles and motorcycles towards proper and lawful compliance behaviour on public highways (Oni and Okanlawon, 2010).

However according to WHO (2004) Public Education and Information Campaigns have proven to be highly effective when they accompany laws and law enforcement. Some of the efforts made to promote drivers' education in the country are:

Enforcement

Enforcement is critical to control of regulations and policies. This is critical for all the policy interventions mentioned below and yet a very difficult area in many countries. However, hidden behind the feeling of helplessness in a law enforcement agent is the issue of corruption that affects transport safety. It involves the police and licensing bodies that include motor vehicle and driver licensure. A BBC reporter was able to buy a driving license in one country, but this is also true elsewhere (Villafana, 2000). In studies described by Nantulya and Musiime (2001) there was a triangle of accusations and counter-accusations as to who was responsible for bribe taking: the police blamed the drivers and the public; the public blamed both the drivers and the police; the drivers blamed the police. The solution, however, does not lie in finding out who is right or wrong. All parties need to work together to place the value of human life above these accusations as the enforcement of traffic regulations is a major area for intervention that can give immense returns. This is possible through a public

health approach. Furthermore, an institutional structure with sufficient legislative authority is essential for enforcing traffic regulations (Nantulya and Michael, 2001).

Standard Model Driving Schools

The FRSC is working on the establishment of some Standard Model Driving Schools, while also finalizing the modalities for accreditation of driver training providers in the country. FRSC, in partnership with Nigerian Institute of Transport Technology (NITT) has prepared standard curriculum for the driving schools (FRSC, 2012). Possession of driving school certificate is now to be part of the requirement for issuance of driver licence in the country. But the current efforts are still limited in scope and coverage (Sumaila, 2013).

Publicity and Awareness

The FRSC has in the last few years accorded due recognition to public awareness in its safety efforts. It has embarked on aggressive campaigns targeted at drivers, market women, students and pupils, and fleet operators among others. They also sponsor television and radio adverts and jingles, and organize other public relation programmes. In October 2012, the FRSC declared an Enforcement Patrol Free Week to carry out massive campaigns distributing handbills, safety pamphlets and posters to road users across the country. However illiteracy remains a major hindrance to the success of the campaigns (FRSC, 2012).

Engineering

This is one of the strategies popularly known by road safety practitioners and scholars. Engineering will normally focus on those elements which deal with safer vehicles and improved vehicle design. The real point here is that engineering as a counter measure ensures that a high reliability is achieved at the design stage and consequently the occurrence of failure of the vehicle while in operation is maintained (Sanders, 2010).

2.10 Strategies for Prevention and Control of Road Traffic Accidents

Combined enforcement strategies are the most efficient way to respond to the burden of road traffic injuries, because they benefit from significant synergies on the cost side, while generating greater overall health gains on the effect side (WHO, 2008). The various strategies are listed below:

2.10.1 Nigeria Road Safety Strategy

Nigeria has come up with an intervention strategy with the hope that it will drive the country towards its road safety vision of 'Zero deaths occurring from road traffic crashes'. These strategies are contained in the Nigeria Road Safety strategic vision from 2012 to 2016. The goal is to reduce the current road safety death by 50% in 2016 (Sumaila, 2013). The following objectives are clearly shown:

(i) to establish a cohesive and efficient road safety system;

(ii) to provide road infrastructure that accommodate the needs of all road users;

(iii) to ensure all vehicles on Nigerian roads meet defined standards;

(iv) to instil a culture of personal responsibility for safe road use;

(v) to deliver prompt and effective response to road crashes.

An astonishing finding was however made by Atubi (2012) which suggested that there were more and significant levels of road traffic accidents in the periods when road safety corps was manning the road system. This is because the size of Nigeria's traffic police force is too small for its road network and driver population. Moreover, the force often stays on the major highways while most of the reported road traffic accidents occur in the densely populated and motorized municipal area. The strategies are further described under the following:

2.10.2 The effect of Policy

According to the policy released by the World Health Organization (2008) the following are some of the programmes/intervention that should be embarked on for road safety: enforcement of speed limits (via mobile speed cameras); drink-drive legislation and enforcement (via breath-testing campaigns); legislation and primary enforcement of seat belt use in cars (drivers and passengers); legislation and enforcement of helmet use by motorcyclists (all riders); legislation and enforcement of helmet use by bicyclists (aged below 15 years). Internationally, road safety principles by United Nation Economic Commission for Europe Inland Transport Committee spelt out the following:

Road User Information/ Raising Awareness policy

1. Governments should provide regular awareness and set information campaigns to alert the public about all the possible consequences of the use of substances on driving;

2. Governments should also regularly plan and conduct campaigns to publicize the strict enforcement of rules concerning driving under the influence of substances;

3. Information campaigns should also be used to create social norms prohibiting driving under the influence of substances. As in the case of alcohol, increasing drivers' perception of the risk of being detected is one of the most effective measures of preventing impaired driving;

4. In addition, to provide a general deterrent effect and for an efficient enforcement, governments should regularly publicize the police activities to combat driving under the influence of substances.

Speed Limit Policy

With regard to regulations:

1. Establish general speed limits in terms of the type of road in question and its equipment (urban roads, motorways, dual carriageways, other roads,), categories of vehicles (light vehicles, heavy vehicles, etc.), drivers (e.g. novice drivers) and weather conditions;

2. Establish local speed limits where the dangerous nature of the section or the regulation of the traffic requires, making sure that the limits are justified and are applied by drivers;

3. Clearly indicate local speed limits by means of appropriate signs respecting the principles of uniformity and consistency by applying the same criteria as for similar traffic conditions;

4. Recommend on heavy vehicles the installation of speed limiters which are already obligatory in certain countries. Moreover, it should be taken into account that some countries already recommend the use on light vehicles of devices which help drivers to better observe speed limits such as cruise control and/or speed limiters that can be adjusted by the driver.

Alcohol Consumption Policy

Public Information and Education

Governments should provide regular awareness and information campaigns to alert the public about the consequences of alcohol consumption, especially on driving; and provide information on the existing laws concerning drinking and driving, the penalties for driving under the influence of alcohol, and the measures that can be taken to prevent drinking and driving. Such informational campaigns can also be used to create social norms that alcohol-impaired driving is unacceptable. In addition, to provide a general deterrent effect, Governments should regularly publicize police enforcement activities to combat alcohol-impaired driving. Schools should include in their curriculum information about the effects of alcohol and the dangers of driving under the influence of alcohol. Moreover, driving schools for new drivers should provide similar information on the effects of alcohol on perceptual and motor skills and reasoning, as well as the dangers of drinking and driving and what can be done to prevent drinking and driving. Governments should discourage advertisements for alcoholic beverages along roads and during mass participation events.

Programmes

Governments should encourage employers to implement programmes and policies making any behaviour associated with drinking and driving by their employees unacceptable. In addition, Governments should formulate broad-based programmes to change attitudes and social norms about drinking and driving. These may include programmes to support alcohol server intervention and designated driver programmes at establishments serving alcoholic beverages. Governments should work with competent bodies to ensure that a discussion on the risks of driving under the influence of alcohol is included in the driver's manual and questions on the risks of driving under the influence of alcohol are included on the driver's license examination.

Assessment and Rehabilitation

Governments should ensure the accessibility of effective assessment and treatment, as well as rehabilitation services with trained personnel, for all drunk-driving offenders, but especially for habitual offenders and those addicted to alcohol. License re-instatement should be linked to successful completion of the appropriate alcohol rehabilitation programme. Moreover, Governments should consider programmes incorporating alcohol interlock ignition devices,

at least for repeat or habitual alcohol-impaired driving offenders, and perhaps for all drunk-driving offenders. Participation in such a programme could be a condition for license re-instatement.

Research and Data

Governments should conduct research and support data collection to assess the role of alcohol in road accidents, as well as the economic and social costs of alcohol-related collisions. Data should include coroner data; hospital data on injuries; roadside surveys of alcohol use among drivers; police data on blood alcohol concentration (BAC) test results and arrests; convictions and sanctions imposed; and surveys of public knowledge, attitudes and self-reported impaired driving. Specific research should focus on identifying the populations at risk for alcohol-impaired driving to better target policies and programmes for reducing impaired driving. Governments should undertake evaluation of programme activities to establish the effectiveness, including cost effectiveness, of different policies, programmes and strategies.

Partnerships

Governments should formulate policies and programmes, at the national and international level, involving all the sectors in preventing drinking and driving. These sectors include law, law enforcement, health and medical, education, insurance, media, private sector companies, victims' organizations, employers, road user groups, and any other sector that can be effective in developing policies and programmes to reduce drinking and driving (WHO 2008).

2.10.3 The Effect of Legislation:

Legislation should define the offences, the enforcement actions, and the penalties (United Nations Economic Commission for Europe, 2010). The effect of legislation cannot be over-emphasized. An example is the legalization of the licensing system, internationally; licensing system in several states of the USA have resulted in reduction of teen crashes by 5-16%. Being new license holders, the adolescent are more careful so that their license will not be evoked (Rosenberg and Martinez, 1996).

The Swedish National Road Traffic Accidents showed large reduction of fatality and accidents leading to serious injuries when the age of attaining driving license was increased

from 18 years to 24 years (Statistics Sweden, 2001). The accident rate peaked at 19 years and declined at age 20 and 21. There were older people who were license holders as compared to the 19 year old (Murray, 2003). In Malaysia, there was a significant association between having injuries as motorcar occupants and not having driving license. Once a person acquires a driving license in Malaysia they are still on probation for two years before they can receive their normal driving license. Most new probation licensed drivers are more careful as they do not want to lose their driving status and opportunity at an early stage (Hejar, Nor, Kulanthayan and Law, 2005).

According to Sumaila (2013), the Strategies instituted in Nigeria for legislation of road safety are:

The Nigeria Police Force

It was emphasized that the Nigeria Police force is constitutionally empowered to act as the primary enforcement agency of all traffic laws and regulations of the Federal, State and Local governments in the country. This function it performs through its Motor Traffic Division. Thus like the FRSC, the Police carries out road patrols, vehicle checks, and prosecute traffic offenders. On the other hand; the Vehicle Inspection Officers(VIOs) are constitutionally mandated to issue and renew Licences for all private and commercial vehicle drivers.

Other Domestic Interventions: There are other Federal Ministries (e.g. Transport, Works), State Ministries e.g. Works and Transport; Transport Regulatory Authorities; Local Government Councils and Trade Unions e.g. National Union of Road Transport Workers (NURTW) who are empowered to play either persuasive, preventive or punitive safety roles in the country. Conventionally, the FRSC is expected to coordinate the activities of these bodies in order to improve road safety (FRSC, 2012).

2.10.4 Effect of the use of Technology

New technologies are opening new opportunities for road safety. Some of the more promising recent developments are:

Smart, audible seat-belt reminders that detect whether or not belts are in use in each occupied seat and emit increasingly aggressive warning signals until belts are fastened (Transport Safety Council, Vehicle Safety Working Party, 2001).

In Sweden, for example, 35% of all new cars sold are equipped with these (Lie and Tingvall C, 2003). Although Sweden already has high rates of seat-belt use, these reminders could boost the rate to an estimated 97% and contribute to a 20% reduction in deaths among car occupants (Larsson and Nilsson, 2000).

Intelligent speed adaptation is a system by which the vehicle determines the speed limit for a road. Current versions use a digital road map onto which speed limits have been coded. Intervention levels can be set to advisory (informing the driver of limits and violations), voluntary (the system is linked to the controls but the driver can enable or disable the link) or mandatory (the driver cannot override the system's control). The system could reduce fatal crashes by an estimated 18–25% at the advisory level, 19–32% at the voluntary level and 37–59% at the mandatory level (Carsten, Fowkes and Tate, 2001). Experimental trials in Sweden indicate high driver acceptance of such a system in urban areas (Lie et al., 2003).

Alcohol-ignition interlock systems detect alcohol on the breath of drivers, preventing them from starting their motor vehicles. Many states in the United States and some provinces in Canada now have laws requiring that such systems be installed in cars owned by repeat violators of laws pertaining to driving while under the influence of alcohol. In Sweden, two major manufacturers are offering the systems as standard equipment in trucks, and more than 1500 trucks now have them installed (Lie et al., 2003).

Electronic stability programmes can help maintain the stability of a car in adverse weather conditions, preventing skidding and loss of control on wet roads and ice. Electronic stability programmes are being offered only in luxury vehicles, but recent tests in Sweden indicate that they could reduce crashes related to ice and snow by 32–38% (Tingvall, 2003).

2.11 Theoretical Framework

The theory that was used in carrying out this study is the PRECEDE Model because the model views health behaviour as influenced by both individual and environmental forces; it as an "educational diagnosis and ecological diagnosis". This theory was considered due to the fact that it provides a sound foundation for this study. The PRECEDE model is a framework for the process of systematic development and evaluation of health education programs. The model consists of three phases. Green and Kreuter (1999).

In Phase 1 "Diagnosis", a behavioural and contextual analysis is made and programme goals are established in line with policy objectives. The roles of habitual and reasoned behaviour of

the target groups are assessed. Also the changeability of behaviour is analysed as it is advisable to start with behaviour which has the greatest impact and is easiest to change.

In Phase 2 the corresponding determinants influencing the target group behaviour are analysed. These include predisposing factors (motivating behaviour), enabling factors (facilitating behaviour) and reinforcing factors (providing feedback). Behaviour can be explained as a function of the collective influence of these determinants. In this step, both internal and external factors influencing behaviour should be taken into account.

- **Predisposing factors**: these are factors which motivate or provide a reason for behaviour; they include knowledge, cultural beliefs, attitudes (components of attitude constitute beliefs, opinions, ideas, stereotypes, and thoughts that an individual conceives about particular issues, either negative or positive) and personality traits.
- **Enabling factors:** facilitate persons to act on their predispositions, they include supportive policies, assistance, and services resources such as skills, good roads, continue education, road bumps, signboards, publicity and awareness among others.
- **Reinforcing factors:** are factors that come into play after a behaviour has been initiated; they encourage repetition or persistence of behaviours and buttress the practice of the good behaviours such as the presence of law enforcement bodies, association of drivers, educated passengers.

In Phase 3. Regulatory instruments (laws, regulations, permits, enforcement, covenants and agreements) mainly influence behaviour through compulsion. Economic instruments (subsidies, levies, taxes, tax differentiation and financial constructions) influence behaviour through financial transactions. Communicative instruments (information and promotion, training, personal advice, demonstrations and benchmarks) persuade.

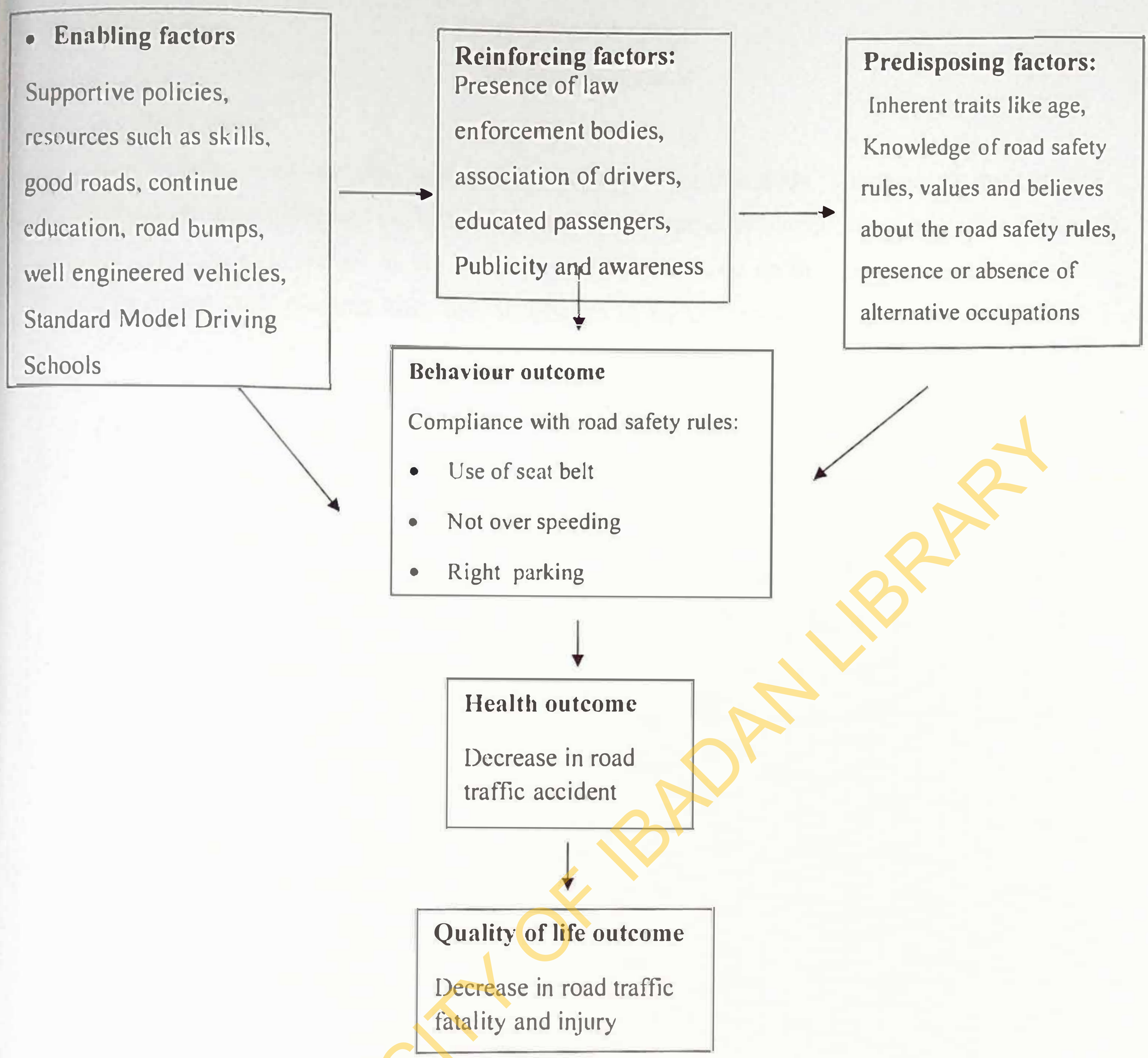

Figure 2.1: Diagrammatic Representation of the PRECEDE Model

Source: The PRECEDE - PROCEED (Modified from Green and Kreuter, 1999).

CHAPTER THREE
METHODOLOGY

3.1 Study Design

A descriptive cross-sectional survey design was used for this study. The research work was essentially descriptive and analytical in nature. Structured questionnaire were administered to the commercial motorists in the University of Ibadan based on the sample size chosen in conjunction with personal interview of officials in the University in gathering information. Also, personal observation of the case study area formed part of the methodology adopted.

3.2 Study Area

The University of Ibadan is located in Ibadan North Local Government of Oyo State; it is bounded to the East by Agbowo Community, to the South/West by Polytechnic Ibadan and to the North by Nigerian Institute of Social and Economic Research. It is the oldest Nigerian University with a population of over 12000 students. Within the University are residential houses for staffs, halls for students which are a bit far from the main gate, hence there are commercial transporters with their headquarter bus stop located at the main gate from where they transport people to and from different areas within the campus.

Commercial Transport Service in the University of Ibadan campus

Initially, public motorists operate within the University of Ibadan campus which resulted in public crisis, making the institution see a need to set up a commercial transport service. In 2009, the Intra campus transport committee came up with 24 approved traffic regulations to serve as guidelines for road usage. The intending drivers having paid a registration fee, depending on what they are driving, the school conducts a well scrutinized examination on the vehicle and the driver to be sure they are in good condition. They present the vehicles particulars to prevent stolen vehicles been used in the presence of the intending driver and car owner. They are compelled to run medical test in the school health centre, the test involves checking their blood pressure, blood sugar level, vision test. The test is not to disqualify them but to show their fitness, if unfit in any way drugs will be prescribed. A mid-term appraisal of therefore the commercial drivers' service is carried out in form of a screening exercise every six months for all the drivers again, those who do not meet the cut-off score are disqualified. The vehicular and human factors are strongly put into consideration before re-enrolling the car into the system again.

The commercial drivers within the U.I campus are well organized, having a functioning leadership structure. They are headed by a chairman, they have a secretary who is also a member of the Intra Campus Transport Committee (ICTC), a public relation officer (PRO), they also have team leaders, and these are drivers that head each of the routes where commercial motors ply. These helps for effective conduct of information to the headed-chairman. The U.I campus is comprised of 24 rules guiding driving as stated in Appendix IV. These rules were instituted in 2009 by the ICTC to regulate traffic accident.

3.3 Study Population

The population in this study consisted of commercial motorists in the University of Ibadan and policy makers in the University of Ibadan

Inclusion Criteria

- All commercial drivers who were available at the time of the study and gave their consent.

Exclusion criteria

- Commercial drivers who were absent from work
- Commercial drivers who had not completed their registration and were uncertain of continuation of the service

3.4 Sample Size

One hundred and eighty-six out of the 230 commercial motorists within the campus were interviewed (these included bus and car drivers). Out of the total number, 23 declined, some were said not to have completed their registrations hence not permitted to operate until they completed it while others were reported to have faulty cars.

3.5 Methods for Data Collection

Both qualitative and quantitative methods were used in collecting data.

1. **Quantitative:** A validated semi-structured questionnaire (See Appendix I) which measured the drivers' knowledge, attitude, compliance with road traffic regulations and factors influencing them was used to elicit responses from respondents of the study using interviewer administered approach. The questionnaire was developed after a review of the literature. The results of the conducted KIIs were also used to fine tune or modify the questionnaire.

2. **Qualitative:** The qualitative method used was the key informant interviews (KII). The key informant interviews guide explored issues relating to policies formulated on the commercial motorist program in U.I, how compliance is monitored, how the programme can be improved, registration procedure and challenges facing the programme alongside recommendations (See Appendix II)

3.6 Validity and Reliability

Validity

Validity was censured by the following steps:

1. The questionnaire was drafted having consulted relevant literatures on the study;
2. The draft instrument went through independent review from peers and experts in the field of public health;
3. Content validity of the questionnaire was further ensured through the incorporation of the preliminary pretested KII outputs;
4. The quality of data collected was monitored through supervision during collection of data.

Reliability of the Instrument

Both the KII guide and the questionnaire were reviewed for quality and consistency. The instruments were translated into Yoruba (which is the local language of the target population (See Appendix III) by a Yoruba language expert. The two instruments were pre-tested to ascertain aptness and suitability to field situations, determine the average time duration for administering the questions, determine whether the questions were clear and simple enough for participants' comprehension and determine the trend in the response of participants. Twenty-nine drivers were interviewed with the questionnaire (representing 10% of the actual sample size for this study and extra six in case of incompleteness) at the Polytechnic, Ibadan. At the end of the exercise, items that were not easily understood were reframed, those that were found to be irrelevant were removed and adequate spaces were provided for responses. The pre-test questions were analyzed using the SPSS (now PASW- Predictive Analytics Software) version 17.

The reliability was calculated using the Alpha Cronbach's reliability test. The result was 0.7 which modelled internal consistency, based on the average inter-item correlation.

3.7 Ethical Consideration

The proposal was submitted, reviewed and approved by the U.I/UCH Ethical review committee. A letter introducing the researcher and the purpose of the research work was obtained from the Department of Health Promotion and Education, for all official contacts throughout the period of fieldwork.

Informed consent was obtained from the respondents by giving them an informed consent form to fill and explaining it to the best of their understanding and also their ability to read and write. The informed consent form stated the title of the study, purpose of the study, justification for doing the study and as well as the benefits that would be derived from the end of the study. The form was given to participants requesting them to go through the entire form and make an independent decision on participating.

Participation was voluntary and participants were given the choice to withdraw their consent freely at anytime. There was no criticism of respondents who refused to participate; confidentiality of information given by each respondent was highly maintained during the research and after the data collection. No identifier like name or address was written on the questionnaire so as to keep the information given by each respondent as confidential as possible.

3.8 Data Collection Procedure

The Instruments were rightly adjusted and standardized after which five research assistants were trained for data collection. The research assistants were trained in the following areas; the objectives of the study, they were taken through each of the questions in the questionnaire so as to be sure they have a good understanding of what they are asking the respondents, they were allowed to ask questions to get clarifications on areas they are not certain about to avoid wrong interpretation of questions to the respondents, also on basic communication and approaching skills. In addition, ethical issues such as obtaining informed consent, respect for privacy and confidentiality of information were explained to the research assistants.

The research assistants with the researcher were involved in the collection of the data. Data collection process spans through January 27 to February 8, 2014 mostly in the day time on week days and weekend when it was easier to get the participants. Short debriefing sessions were held at the end of each day where the day's work was reviewed and the next plans of action were disseminated to the research assistants.

The Key Informant Interview Guide (KII):

A total of five Key Informant Interviews were held with various principals in the institution: the chairman of the commercial drivers association, the Chief security officer, the chairman of the intra campus transport committee, the Deputy Registrar and the Student Union representative. Each interview lasted about 30 minutes. To those who consented to tape recording, their words were recorded and not taking was done. All the participants were allowed to express themselves without interruptions. Questions were asked using the KII guide. At the end of the KII, the tapes were transcribed verbatim and the report of each was written out.

Questionnaire Interview

The researcher with the 5 trained research assistants administered the questionnaires t o commercial motorists in the University of Ibadan, Oyo State, Nigeria. The chairman of the association of commercial drivers was formally informed about the commencement of the research on January 27; we were redirected to the chairman of the ICTC who endorsed the commencement of the study. The collection started on February 4 and ended February 8, 2014 with five research assistants and the principal investigator all present at the field. We The interview of the bus drivers was the first, we started with those that were behind on the queue being that they are slower to get filled up, few of us focused on the cabs, starting from behind too. In a day, each of the six of us completed a total of 7 questionnaires on the average making it 42 questionnaires completed in a day; this gave room for thorough and concise review of the data collected. The completed questionnaires were submitted to the researcher at the end of each day of the period of data collection and were screened before the research assistants left

3.9 Data Management and Analysis

Research Variables: The variables were categorized into two namely the independent variables (presumed cause) and the dependent variable (presumed effect).

Independent Variables: age of respondent (in years), educational status of respondent (none. primary. secondary, tertiary), religion (Christianity, Islam, Traditional), ethnicity (Hausa. Igbo, Yoruba), marital status (single, married, divorce/separated, widower), alcohol consumption (yes, no), alternative occupation of respondents (yes or no), income from alternative occupation source

Dependent variables: knowledge of the road traffic regulations (good or poor), compliance with road traffic regulations (high or low), attitude towards compliance with road traffic regulations (positive or negative), mode of licensing (legal or illegal), active law enforcement bodies in the institution (present or absent), factors influencing compliance with road traffic regulations (positive or negative)

The tape – recorded responses from the KIIs were transcribed verbatim and used to update the write up. The KII report was analyzed manually by the researcher. Content and context analysis using a thematic approach was used.

In respect to data analysis from the questionnaire the following were done:

1. All questionnaires were numbered, reviewed and edited by the researcher for completeness
2. A coding scheme guide was developed and data were manually coded and entered into the computer.

Statistics Package for Social Sciences (SPSS) version 17 was used to analyze the data collected during the field work. This research was subjected to descriptive statistics. This comprises simple percentages, tables, frequency distribution, charts and cross tabulation for the interpretation of the research questions. The research hypotheses were tested to establish significant relationship between the independent and dependent variables using the Chi-square test at 5% probability level for rejecting the null hypotheses. Cross tabulation of dependent and independent variables was also done to establish relationship between the variables. The results were presented in tables. Narratives statements were also used to further present the data.

Also, Knowledge variables were scored: From a total maximum knowledge score (commercial motorists' knowledge of road traffic regulations) of 46 points, an incorrect answer or no response had a score of 0. The scores were then summed up to give a composite knowledge score for each respondent. Knowledge of respondents was categorized into "poor" (<17), "average" (17-32), "good" (>32).

Attitude variables were scored: From a total maximum attitude score (on commercial motorists' attitude towards road traffic regulations) of 15 points, an incorrect answer or no response had a score of 0. The scores were then being summed up to give a composite attitude score for each respondent. Attitude of respondents were categorized into negative attitude (≤7) and positive attitude (>7)

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Compliance variables were scored: From a total maximum compliance score (on commercial motorists' compliance with road traffic regulations) of 24 points, an incorrect answer or no response had a score of 0. The scores were then summed up to give a composite compliance score for each respondent. Compliance of respondents was categorized into low" (<9), "fair" (9-16), "high" (>16).

3.10 Problem Encountered During Data Collection

The encountered limitations in the study area were those related to the level of enlightenment of the respondents such as willingness to cooperate with the researcher. In addition, some of the drivers were unable to complete the questionnaire before it was their turn to pick up passenger so we had to follow some of them to their destination and back to the gate while we waited for others noting their questionnaires and continue when they returned. Plans to collect the quantitative data in 3 days did not work out because of the busy schedule of the drivers hence; data collection was increased to 5 days which took longer time and more energy. Also, another challenge we had was that many of the drivers feared that the research had to do with their work in U.I, but making them know there were no identifiers on the questionnaire resolved the fear for most of them while some others were not convinced. A total of 186 questionnaires were completed at the end of the process.

CHAPTER FOUR

RESULTS

4.1 Respondents' Socio-demographic Characteristics

Table 4.1 below shows that the drivers who drive buses were (32.8%), while cars accounted for (67.2%). There was only one female driver. Majority (60.8%) of the respondents were Christians while majority (84.9%) of the respondents were Yoruba. Most (93.5%) of the respondents are within working age bracket and are still productive. Few (4.8%) had no formal education, 21.5% had primary school education only, and 49.5% completed secondary school while 24.2% had completed tertiary education. The table further shows that 69.9% of them had no occupation aside driving, while 23.7% of them were also business men, others have extra occupations like being staff of U.I (2.7%), clergy (0.5%), artisans (1.1%), driving outside U.I (1.6%), retired (0.5%). The table also indicates that about half (50.9%) of the respondents earned below ₦50, 000 per month from other occupations. 12.9% were single, 86.6% were married, while 0.5% were widowed.

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Table 4.1: Respondents' Socio-demographic Characteristics (N=186)

Variable	Frequency	Percentage (%)
Type of car drive		
Bus	61	32.8
Car	125	67.2
Religion		
Christianity	113	60.8
Islam	71	38.1
Traditional	2	1.0
Ethnicity		
Igbo	23	12.4
Yoruba	158	84.9
Hausa	1	0.5
Others	4	2.1
Age as at last birthday (in years)		
18-59 years	174	93.5
Above 60 years	12	5.5
Educational qualification		
No formal Education	9	4.8
Primary	40	21.5
Secondary	92	49.5
Tertiary	45	24.2
Marital Status		
Single	24	12.9
Married	161	86.6
Widowed	1	0.5

When asked if they have a valid drivers' licence, 93.0% said yes while 7% said no. When asked how they obtained their first licence, 75% said it was after passing the test and paying the fee, 40% said it was by paying the required fee without doing a test 6% said they paid someone to do the test for them. When asked what type of test was conducted for them before they were given the licence, 70.3% said driving and vision test only, 32% said driving test only, 9% said vision screening test only, 71.5% had learnt driving through a friend, 18.8% through a driving school, 4.8% through their bosses when they were apprentices and another 4.8% learnt by themselves without anyone's help. The result is presented in the table 4.1.1 below:

Driving years and driving within University campus

From figure 4.1 below, 1.6% of the respondents have been driving for less than 6 months, 15.6% have been driving between 7 months to 5 years, 21.5% have been driving between 6-10 years, 21.5% have also been driving between 11-15years, and 16.7% have been driving between 16-20 years, while the remaining 23.1% have been driving for more than 20 years. The figure also indicates that majority (45.2%) of the respondents claimed to have been driving within University campus between seven months to five years, 21.5% between 6-10 years, 16.1% between 0-6 months while 9.7% reported to have been driving between 11-15 years, 5.9% between 16-20 years, while 1.6% have been driving for more than 20 years.

Table 4.1.1: Distribution of Respondents by Licensing

Variable	Frequency	Percentage (%)
Possession of valid driving licence (N=186)		
Yes	173	93.0
No	13	7.0
Methods of obtaining first licence (N=184)		
Paying required fee without doing test	40	21.5
After passing the test and paying the fee	138	74.2
Paying someone to do the test for me	6	3.2
Type of test conducted before given the driving licence (N=143)		
Vision screening test only	9	4.8
Driving test only	32	17.2
Both vision and driving test	102	54.8
Vision, screening and blood test	2	1.1
Methods of learning driving (N=186)		
Through a friend	142	76.3
Through a driving school	35	18.8
Myself	9	4.8

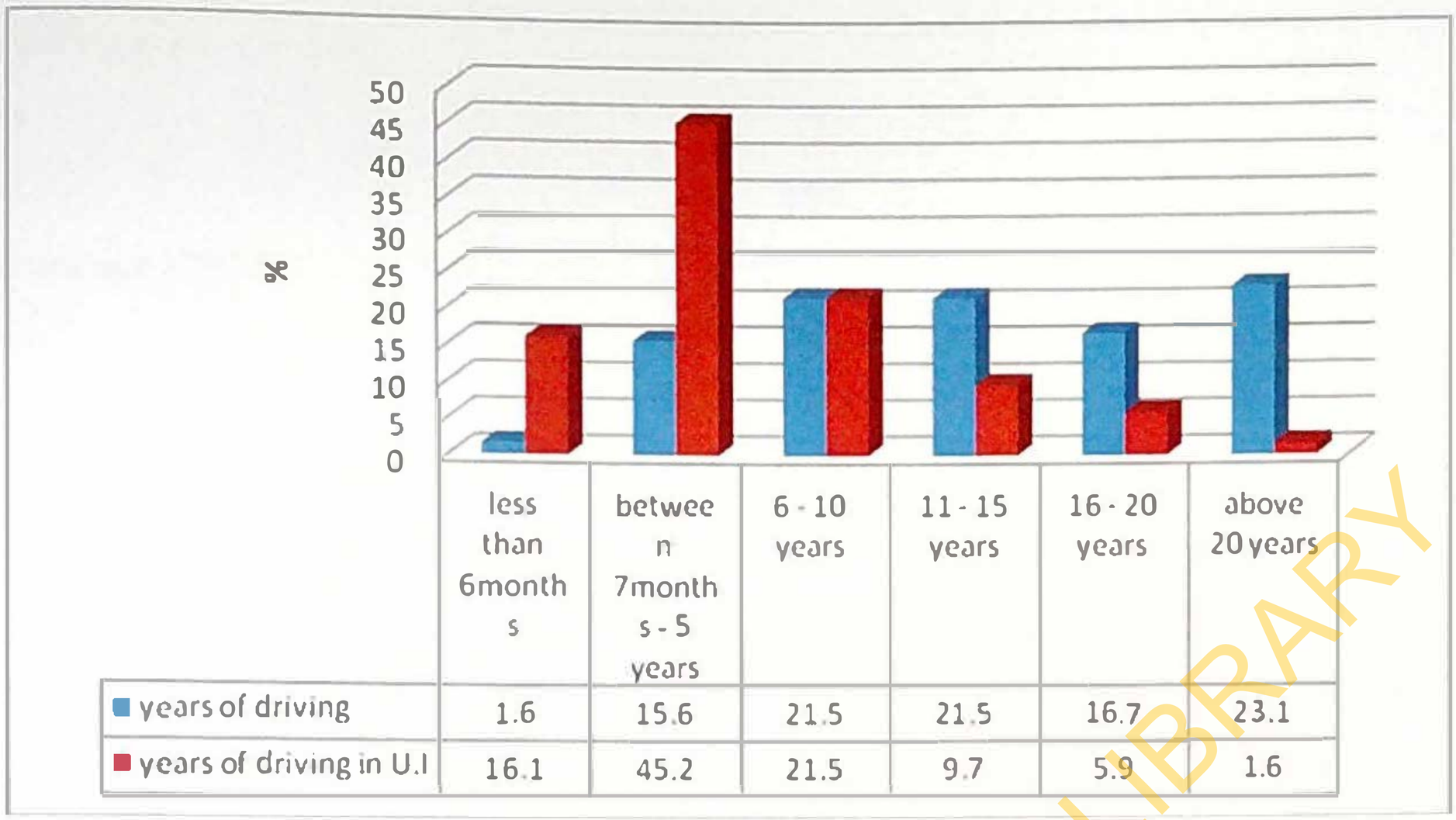

Figure 4.1: Driving years within University campus

Substances taken to enhance driving

The table 4.1.2 below shows that 7.0% of the respondents claimed they took cigarette to enhance their driving, 93.0% did not, 61.5% of them smoked daily, 30.8% weekly, 7.7% monthly. Also, 33.9% took alcohol to enhance their driving, 66.1% declined, 25.3% take beer, while 74.5% do not. Of those who take beer, 34%take beer daily, 53.2% weekly, 8.5% monthly, 4.3% yearly. Of the 19.9% who take palm wine to enhance their driving, 13.5% take it daily, 67.7% weekly, 18.9% monthly. Few of the respondents (8.6%) take red wine.

Table 4.1.2: Substances used to enhance driving

Variable	Frequency	Percentage (%)
Takes cigarette (N=186)		
Yes	13	7
No	173	93
Frequency (N=13)		
Daily	8	61.5
Weekly	4	30.8
Monthly	1	7.7
Takes Alcohol (N=186)		
Yes	63	33.9
No	123	66.1
Takes Beer to enhance driving (N=186)		
Yes	47	25.3
No	139	74.7
Frequency (N=17)		
Daily	16	34
Weekly	25	53.2
Monthly	4	8.5
yearly	2	4.3
Takes Palm wine (N=186)		
Yes	37	19.9
No	149	81.2
Frequency (N=37)		
Daily	5	13.5
Weekly	25	67.6
Monthly	7	18.9

4.2 Respondents' Knowledge of the University of Ibadan campus traffic regulations

The first research question examined the knowledge of the respondents of the University of Ibadan campus traffic regulations.

The table below 4.2 below indicates that all (100.0%) the respondents did not know the total number of approved traffic regulations in the University of Ibadan campus. Majority (81.7 %) of the respondents could only mention between 1 and 8 of the rules correctly, while 5.9% could not state any. About a quarter (25.8%) were knowledgeable about the traffic regulations for the University of Ibadan campus by using the experience they had before on driving, less than half (44.1%) were told during their out registration, while 26.8% used other methods. Most (84.4%) of them proved that the approved speed limit of the University is 40km/hr, while 18.6% got it wrong. Most (70.4%) of them believed that the right time to wear safety belt is before ignition.

Table 4.2: Knowledge of road traffic regulations in UI (N = 186)

Statement	Frequency	Percentage (%)
Do you know the total number of approved traffic regulations present in U.I campus?		
No	186	100.0
The rules confidently stated		
None	11	5.9
Rule one-eight	152	81.7
Nine and above	21	12.4
Knowledge about the traffic regulations for the University of Ibadan campus		
I asked people	6	3.2
I used the experience I had before driving	48	25.8
We were told during our registration	82	44.1
others	41	26.8
The approved speed limit within University campus		
40 km/hr	157	84.4
Any answer aside 40km/hr	29	15.5
The right time to wear safety belt		
Before ignition	131	70.4
After ignition	37	19.9
While driving on the road	18	9.6

Respondents' Knowledge of the University of Ibadan Campus Traffic Regulations about seat belt and parking

More than half, (74.2%) rightly reported that wearing of seat belt does not prevent accident. A good percentage (97.8%) indicated that wearing of seat belt minimizes the risk of injury. More than half of the respondents (54.3%) claimed that at night parked vehicles should not switch off head lights and may not leave parking light on. A larger percentage of the respondents responded to the next two statements correctly (98.4% and 98.9% respectively) it is dangerous parking if vehicle is parked at road junction and it is dangerous parking if car is at bends or corners. Majority (95.7%) correctly answered that it is dangerous parking at narrow road. 91.9% correctly answered it is dangerous parking if the car is parked opposite another parked vehicle if this would narrow the road. About two-third (67.7%) correctly answered that smoking can lead to accident. Majority (98.9%) correctly answered that excessive speeding can lead to accident. Most of the respondents (93.5%) believed that the use of seat belt cannot lead to accident. The result is presented in the table 4.2.1 below.

Percentage of Respondents' Knowledge Grade

The mean knowledge score on a 46 point scale was 34.6±3.3. Outcome results showed that more than half (79.6%) of the respondents had high knowledge and 19.4% had average knowledge score while 1.1% had poor knowledge.

4.3 Attitude of Respondents to Compliance with the University of Ibadan Campus Traffic Regulations

The second research question examined the attitude of commercial drivers to compliance with the University of Ibadan campus traffic regulations. Several questions were asked to determine the drivers' attitude towards compliance with the campus traffic regulations. The first attitude question asked is if a driver can break any of the U.I traffic regulation when he is trying to meet his target for the day, 45.2% answered yes while 54.8% said no. Almost all (96.2%) agreed that the regulations can be broken if there is an emergency, 56.5% agreed that the U.I traffic regulations can be broken if there is none to arrest while 43.5% did not agree. The result is presented in figure 4.2 below.

Table 4.2.1a: Respondents' Knowledge of the University of Ibadan Campus Traffic Regulations about seat belt and parking (N = 186)

Statement	Frequency	Percentage (%)
Wearing of seatbelt prevents accident		
Yes	48	25.8
No	138	74.2
Wearing of seat belt minimizes the risk of injury		
	182	97.8
Yes	4	2.2
No		
At night, parked vehicles should switch off head lights and may leave parking lights only		
Yes	85	45.7
No	99	54.3
It is dangerous parking if the vehicle is at road junction		
Yes	184	98.9
No	2	2.1
It is dangerous parking if the vehicle is at bends or corners		
Yes	184	98.9
No	2	2.1

Table 4.2.1b: Respondents' Knowledge of the University of Ibadan Campus Traffic Regulations about seat belt and parking (N = 186)

Statement	Frequency	Percentage (%)
It is dangerous parking if the vehicle is at designated bus-stop		
Yes	14	7.5
No	172	92.5
It is dangerous parking if the vehicle is at narrow road		
Yes	179	96.2
No	7	3.8
It is dangerous parking if the car is parked opposite another parked vehicle if this would narrow the road to less than the width of two vehicles		
Yes	172	92.4
No	14	7.5
The use of alcohol and drugs lead to accident		
Yes	173	93
No	13	13
Smoking leads to accident		
Yes	126	67.7
No	58	31.2

Table 4.2.1c: Respondents' Knowledge of the University of Ibadan Campus Traffic Regulations about seat belt and parking (N = 186)

Statement	Frequency	Percentage
Excessive speeding leads to accident		
Yes	185	99.5
No	1	0.5
The use of seatbelt leads to accident		
Yes	9	4.8
No	177	95.2
Parking correctly leads to accident		
Yes	16	8.6
No	170	91.4
Fatigue leads to accident		
Yes	166	89.2
No	20	10.8
The use of mobile phone leads to accident		
Yes	165	88.7
No	21	11.3
Cannot maintaining a car leads to accident		
Yes	182	97.8
No	4	2.2
Constant regards for traffic lead to accident		
Yes	84	45.2
No	102	54.8

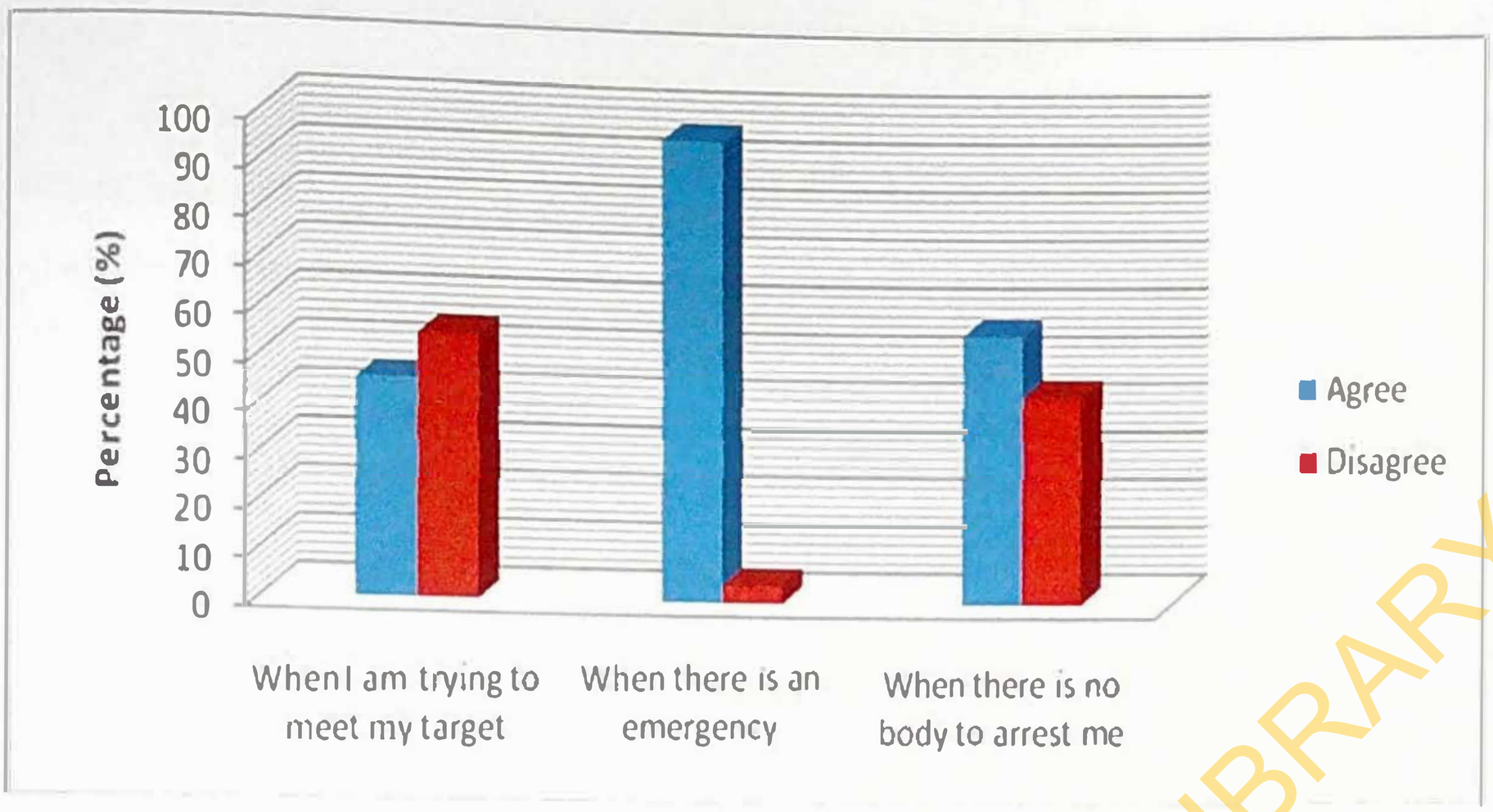

Figure 4.2: Reasons for violation of U.I Traffic Regulations

Almost half of the respondents (49.5%) agreed that an experienced driver can drive safely without obeying the U.I traffic regulations while 50.5% disagreed. More than half of the drivers (56.5%) agreed that a driver can park anywhere in the U.I campus as long as the passenger(s) makes it snappy while 43.5% disagreed. Less than half (37.1%) agreed that a driver can exceed speed limit on campus as long as the road is good while 62.9% disagreed. A quarter (25.3%) of the respondents agreed that 40km/hr is too low as speed limit within the U.I campus while 74.7% disagreed. Close to half (48.4%) agreed that one can drive above 50km/hr when one is about to close for the day so as to make enough money while 51.6% disagreed. A large majority (96.3%) agreed that they will wear seat belt within U.I campus if they know they will be punished for not wearing it; 88.2% agreed that seatbelt makes them uncomfortable when they attempt to wear it. Only a lesser portion (8.6%) agreed that drivers who do not use seat belt in U.I campus should be punished while 91.4% disagreed. As regards seatbelt use for short trips, 87.1% agreed that there is no need to wear seat belt for short trips within the campus. Most (85.5%) of the respondents disagreed that one can still drive within campus after taking alcohol as long as it is little, while 14.5% agreed. Majority (93.5%) disagreed that accident is an act of God and there is nothing anyone can do to prevent it. The result is presented in the table 4.3 below:

Table 4.3a: Attitude of Respondents to Compliance with the University of Ibadan Campus Traffic Regulations (N = 186)

Statement	Frequency	Percentage (%)
An experienced driver can drive safely without obeying the U.I traffic regulations		
Agree	92	49.5
Disagree	94	50.5
I can park at any convenient place in U.I campus to drop a passenger as long as the passenger makes it snappy		
Agree	105	56.5
Disagree	81	43.5
One can exceed speed limit on campus as long as the road is good		
Agree	69	47.1
Disagree	117	62.9
40km/hr is too low as speed limit within the U.I campus		
Agree	47	25.3
Disagree	139	74.7
One can drive above 50km/hr when one is about to close for the day so as to make enough money		
Agree	90	48.4
Disagree	96	51.6
I will wear seat belt within U.I campus if I know I will be punished for not wearing it		
Agree	179	96.3
Disagree	7	3.8

Table 4.3b: Attitude of Respondents to Compliance with the University of Ibadan Campus Traffic Regulations (N = 186)

Statement	Frequency	Percentage (%)
Seat belt makes me uncomfortable when i attempt to wear it		
Agree	165	88.7
disagree	20	10.8
Drivers who do not use seat belt in U.I campus should be punished		
Agree	16	8.6
Disagree	170	91.4
I do not wear seat belt within U.I campus because I feel use of seat belt does not guarantee security		
Agree	111	59.7
Disagree	75	40.3
There is no need to wear seat belt for short trips within the campus		
Agree	162	87.1
Disagree	24	12.9
One can still drive within campus after taking alcohol as long as it is little		
Agree	27	14.5
Disagree	159	85.5
Accident is an act of God and there is nothing anyone can do to prevent it		
Agree	11	5.9
Disagree	175	94

Percentage of Respondents' Attitude Grade

Mean attitude score on a 15 point attitude scale was 8.4±3.4 Outcome result showed that just a little above average (58.1%) had positive attitude about compliance with the University of Ibadan traffic regulations while 41.9% had negative attitude.

4.4 Respondents' Compliance with the University of Ibadan Traffic Regulations

When asked on how often they violate some traffic regulations in U.I in the past 6 months they gave the following responses: more than half (62.4%) said they never violate road signs while 35.5% said they rarely violate it and 2.2% said they always violate road signs. Reasons given by those who violate it always are they can still drive safely without obeying them (50%). the other 50% gave reasons like over speed and alcohol, and it is done unconsciously.

Above half (68.8%) said they never obstruct free flow traffic while 31.2% rarely do. When asked how often they park in unauthorized places, 51.6% said they never did, 41.4% rarely did, and 7.0% always did; 25.0% of those who always did said the reason for always doing it when they did was because there was no one to arrest, another 25.0% of them said whenever they see passengers they park. Another 16.7% said it is done intentionally while the rest (33.3%) gave reasons like: it is done at night alone, if passengers make it snappy, it's not easy to obey the rule and they do forget. Most (87.6%) of the drivers said they never drive at night with faulty light. A very high percentage (95.2%) said they never damaged school property. A little above average percentage (56.5%) rarely drove above speed limit of 40km/hr, 27.4% never did, while 15.6% always did; the reason given for always doing it are: unconsciously (29.2%), 40km/hr is too low (12.5%), other reasons such as: intentionally, to make more money, at night alone, if the road is free, they use their discretion accounted for 54.2%. This is shown in the table 4.4 above:

Most (89.2%) of the respondents reported they never drove under the influence of alcohol, the reason given is that they take a little; 77.9% reported they never disturb and pollute the environment such as shouting, hooting and blaring of horns, When asked how often do you Collect/drop off people/passengers at places other than designated bus-stops on campus (48.9%) answered that they never did, (43.5%) rarely did, the reasons given by those who practise the act always are if snappy (30.8%). When asked how often they violate road-ethics and norms at car parks, majority (81.7%) answered never. About half (50.5%) of the respondents said they received/made calls always while driving. Reasons given by those who always do this are: they were always careful (32%). An alarming percentage (86.0%) attested

that they always violate the use of seat belt. A large number (88.0%) said because it is not convenient, the result is presented in the table 4.4.2 below:

Table 4.4: Compliance with the University of Ibadan Traffic Regulations (N = 186)

	Frequency	Percentage (%)
Frequencies of violating road signs/signals		
Always	4	2.2
Rarely	66	35.5
Never	116	62.4
Frequencies of obstructing free flow traffic		
Always	58	31.2
Rarely	128	68.8
Frequencies of parking in unauthorised place		
Always	13	7.0
Rarely	77	41.4
Never	96	51.6
Frequencies of driving/riding at night with faulty light or without full complement of lights.		
Always		
Rarely	4	2.2
Never	19	10.2
	163	87.6
Frequencies of damaging University properties, like buildings, lawns, poles,		
Always	1	0.5
Rarely	8	4.3
Never	177	95.2

Table 4.4.1 Reasons Given by Respondents for Always Violating Traffic Regulations

Traffic regulations	Frequency	Percentage
Violating road signs/signals (N=6)		
I can still drive safe after all	2	33.3
Over speed and alcohol	1	16.7
Unconscious	2	33.3
I like speed	1	16.7
parking in unauthorised place (N=13)		
when there is no ne to arrest	3	23.1
at night alone	1	7.7
it is not easy	1	7.7
intentional	2	15.4
if the passenger makes it snappy	1	7.7
I do forget	1	7.7
Whenever I see passengers, I park	3	23.1
Driving/riding at night with faulty light or without full complement of lights. (N=4)		
It is hard to be arrested	2	50
I manage it	2	50
Exceeding speed limit 40km/hr (N=29)		
Done unconsciously	7	29.2
Intentional	3	12.5
40km/hr is too low	4	16.7
At night only	3	12.5
If the road is free	2	8.3
I use my discretion	3	12.5

Table 4.4.2: Frequency of Violation of Traffic Regulations (N = 186)

Statement	Frequency	Percentage (%)
Frequencies of driving under the influence of alcohol		
Always	1	0.5
Rarely	20	10.7
Never	165	88.7
Frequencies of disturbing and polluting the environment.		
Always	3	1.6
Rarely	37	19.9
Never	146	78.5
Frequencies of collecting /dropping off people/passengers at places other than designated bus-stops on campus		
Always	14	7.5
Rarely	81	43.5
Never	91	48.9
Frequencies of violating road-ethics and norms at car parks		
Always	33	17.7
Rarely	152	81.7
Never	1	0.5
Frequencies of receiving/making calls while driving		
Always	94	50.5
Rarely	50	26.9
Never	42	22.6

Table 4.4.3: Reasons Given by Respondents for Always Violating Traffic Regulations

Traffic regulations	Frequency	Percentage (%)
Driving under the influence of alcohol (N=1)		
I take a little	1	100
Disturbing and polluting the environment (N=3)		
It is fun	1	33.3
Some people need it	1	33.3
Because I am on motion, it happens	1	33.3
Collecting /dropping off people/passengers at places other than designated bus-stops on campus (N=13)		
If snappy	4	30.8
None to arrest	2	15.4
Road is free	2	15.4
Passengers request	3	23.1
It is done at night	2	15.4
Receiving/making calls while driving (N=25)		
I am careful	8	32.0
I use earpiece	3	12.0
It could be an emergency	8	32.0
It could be a customer	3	12.0
I am ok with it/I park to receive the call	3	12.00
Violating road safety belt use (N=17)		
It is not convenient	15	88.2
Intentional	1	5.9
We don't use it here	1	5.9

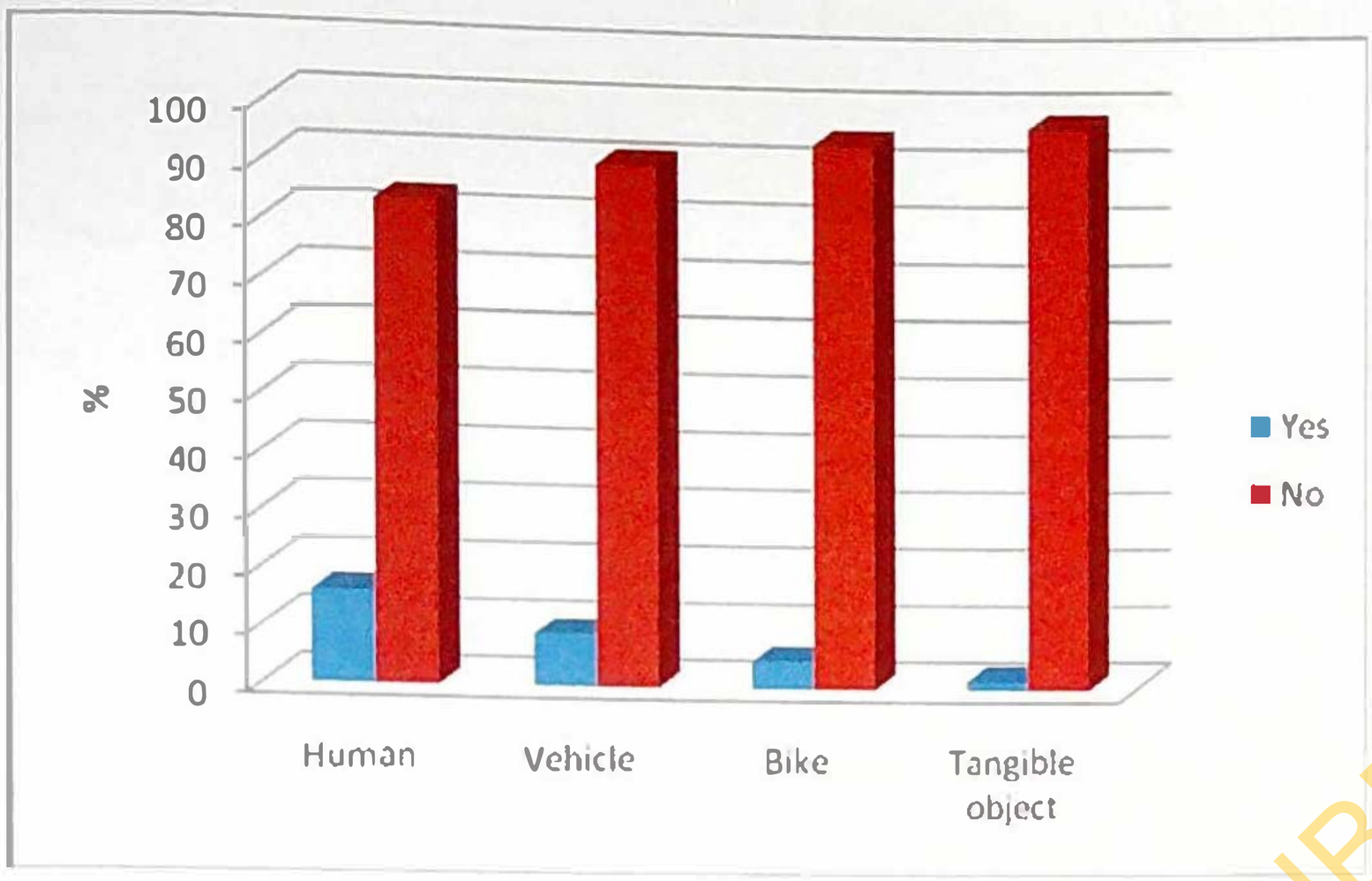

Figure 4.3: Collision Occurrence

From the above figure 4.3, it is shown that 1.1% reported to have collided with humans in U.I while driving for reasons such as over speed, passers by crossed the road suddenly. Some (9.1%) admitted to have collided with vehicles since they have been driving in UI. Reasons such as: poor vision, it was a T-junction road, wrong parking, drowsiness, narrow road, over speed on drivers' part and fatigue. Few (4.8%) had collided with a bike before for reasons like: drowsiness, over speed, poor driving culture, carelessness of bike riders, only 1.6% reported to have collided with tangible objects. The result (reasons) is presented in the table 4.4.4 below:

Table 4.4.4: Reasons for collision

Reasons	Frequency	Percentage (%)
Collided with human being (N=17)		
Poor vision	2	11.8
It was a T-Junction	1	5.9
Wrong parking	4	23.5
I was sleepy	1	5.9
I was reversing	2	11.8
Roads was narrow	4	23.5
Over speed on my part	2	11.8
I was tired	1	5.9
Collided with vehicle (N=3)		
He crossed the road suddenly	2	66.7
Over speed	1	33.3
Collided with bike (N=9)		
I was sleepy	2	22.2
Over speed on my part	4	44.4
I did not trafficate on time	1	11.1
I was tired	1	11.1
Bike's carelessness	1	11.1

Percentage of Respondents' Compliance Grade

Mean compliance score on a 24 point compliance scale was 17.5±3.7. Outcome result showed that most of the respondents (62.4%) had high compliance practice with the University of Ibadan traffic regulations while 36.0 % had fair compliance practice and 1.6% had a poor compliance practice.

4.5 Factors Influencing Respondents' Compliance with the University of Ibadan Traffic Regulations

The factor attested to by the drivers are: punishment by 97.3%, vigilance by their colleagues (56.4%), good road (86.6%); tendency of passengers to report (91.4%). When asked which of the traffic rules they found hard to comply with, 54.3% reported none while 45.7% mentioned the rules they found hard to comply with: 11.3% reported that the use of seat belt, 9.7% said parking right, 5.4% said speed limit. Other factors indicated are: publicity about the rules (83.3%); inability to avoid payment of fine when apprehended (89.2%). The result is presented in the table 4.5 below:

Perceived Factors Influencing Respondents' Compliance

When asked to what extent the following factors influenced their compliance with U.I traffic regulations, 54.3% reported that driving education mildly influenced their compliance, 85.5% said fear of punishment strongly influenced their compliance, 83.9% reported that the presence of security officers strongly influenced their compliance, 72% said personal decision strongly influenced their compliance, less than half (48.3%) reported that the presence of road signs strongly influenced their compliance, 67.7% reported that the presence of good roads strongly influenced their compliance. Majority (88.7%) also reported that the presence of a well functioning car/bus influenced their compliance. The result is presented in the figure 4.4 below:

Table 4.5: Distribution of Respondents by compliance with U.I Traffic Regulations (N = 186)

	Frequency	Percentage (%)
I will comply with the U.I traffic regulation if I will be punished for not doing them (N=186)		
Yes	181	97.3
No	5	2.7
I comply with some of the U.I traffic regulation because my colleagues are watching me (N=186)		
Yes	106	57.0
No	80	43.0
Even if the roads are good I will still violate some the U.I traffic regulation (N=186)		
Yes	25	13.4
No	161	86.6
I will not comply with the U.I traffic regulation even if the passengers can report me (N=186)		
Yes	16	8.6
No	170	91.4
U.I traffic regulation hard to comply with (N=186)		
None	101	54.3
Parking right	18	9.7
Speed limit	10	5.4
Use of seat belt	21	11.3
All	3	1.6
others	33	17.7
I will comply with the U.I traffic regulations if there are more publicity about the rules (N=186)		
Yes	155	83.3
No	31	16.7
A driver can avoid paying the fines if he breaks any of the U.I traffic regulation. (N=186)		
Yes	19	10.2
No	167	89.8
Methods of payment (N=17)		
By pleading with the authorities	15	88.2
By offering money	1	5.9
Warning	1	5.9
If there are no penalties for breaking the U.I traffic regulation I will not comply with some of the rules (N=186)		
True	126	67.7
False	60	32.3

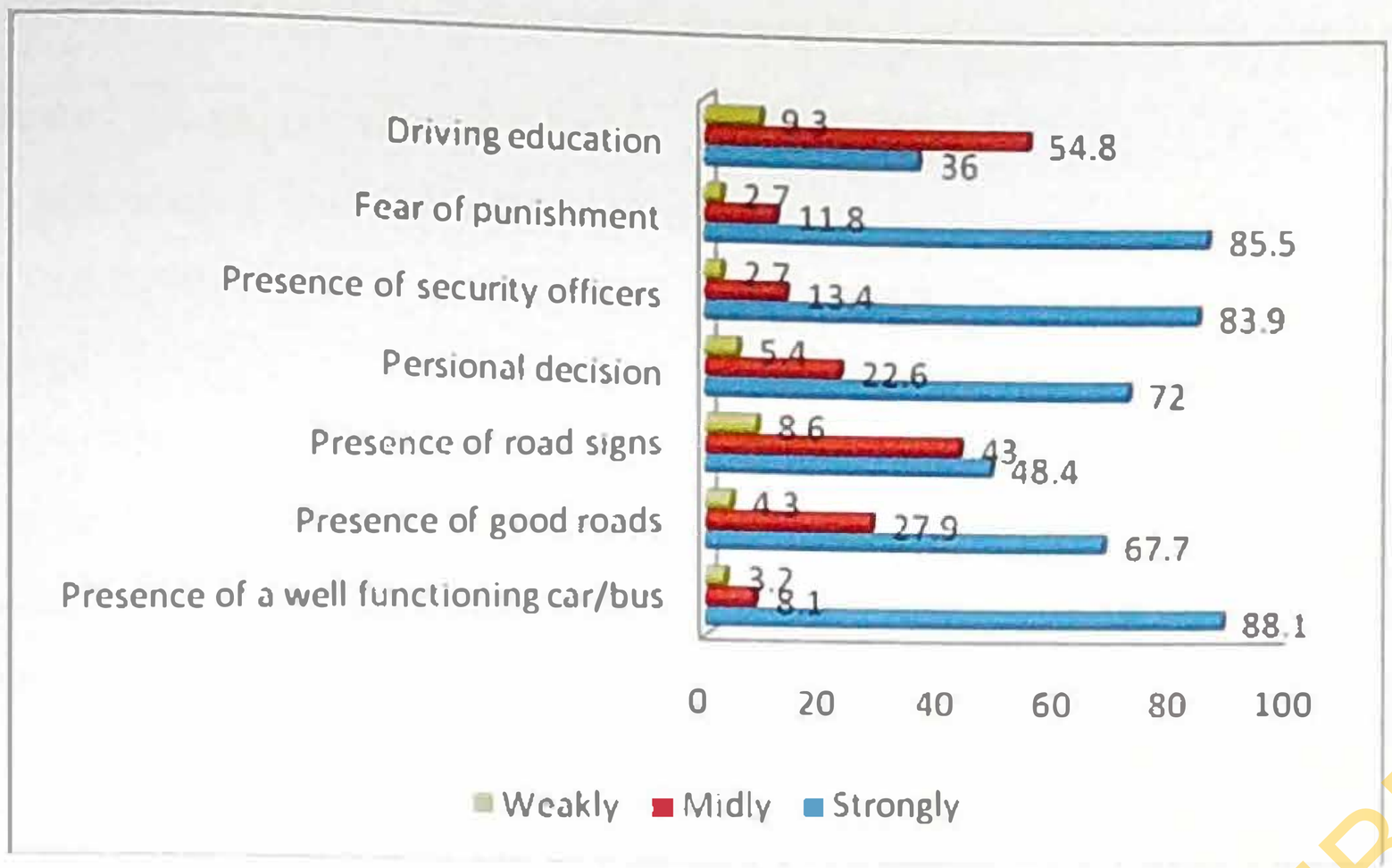

Figure 4.4: Perceived Factors Influencing Respondents' Compliance

The table 4.5.1 below indicates that 17.6% of the respondents believed that competitive screening exercise is the other perceived factor influencing respondents compliance, 11.8% claimed that it is their age, 17.6% indicated that ICTC monitoring, 11.8% considered drivers' association monitoring, while 5.9% claimed that life is precious, students monitoring, reading of high way code etc. The result is presented in the table below:

Table 4.5.1: Others Perceived Factors Influencing Respondents' Compliance (N=17)

	Frequency	Percentage (%)
Screening is competitive	3	17.6
I am experienced, have been driving outside	1	5.9
I have a family	1	5.9
My age	2	11.8
If those who make it obey it	1	5.9
I read the high way code	1	5.9
Students monitor us	1	5.9
Presence of professors, they may just get out of the car and condemn you	1	5.9
Life is precious	1	5.9
ICTC monitor us	3	17.6
Drivers' association monitors us	2	11.8

4.6 Hypothesis Testing

Hypothesis 1

H_0: There is no significant association between age of respondents and compliance with the University of Ibadan traffic regulations.

Table 4.6.1: Association between age at last birthday and Compliance's score

Age as at last birthday (in years)	Compliance's score			Total
	Poor N (%)	Fair N (%)	High N (%)	N (%)
20-39 years	2 (2.2)	38 (40.9)	53 (60)	93 (100)
40-59 years	1(1.25)	26 (32.5)	53 (66.3)	80 (100)
60-79 years	1(8.3)	2 (16.7)	9 (75)	12 (100)

$X^2 = 2.632$; d.f = 4; P = 0.621.

Age of respondents and compliance with the University of Ibadan traffic regulations were cross tabulated to determine if age had an influence on compliance. Table 4.6.1 above shows that there was no significant association between age of respondents and compliance with the University of Ibadan traffic regulations ($p>0.05$). It is not statistically significant. Therefore, the null hypothesis (H_0) was accepted. This implies that a ge is not a significant factor influencing compliance with the University of Ibadan traffic regulations.

Hypothesis 2

H_0: There is no significant association between education qualification of respondents and knowledge of the University of Ibadan traffic regulations.

Table 4.6.2: Association between education qualification and knowledge level of the U.I traffic regulation

Education qualification	Knowledge score		Total
	Average (17-32) N (%)	High (33-46) N (%)	
No formal education	1 (11.1)	8 (88.9)	9 (100)
Primary completed	11 (27.5)	29 (72.5)	40 (100)
Secondary completed	16 (17.4)	76 (82.6)	92 (100)
Tertiary	10 (22.2)	35 (77.8)	45 (100)

$X^2 = 8.669$; d.f = 6; p = 0.193

The result showed there was no significant association between education qualification and the knowledge level of the U.I traffic regulations ($p>0.05$). It is not statistically significant. Therefore, the null hypothesis (H_0) was accepted. It could be deduced that educational qualification of the respondents are not significantly influencing their knowledge about the U.I traffic regulation.

Hypothesis 3:

H_0: There is no significant association between education qualification and attitude towards compliance of the respondents.

Table 4.6.3: Association between educational qualification and attitude score of the respondents

Educational Qualification	Attitude score		Total
	Negative	Positive	
No formal education	N (%)	N (%)	N (%)
	1 (11.1)	8 (88.9)	9 (100)
Primary completed	16 (40)	24 (60)	40 (100)
Secondary completed	47 (53.2)	45 (46.7)	92 (100)
Tertiary	15 (33.3)	30 (66.7)	45 (100)

$X^2 = 8.718$; d.f = 3; p = .045

The result showed a significant association between education qualification and attitude towards compliance ($p<0.05$). It is statistically significant. Therefore, the null hypothesis (H_0) was rejected. This implies that education qualifications of the respondents are significantly influencing their attitudes towards compliance level. The more educated they are, the more positive their attitude toward compliance level with U.I traffic regulations would be.

Hypothesis 4:

H_0: There is no significant association between alcohol intake and accidental collision.

Table 4.6.4: Association between alcohol intake to enhance driving and accidental collision since started driving in U.I campus

Taking alcohol to enhance driving	Accidental collision since started driving in U.I		Total
	Yes	No	N (%)
	N (%)	N (%)	
Yes	45 (71.4)	18 (28.6)	63
No	111 (90.2)	12 (9.8)	123

$X^2 = 10.903$; d.f = 1; p = 0.001

The result showed that there was significant association between alcohol intake and accidental collision ($p < 0.05$). It is statically significant. Therefore the null (H_0) hypothesis was rejected. The implication of this is that alcohol intake has a significant influence on the occurrence of accidents in the study area.

4.7 Findings from In-Depth Interview

1. Policy

The IDI participants unanimously agreed that there is no formal documented policy as regards the programme of commercial motorist in U.I. However, there is a committee- Intra Campus Transport Committee (ICTC) set up by the school to oversee the smooth running of the programme. *"There is no existing policy at the moment, what we have is a code of conduct. It is not formally documented. Some rules are also set aside to punish offenders".*

2. Road traffic regulations

The ICTC came up with 24 approved traffic regulations in 2009 to serve as guidelines for road usage. However, from record review at the University of Ibadan Security department, it is observed that some traffic rules are mostly observed while some others are not complied with regularly. Of the 24 traffic rules of the institution, it is reported that:

> *The most committed offence is wrong parking, among commercial motorists, at the gate the record review at the security department located at the main gate shows that about 85% of the most violated offence among the commercial drivers is wrong parking. Although, rules such as use of seat belt is rarely complied with at all and one of the reasons for the laxity is that the institution has not made the enforcement so emphatic as some other rules.*

One of the participants reported that: *"It is not easy to wear seat belt for short trips so we don't really enforce the regulation of seat belt".*

3. Problems encountered by the commercial drivers' service

The interviewee unanimously agreed that the greatest problem facing the programme is the attitude of the drivers; they also identified movement to and from all routes as a major challenge facing them because ideally, the movement from the main gate to specific locations on campus are structured. Another problem is lack of alcohol breathily test instrument. The problems go thus:

The attitude of the drivers is one of the greatest problems we face. their individual differences and low level of knowledge of the ideal way things are done by some of them. One of the problems which is now being solved is that a times students want to move from their departments to their halls directly without having to come to the gate first to take a bus/cab to save cost and time.

4. Interventions put in place to solve the identified problems

From the mid-term and routine appraisal of the commercial drivers' programme, conducted by the institution, the school has put in place the following interventions which are said to have been producing gradual result:

a. *Thorough examination before being granted permission to practice on campus: the* drivers having paid a registration fee, depending on what they are driving, the school conducts a well scrutinized examination on the vehicle and the driver to be sure they are in good condition. These are the responses of the respondents:

There are a number of things put into consideration, firstly, we want to know how sound the vehicle is- good tyre, good body, good upholsteries, we make sure all the parts of the vehicles function very well, brake, lightening, trafficator, everything in the vehicle because they contribute significantly. It must be neat in appearance if not it will be rejected. Secondly, The human factor too: the driver; we make sure all the drivers are professionals with drivers licence, no record of accident, neat in appearance, well behaved, hooliganism is not allowed, fighting is not allowed, if not they will be penalized. We consider age, anybody above seventy years is not allowed. We ensure they are mentally and physically fit.

b. *Training and education:* the school partners with FRSC on yearly basis to come and educate the commercial drivers on road safety; they also organize routine in-house education. *"We organize training and retraining for them". "Every Wednesday, we hold our environmental sanitation for 30 minutes where the chairman of the ICTC also comes along to educate us as to safe driving briefly".*

c. *Alcohol prohibition:* they discourage alcohol sellers in the parks but there is still much work to be done in this area as there is lack of standard alcohol breath test instrument to identify those who take in alcohol from the point of registration into the programme. There are also no rehabilitation plan put in place for alcoholics, when asked of existing plan, the response was: *"None at the moment other than it is not allowed".*

d *Enforcement:* it was reported that the University of Ibadan has put in place an enforcement structure to enable compliance with road traffic regulations. There are penalties for violators of the regulations after they are being warned the first time. One of the IDI respondents reported that: *"Aside setting the rules and publishing them with penalties attached; we also have some factors in place such as: the Monitoring Squad, Service vehicles and Security unit".*

The monitoring squad and service vehicles drive round the campus from time to time to ensure things are in order, some are stationed in some strategic places where there is constant activity going on while the security unit have their members assigned to various parts of the campus, they have a mini office at the gate, there are also officers in charge of the commercial transporters' motor park at the gate and other places around the campus. However, according to the report, some regulations are more enforced than the other, offences like non use of seat belt are not being punished at all, it was reported that: *"Some rules that can be easily noticed when violated are strictly enforced for example: obstruction to free flow of traffic, abandoning vehicles on the main road and over speeding".*

The main challenge faced by the enforcement programme as reported is the absence of good record attitude:

We do not have good record keeping attitude of the offences and accidents so it is difficult to have a review of our records and plan intervention. It is also not easy to know the cause of the accidents when they occur so that

also limits our approach to enforcement. Another challenge is that some private cars claim not to be aware of our regulations so they end up violating them causing a lot of troubles for our team.

CHAPTER FIVE

DISCUSSION

Socio Demographic Characteristics

Most of the drivers do not have more than secondary school education, which can be attributed to the fact that educational qualification is not one of the requirements for being a commercial driver in U.I. This has an implication on comprehension of road signs as many of them may not be able to accurately discern traffic symbols and signs making them prone to road crashes as reported by Okafor et al., (2013) that drivers that are less educated find it more difficult reading signs.

Almost half of the respondents admitted that they take alcohol and cigarette to enhance their driving which can be attributed to the lack of alcohol detecting instrument, this shows a similarity with the work of Ukeghu et al., (2012) who reported that 79.9% of their respondents who were commercial drivers in Umahia took alcohol and cigarette to enhance their driving.

The result has shown that there is a significant association between alcohol intake and accidental collision which can be caused by alcohol impairment to vision resulting in collision with tangible objects. This buttress the work of Nzegwu et al., (2008) reported that alcohol is one of the major causes of crashes.

Respondents' Knowledge of the University of Ibadan campus traffic regulations

All the respondents admitted that they do not know the total number of approved regulations in the University of Ibadan campus; this can be attributed to the inadequate publicity of the traffic regulations by the institution. It supports the view of the United Nations Economic Commission for Europe, (2010) which emphasized that awareness and publicity of traffic regulations improve knowledge.

More than half of the respondents did not know that parked vehicles should switch off head light and may leave parking light only as recommended by FRSC (2008). This shows that there is insufficient awareness and education on right parking especially at night; this supports the report documented by the security unit that wrong parking is one of the most violated regulations in the University of Ibadan among commercial drivers.

A major finding is that a large majority of respondents rightly reported that over speed and alcohol intake can cause accident buttressing the view of Evans (2003) who reported that the human factor appears in the literature as being the most prevalent contributing factor of road traffic crashes listing speeding and drinking as prominent causes.

Attitude of Respondents to Compliance with the University of Ibadan Campus Traffic Regulations

Another key finding in the study is the attitude that the U.I traffic regulations can be broken if there is no one to arrest, this can be attributed to the poor attitude towards compliance. This buttress the report of the work of WHO (2004) which stated that compliance with key road safety rules can be significantly increased using enforcement.

Almost half of the respondents agreed that an experienced driver can drive safely without obeying the U.I traffic regulations, this seem to be putting Eleni et al., (2000)'s claim into reconsideration because inexperience is said to be a risk factor that can cause accident but from this study, experienced drivers had a negative attitude of not having to keep traffic regulations which can ultimately make them more prone to accident.

Some drivers agreed that a driver can exceed speed limit on campus as long as the road is good. This supports the finding of Onakomaiya (1988) who questioned if good roads will indeed have a positive influence on compliance with traffic regulations.

Almost all the respondents agreed that they will wear seat belt within U.I campus if they know they will be punished for not wearing it. This explains why few drivers wear it, being one of the least enforced traffic regulations. This aligns with FRSC (2008)'s finding, relating enforcement to compliance with seat belt use.

Compliance with the University of Ibadan Traffic Regulations

The least complied traffic regulation in the last six months is use of seatbelt followed by use of mobile phone while driving, exceeding speed limit and wrong parking. This can be attributed to the fact that non use of seatbelt and mobile phone use while driving are weakly enforced in the University of Ibadan campus also, there is not enough law enforcers in various areas of the institution which could result in the prevalence of 'wrong parking'. This supports the finding of Inciadi (2007) who identified over speed and non use of seat belt on the list of most common violations of traffic laws.

Factors Influencing Compliance with the University of Ibadan Traffic Regulations

Less than one-fifth of the drivers learnt driving through a driving school. This could be because the compulsion by FRSC to go through a driving school before being licensed is a recent development.

Nearly all the drivers identified punishment as a potent factor that will make them comply with traffic regulations, this can be attributed to the high gravity of the punishments and the fact that it cannot be avoided as reported by the drivers have made it effective. This supports the work of Sumaila (2013) that the root cause of the poor driving culture in the country is when punishments for traffic offences can be waived through negotiation or amicable settlement.

Majority also reported other factors like publicity about the traffic rules, presence of security officers, personal decision, presence of a well functioning car/bus, positively influence their compliance. This buttresses the publication of WHO (2008) that combined strategies are the most efficient way to respond to the burden of road traffic injuries.

5.1 Implication of this Study for Health Promotion and Education

The findings of this study have some implications for health promotion and education. The PRECEED model provides guidance in the prescriptive and descriptive health education and promotion implication that is applicable. It stresses that the corresponding determinants influencing the target group behaviour are analysed as; predisposing factors (motivating behaviour), enabling factors (facilitating behaviour) and reinforcing factors (providing feedback). Behaviour can be explained as a function of the collective influence of these determinants.

The key findings of this study that require urgent implementation of health education and promotion programs are summarized below:

a. Almost half of the respondents admitted that they take alcohol and cigarette to enhance their driving which can be attributed to the lack of alcohol detecting instrument.
b. None of the respondents could correctly state the total number of approved traffic regulations in the University of Ibadan.

c. More than half of the respondents admitted to the negative attitude that the U.I traffic regulations can be broken if there is no one to arrest.
d. The least complied traffic regulation in the last six months was the use of seatbelt.
e. Nearly all the drivers identified punishment as a potent factor for compliance with traffic regulations.

There is a need for the University institution to incorporate educative talks by medical personnel from Jaja, the school clinics into the weekly meetings of the drivers persistently for about a month; so as to explain in details the health implication of taking alcohol. After the talk, a system of reinforcement should be created to serve as remembrance and encouragement of practising the positive behaviour, this should be done through text messages to all drivers with an inclusion of the dangers of driving under the influence of alcohol and the corresponding punishment the school gives to violators of the regulation. The messages should be sent early in the morning at about 7a.m and late in the evening at about 8p.m for the one month. The evening message should be a follow up on the morning message. This is an interpersonal communication channel which allows for individual decision with limited influence of others.

As a way of creating awareness of the approved traffic regulation of the University of Ibadan, the mass media platform should be used. There should be a weekly programme aired on the school radio station- Diamond FM dedicated to the service of commercial drivers in UI. This programme should be aired in the evening, around 5p.m. when there is less pressure on the drivers; it should include interviews with experts in road safety activities, representatives of the University authority and the campus commercial drivers. There should be opportunities for calling in for questions and answers from drivers and passengers. There should be rewards given to drivers who can correctly state the regulations.

Furthermore; another way of improving the knowledge of the regulations is by having an assessment during the mid year evaluation exercise of the commercial drivers. This evaluation should involve development of a scoring guide that will include awarding more points to those who can state more of the regulations.

Security officials that enforce the traffic regulations should be educated on the available traffic regulation and the need to not prioritize a particular regulation above the other. This training should be done by Federal Road Safety Corps (FRSC) officials as often as

twice a year. This can be done in batches since there must never be a time when the roads will be void of security officials. The second batch should be trained the following day after the first so that there will not be a lagging behind in the mode of operation of the team.

Behavioural change communication materials such as bill boards and hand fliers, that focus solely on the use of seatbelt should be developed being the least complied traffic regulation among the commercial drivers. Since it is a negative behaviour in a large proportion of the drivers, a bill board can be used to provide a community action. The negative response commonly indicated by the drivers that: it is not necessary to use seatbelt for short distance should be addressed and corrected on the bill board.

5.2 Conclusion

In conclusion, the University of Ibadan have most of their commercial drivers Yoruba with a majority having secondary school education and below, majority of the drivers have other occupations aside driving within the campus. The rate of alcohol and cigarette use among the drivers is of great concern. Most of the drivers have been driving for more than eleven years.

As regards knowledge of commercial drivers of road traffic regulations, all of them do not know the total number of approved traffic regulation in UI with most of the drivers attesting that they acquired the knowledge during the orientation organized for them during registration by the school authority. Most of the drivers have good knowledge about seat belt use. Most of the drivers do not have a good knowledge of right parking. There is also a good knowledge of how the intake of alcohol, use of mobile phone when driving, poor car condition, fatigue and violation of traffic regulations are causes of accident.

The attitudes of the drivers show that most of them believe traffic regulations can be broken if there is no one to arrest. Many of the drivers have wrong attitude towards parking rightly and exceeding speed limit believing that speed limit can be exceeded for reasons such as meeting the day's revenue target and presence of good road. Most of the drivers have a negative attitude towards seat belt use, believing that it is not needed for short trips, violators should not be punished. As regards alcohol, most of the drivers showed a positive attitude towards it, responding that a driver should not take alcohol and drive within the campus.

Respondents' reports show that within a period of six months, the traffic regulation with the least compliance is the use of seat belt, next to this is the use of mobile phone while driving,

exceeding the approved 40kn/hr drive within campus. Reasons given for constantly violating traffic regulations centred on convenience and the tendency to escape being punished. Wrong parking or dropping of passengers in unauthorized places and alcohol use while driving are not complied with by some of the drivers either. Some of the respondents reported to have collided with humans, vehicles or bikes for reasons such as fatigue and poor driving culture.

The identified factors that influence compliance were reported as fear of punishment, delivery of drivers' education, tendency of passengers to report them drivers, tendency of their colleagues to report them if they violate the traffic regulations, presence of security officers at various points on campus, increase in the publicity of the approved regulations and the possibility of avoiding the payment of fines.

Hence, the level of compliance of commercial transporters with road traffic regulations in the University of Ibadan campus is a little above average making it necessary to strengthen the factors that positively influence compliance. Enforcement of road traffic regulations, drivers' education, publicity and awareness using the various media platforms are strong factors that need to be strengthened.

5.3 Recommendations

Based on the findings of this study, the following recommendations are made:

1. The security department of the institution should create a separate database for recording road traffic accidents that will cover the human, vehicular and environmental factors, for example; it should indicate the nature of the accidents, the possible causes, the locations and some other information about the driver(s) involved rather than recording accidents in the "offence record" where all manner of offences that occur in the institution are recorded. This will enhance clarity of information and aid intervention on RTA.

2. On the issue of alcohol, there should be a way of checking if an intending driver takes alcohol regularly or not and for drunk-driving offenders, a rehabilitation programme should be set up for them, this will reduce accidental collision due to alcohol.

3. Introduction of comprehensive public education and information using the various media tools at their disposals can clearly improve knowledge about the rules of the road and increase compliance.

4. Before enrolling a driver, questions should be asked as regards driving experience; the institution should set a minimum "years of experience" for incoming drivers, so as to reduce drivers learning on the job.

5. There is need to formulate a policy statement so as to strengthen and continue in the factors the institution has already put in place that enables compliance such as the 6 months examination exercise of the vehicles and drivers, medical fitness test, presence of security officers at different positions within the campus to encourage continuity.

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APPENDIX I

QUESTIONNAIRE

INFORMED CONSENT FORM

Dear Respondent,

My name is Ayokunle Emoruwa. I am a postgraduate student of the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. The purpose of this study is to ***investigate the compliance of commercial motorists with road traffic regulations in the University of Ibadan***. The findings from this study will help in the design of programmes aimed at road safety intervention. Your responses and opinions will be kept strictly confidential and will be used for the purpose of this research only. Please note that you do not have to write your name on this questionnaire, also try to give honest answers to the questions asked, as much as your maximum co-operation will assist in making this research a success.

Would you want to participate in the study? (1) YES [ ] (2) NO [ ] Serial No.....

Thank you very much.

Please indicate if you drive a bus or a car: (1) Bus [ ] (2) Car [ ]

SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS

Instruction: Please answer the following questions

1. Religion: (1) Christianity [ ] (2) Islam [ ] (3) traditional [ ] (4) Others, please specify ----------

2. Ethnicity (1) Igbo [ ] (2) Yoruba [ ] (3) Hausa [ ] (4) Others please specify ----------

3. Age as at last birthday (in years).....

4. Educational Qualification (1) No formal education [ ] (2) Primary completed [ ] (3) Secondary completed [ ] (4) Tertiary [ ]

5. Other Occupation aside driving: (1) None [ ] (2) Staff of University of Ibadan [ ] (3) Business man/Trading [ ] (4) Others, please specify.....

6. If you have other occupation aside driving, what is your income in a month? ₦.....

7. Marital status (1) Single [ ] (2) Married [ ] (3) Divorced/Separated [ ] (4) Widowed [ ] (5) Others, please specify.....

8. Since when have you been driving? .....

9. Since when have you been driving in U.I?

Please respond as appropriate to you.

Do you take any of these substances to enhance your driving?

		Yes	No	How often (frequency)							
9.	Smoking cigar			Daily	Weekly	Monthly	Yearly	Others	Indicate number of sticks		
10.	Alcohol drink								Indicate quantity number of cups	Indicate quantity number of bottles	Indicate quantity number of sachet
I	Beer										
Ii	Palm wine										
Iii	Red wine										
Iv	Others (specify)										

SECTION B: KNOWLEDGE OF THE U.I CAMPUS TRAFFIC REGULATIONS

Please choose the right answer by responding only to one correct option

11. Do you know the total number of approved traffic regulation in the University of Ibadan campus? .....

12. How many of the rules can you confidently state? .....

13. How did you know about the traffic regulations for the University of Ibadan campus? (a.) I asked people (b.) I used the experience I had before on driving (c.) we were told during our registration (d.) Others please specify.....

14. The approved speed limit within the University of Ibadan campus is.....

15. When is the right time to wear safety belt? (1) Before ignition of engine (2) After ignition of engine (3) While driving on the road

16. Wearing of seat belt prevents an accident (1) Yes [ ] (2) No [ ]

17. Wearing of seat belt minimizes risk of injury (1) Yes [ ] (2) No [ ]

18. At night, parked vehicles should switch off head lights and may leave parking lights only

(1) Yes [ ] (2) No [ ]

19. It is dangerous parking if the vehicle is at:

(1) Road junction (1) Yes [ ] (2) No [ ]

(2) Bends or corners, (1) Yes [ ] (2) No [ ]

(3) Designated bus-stop (1) Yes [ ] (2) No [ ]

(4) A narrow road (1) Yes [ ] (2) No [ ]

(5). Opposite another parked vehicle if this would narrow the road to less than the width of two vehicles (avoid double parking) (1) Yes [ ] (2) No [ ]

20. Which of the following can lead to accident?

(1) Use of alcohol and other drugs (1) Yes [ ] (2) No [ ]

(2) Smoking (1) Yes [ ] (2) No [ ]

(3) Excessive speeding (1) Yes [ ] (2) No [ ]

(4) Use of seat belt (1) Yes [ ] (2) No [ ]

(5) Parking correctly (1) Yes [ ] (2) No [ ]

(6) Fatigue (1) Yes [ ] (2) No [ ]

(7) Use of mobile phone while driving (1) Yes [ ] (2) No [ ]

(8) A car that is not maintained (1) Yes [ ] (2) No [ ]

(9) Constant regard of traffic regulations (1) Yes [ ] (2) No [ ]

SECTION C: ATTITUDE TO COMPLIANCE WITH THE U.I CAMPUS TRAFFIC REGULATIONS

21. A driver can break any of the U.I traffic regulations

(1). When he is trying to meet his target for the day (1) Yes [ ] (2) No [ ]

(2). When there is an emergency (1) Yes [ ] (2) No [ ]

(4). When there is nobody to arrest him (1) Yes [ ] (2) No [ ]

(6). others, please specify.....

Please answer the option that applies to you most within the University of Ibadan campus

S/N	Question	Agree	Disagree
22.	When one is an experienced driver one can still drive safely without obeying the U.I traffic regulations		
23	I can park at any convenient place in U.I campus to drop a passenger as long as the passenger makes it snappy		
24	One can exceed speed limit in the campus as long as the road is good		
25	40km/hr is too low as speed limit within the U.I campus		
26	One can drive above 50km/hr when one is about to close for the day so as to make enough money		
27	I will wear seat belt within U.I campus if I know I will be punished for not wearing it		
28	seat belt makes me uncomfortable when I attempt to wear it		
29	Drivers who do not use seat belt in U.I campus should be punished		
30	I do not wear seat belt within U.I campus because I feel use of seat belt does not guarantee security		
31	There is no need to wear seat belt for short trips within the campus		
32	One can still drive within campus after taking alcohol as long as it is little		
33	Accident is an act of God and there is nothing anyone can do to prevent it		

SECTION D: COMPLIANCE WITH THE UNIVERSITY OF IBADAN TRAFFIC REGULATIONS

Please tick the boxes that contain your answer: how often do you do any of these acts in the last 6 months?

S/N	TRAFFIC REGULATIONS	ALWAYS	RARELY	NEVER	REASON
34.	Violation of road signs/signals				
35	Obstruction of free-flow of traffic,				
36	stopping, parking in unauthorized places.				
37	Driving/riding at night with faulty light or without full complement of lights				
38	Damage to University properties, like buildings, lawns, poles,				
39	Exceeding speed limit 40km/hr				
40	driving under the influence of alcohol/drug				

41	Disturbing and polluting the environment such as shouting, hooting and blaring of horns, sooty smoky vehicles, noisy engines and loudspeakers.				
42.	Collecting/dropping of people/passengers at places other than designated bus-stops on campus				
43.	Violation of road-ethics and norms at car parks				
44.	Receiving/making calls while driving				
45.	Safety belt violation				

46. Have you ever collided with any of the following since you started driving in the University of Ibadan campus?

S/N		No	Yes	Cause (if yes)
I	Human			
Ii	Vehicle			
Iii	Bike			

SECTION E: FACTORS INFLUENCING THE COMPLIANCE WITH TRAFFIC REGULATIONS IN THE UNIVERSITY OF IBADAN

47. Do you have a valid driver's licence? (1) Yes [ ] (2) No [ ]

48. If yes what is your type of license and year of expiration? (1) Type A year..... (2) Type B year ..... (3) Type C year ..... (4) Type D year ..... (5) Type E year ..... (6) Type F year .....

49. If yes, how did you obtain your first licence?

(1) Paying the required fee without doing a test (2) After passing the test and paying the required fee (3) Paying someone to do the test for me (4) Others, please specify .....

50. What type of test was conducted for you before you were given your driving licence?

(1) Vision screening test only (2) Driving tests only (3) vision and driving test (4) no test

51. How did you learn driving? (1) Through a friend [ ] (2) through a driving school [ ]

(3) Others, please specify.....

Answer "yes", "no" to the following questions

S/N	Statement	Yes	No
52	I will comply with the U.I traffic regulations if I will be punished for not doing them		
53	I comply with some of the U.I traffic regulation because my colleagues are watching me		
54	Even if the roads are good I will still violate some the U.I traffic regulation		
55	I will not comply with the U.I traffic regulation even if the passengers can report me		

58. I will comply with the University of Ibadan regulation if there are more about the rules (1)

Yes [ ] (2) No [ ]

59. A driver can avoid the fine if he break any the University of Ibadan traffic regulation (1)

Yes [ ] (2) No [ ]

60. How? (1) By pleading with the authorities (2). By offering money (3). Others (please, specify)

61. If there are no penalties for breaking the University of Ibadan traffic regulation I will not comply with some of the rules. (1) True [ ] (2) False [ ]

62. Please, identify the extent to which the following influence your compliance with the University of Ibadan traffic regulation

S/N	Factors	Strongly	Mildly	Weakly
i	driving education			
ii	fear of punishment			
iii	presence of security officers			
iv	personal decision			
v	presence of road signs			
vi	presence of good roads			
vii	presence of a well functioning car/bus			

Others (please specify)

Thank you

APPENDIX 2

Key Informant Interview Guide

Title: Compliance of Commercial Motorists with Road Safety Rules in University of Ibadan

Introduction

Good day sir/ma, I thank you for agreeing to participate in this study. My name is Ayokunle Emoruwa, and my colleagues are..... We are postgraduate students of the Department of Health Promotion and Education in the Faculty of Public Health, College of Medicine, University of Ibadan.

The purpose of this discussion is to get your opinion on compliance of commercial motorists with the institution's road safety rules. Your input will be of great benefit to this study and also be useful in recommending programmes, interventions, policies that will help in improving the transport system and activities within the campus and even in other Nigeria institution. This discussion will last between 30-45 minutes. We would like to tape record the in-depth interview discussion so that we can be sure to capture the thoughts, opinions and ideas we hear from you. No name will be attached to the interview, and the tapes will be destroyed as soon as they are transcribed. You are free to answer any question or withdraw from the study at any time. We understand how important it is that information is kept private and confidential.

Thank you.

Ayokunle EMORUWA; kunllex2003@yahoo.com; 08060754338

SECTION A: IDI for the Deputy Vice Chancellor Administration

3.2 Is there any existing policy guiding the programme of commercial motorists in the University of Ibadan?

Probe on:

i. When was the policy formulated? What does the policy state?

ii. What process did the policy go through before being translated into guideline?

3.3 Was the formulation guided by data?

3.4 How was the program of commercial motorists in U.I set up? Probe on:

i. What is the staff capacity and what type of staffing are made available for the programme?

ii. What is the organogram existing for the programme?

3.5 About the U.I traffic rules sir, how did the school arrive at those traffic rules?

3.6 On the issue of partnership, who are those U.I partner with?

Probe on:

Does U.I participate in the FRSC road safety day?

3.7 On the issue of research, does U.I conduct any form of research to access the program?

Probe on:

How does U.I make use of the data collected on commercial motorists to make improvement?

3.8 What are some of the problems encountered by the Commercial drivers' programme U.I?

Probe on

i. What interventions are put in place to solve the problems?

ii. Are the interventions producing desired results?

iii. What should be done to make the commercial drivers programme work better?

iv. Are there quarterly plans or yearly plans for the program?

SECTION B: IDI for Chairman of Intra Campus Transport Committee in U.I

1. Let us look at the examination done for commercial drivers in U.I before they are allowed to operate within the campus can you please highlight the things that are put into consideration?

Probe on:

i. Who does the registration for intending commercial driver in U.I s?

ii. Do intending commercial drivers in U.I pay before the registration?

iii. What do intending commercial drivers in U.I supply during registration?

iv. How can the U.I commercial drivers' registration procedure be improved on?

v. How does U.I carry out an assessment to know if a driver drinks before he is being recruited?

vi. Are driving tests one of the examinations a driver must pass before they are granted permission to operate in U.I?

vii. What form of medical examinations do drivers go through before they are granted permission to operate in U.I

viii. How are the vehicles checked during registration in U.I?

ix. What form of background checks are done in U.I for the intending drivers at the point of registration?

2. What mechanism does U.I have for testing for maintenance such as: vehicular factors, defects and low quality spare parts

Probe on:

i. What measures does U.I take to ensure vehicles are always in good condition?

ii. How often does U.I check the vehicles to be sure they are in good conditions?

SECTION C: Chairman of Commercial Drivers

3.8.1 How often do the commercial drivers in U.I undergo training and education on compliance with road safety rules?

Probe on:

i. What type of education is being given? Is it through print media, radio, television, talks or what other means?

ii. What form of publicity campaign does U.I do to reinforce the compliance with road safety rules among commercial drivers and other road users such as the pedestrians?

iii. Is there alcohol impaired drinking information for the drivers?

2. What are the various ways U.I carry out campaign against the use of substance and alcohol while driving among commercial drivers within the campus?

Probe on:

i. What type of programme has the school put in place to prevent alcohol use among commercial drivers?

ii. What type of rehabilitation plan does the school have for commercial drivers who are also alcoholic?

3. What are some of the problems facing the programme of commercial motorists in U.I?

Probe on:

What can be done to improve the situation?

SECTION D: IDI for Chief Security Officer in U.I

3.8.1.1 Sir, about enforcement, what are the factors U.I has put in place to ensure compliance with road safety rules?

Probe on:

i. How does the institution enforce the institution traffic?

ii. Which of the rules are more enforced than the other?

iii. Who does the monitoring of the rules?

iv. How often is the enforcement carried out? Are they at scheduled times?

v. How are the violators punished?

vi. What are the challenges faced in the enforcement of the institution traffic rules?

vii. What is the disposition of the institution towards drink driving and how is it enforced?

viii. Sir, in your own opinion should the use of seat belt be mandatory since most of the trips within campus are short distance?

ix. What does the institution do to drivers who do not use seat belts?

2. What plans does U.I have on ground to deliver prompt and effective response to road crashes?

3. Which of the U.I traffic rules do the commercial drivers find difficult to comply with?

Probe on

i. Why?

ii. What can be done to improve compliance with the U.I traffic rules

We have come to the end of this interview. Thank you for your cooperation.

SECTION E: IDI FOR SUG president

1. In your opinion, what traffic regulation do you observe the commercial drivers in the University of Ibadan break most?

2. What are the challenges you have observed students have with respect to commercial transportation in U.I

Probe on:

i. what are your recommendations as to how the challenges can be solved or at least minimized?

APPENDIX III

Translation of the questionnaire to Yoruba language

PIPA OFIN OJU ONA FUN AWAKO MO LAARIN AWON AWAKO ILE IWE GIGA TI ILU IBADAN

Afesi owon,

Oruko mi ni Ayokunle Emoruwa, mo je ile giga ti fasiti Ibadan, mo un ko bi won se un da awujo leko nipa ilera. Ni bayi, mo un sise lori **"Pipa ofin oju ona fun awako mo laarin awon awako ile iwe giga ilu Ibadan".**

Abajade ise yii yoo ran wa lowo lati gbe eto kale leri pipa oju ona mo lowo ewu. Awon nnkan ti e ba bawa so yoo wa ni apamo, a oo lo fun ise iwadi yii nikan.

E jowo e kiyesi pe e ko ni lati ko oruko yin si iwe iforo weniwo ki e si jowo je ki idahun yin je ododo .

Nje e setan lati kopa ninu ise yii? (1) beeni [ ] (2) rara [ ] Nomunba .....

E se lopolopo

E jowo e toka boya oko le un wa tabi boosi a. Boosi b. oko

SECTION A: NIPA AWON IWA TO JO MO ENIYAN ATI IBI TI E UN GBE

Ilakale: e jowo e dahun awon ibeere wonyi

1. Esin (1) kirisiteni [ ] (2) musulumi [ ] (3) ibile [ ]
   (4) omiran dakun fihan ni pato [ ]
2. Eya orisun (1) Igbo [ ] (2) Yoruba [ ] (3) Hausa [ ] (4) Omiran (dakun fihan) ni pato.....
3. Ojo ibi ti e se keyin (ni odun).....
4. Nwe to ka to gaju lo (1) mi ko lo ile iwe [ ] (2) mo pari iwe alakobere [ ] (3) mo pari iwe mewa [ ] (4) ile eko giga [ ] (5) omiran (dakun fihan ni pato)
5. Nnje e un se ise miran yato si oko wiwa? (1) kosi [ ] (2) Osise ile iwe giga Ibadan [ ] (3) onisowo [ ] (4) omiran (dakun fihan ni pato) .....

6. Bi o ba ni ise miran yato si oko wiwa, kini owo osu re? ₦ .....

7. Nipa igbeyawo (1) aii tii sigbeyawo [ ] (2) ti gbeyawo [ ] (3) ti ko eni ti mo fe sile [ ] (4) eni ti mo fe ti ku [ ] (5) omiran dakun fihan ni pato.....

8. Ati igbawo le ti un wa oko? .....

9. Ati igbawo leti un wa oko ninu U.I?

Jowo dahun awon ibeere wonyi bi o ti ye

Nnje o maa un lo ikankan ninu awon ohun wonyi lati mu oko wiwa re dara si?

		0	Ra ra	How often (frequency)							
9.	Siga mimu			Oojo	Ose-ose	Osoosu	Odoodun	omiran dakun fihan ni pato	Iye igi melo?		
10	Oti								Iye koopu melo?	Iye igo melo?	Iye sa seeti melo?
i	Oti bia										
Ii	Emu funfun										
Iii	Oti pupa										
Iv	Omiran dakun fihan ni pato										

SECTION B: IMO OFIN OJU PAPA NI TI U.I

Dakun mu idahun ti o ye ninu awon ibeere wonyi

11. Nje o mo iye gbogbo ofin oju papa ni inu ogbaile iwe giga ti ilu Ibadan? .....

12. Melo ninu ofin yii lo le daruko? .....

13. Bawo lo se mo nipa awon ofin awako ninu ogba U.I? (1) Mo bere lowo awon eeyan (2.) mo lo iriri ti mi ni ni idi oko wiwa (3) won so fun wsa nigba ti a foruko sile (d.) omiran (dakun fihan ni pato) .....

14. Ibi a ko gbodo sare koja ti ofin fi lele ninu ogba U.I ni.....

15. Igbawo ni o to ki eeyan wo beliti?

(1) ki a to sina si oko (2) leyin ti a ba sina si oko (3) ti a ba ti un wa oko lo

16. Beliti wiwo maa un dena ijamba oko (1) Beeni [ ] (2) Rara [ ]

17. Beliti wiwo maa un dekun ifarapa ni ijamba (1) Beeni [ ] (2) Rara [ ]

18. Ni ale o ye ki oko ti a paaki o pa ina re ki o wa tan ina ti a fi paaki (1) Beeni [ ] (2) Rara []

19. O lewu ti oko ba paaki si:

(1) iyana oju titi (1) Beeni [ ] (2) Rara [ ]

(2) kona, (1) Beeni [ ] (2) Rara [ ]

(3) ibi ti o ye ki oko paaki si (1) Beeni [ ] (2) Rara [ ]

(4) oju ona ti o kere (1) Beeni [ ] (2) Rara [ ]

(5) ikoju si oko miran debi pe o maa je ki ona naa kere si (1) Beeni [ ] (2) Rara [ ]

20. Ewo ninu iwonyi lo le fa ijamba fun awoko?

(1) Mimu oti ati oogun oloro miran (1) Beeni [ ] (2) Rara [ ]

(2) Siga mimu (1) Beeni [ ] (2) Rara [ ]

(3) Ere asaju (1) Beeni [ ] (2) Rara [ ]

(4) Beliti lilo (1) Beeni [ ] (2) Rara [ ]

(5) Ki a paaki oko bi o se ye (1) Beeni [ ] (2) Rara [ ]

(6) Rireyan (1) Beeni [ ] (2) Rara [ ]

(7) Lilo eereo agbeka bi a ba un wa oko (1) Beeni [ ] (2) Rara [ ]

(8) Oko ti a ko toju (1) Beeni [ ](2) Rara [ ]

(9) Constant regard of traffic regulations (1) Yes [ ] (2) No [ ]

SECTION C: IHA SI PIPA OFIN OJU PAPA TI INU OGBA U.I MO

21. Awa ko le pa ofin oju papa ninu ogba U.I je

(1) bi o ba fe pa iye owo ti o ti pinu lati pa fun ojo yen (1) Beeni [ ] (2) Rara [ ]

(2) ti airotele ba sele (1) Beeni [ ] (2) Rara [ ]

(3) bi koba si eni ti o le dalejo (1) Beeni [ ] (2) Rara [ ]

(4) omiran (dakun fihan ni pato).....

Dakun mu idahun ti o ro mo o ninu Ogba U.I julo

S/N	Ibeere	Mo fara mo	Mi ko fara mo
22.	Bi eeyan ba je awako ti o ti mose o le wa oko ninu ogba U.I lai sewu bi ko tile pa ofin oju papa inu U.I mo		
23	Mo le duro si ibikibi ti ko ba pamilara lati gbe eero ti won ba shaa		

	yara se		
24	Aayan le sare ju iye ti ofin fisile bi ona ba saa dara		
25	Ere ogoji ti kere ju fun oko wiwa ninu ogba U.I		
26	Eeyan le sa ere 50km/hr ninu ogba U.Ibi o ba je pe o ti fe pale ise mo lati le pa owo si		
27	Mo maa wo beliti mi ninu ogba U.I bi mo ba mo pe won fiya jemi bi mi ko ba wo		
28	Beliti maa un pamilara bi mo ba daba ati loo		
29	O ye ki won fiya je awon awako ti ko ba lo beliti ninu ogba U.I		
30	Emi o kii un lo beliti ninu ogba U.I tori mo ro pe beliti lilo o deno ijamba		
31	Ko nilo lati wo beliti fun irin ajo ranpe		
32	Eeyan si le wako laarin ogba bi o ba tile sepe o se moti tan to ba saa je die lo mu		
33	Ijambe je amuwa Olorun ko si si ounkan ti enikeni le se lati fi dena re		

SECTION D: PIPA OFIN PAPA OJU ONA TI U.I MO

Dakun mu aye ti o ba ba idahun re lo: bawo lo se hu awon iwa wonyi si ni aarin osu mefa seyin ninu ogba U.I?

S/N	Ofin oju papa	Igbagbogbo	Eekankan	Ko si igba	idi
34.	Riru ofin ami oju ona				
35	Didena lilo oko ni were				
36	Diduro nibi ti ofin ko fowo si lati duro				
37	Wiwa oko lale pelu ina oko ti ko dara/ mole				
38	Biba oun ini ile iwe je bii ile, papa, opo, ati bee be lo				
39	Sisa ere koja ogoji kilomita ni wakati kan				
40	Wiwa oko nigba ti oti un pa o				
41	Pipa ayika lara pelu ariwo, hoonu moto, eruku oko, ariwo irise oko, ati ero igbohun soke.				
42.	Gbigbe tabi jija ero sile ni ibi ti ofin ko lowo si lati ja tabi gbe ero ninu ogba				
43.	Riru ofin oju ona lilo ati ise si ni ile oko				
44.	Pipe tabi gbigba ipe nigba ti o un wa oko				
45.	Riru ofin beliti lilo				

46. Nje o ti kolu ikan ninu awon ounh wonyi lati igba ti o ti un wa oko ninu ogba U.I

S/N		Rara	Beeni	Ki lo fa (to ba je "beeni")
I	Eniyan			
Ii	Oko			
Iii	Okada			

SECTION E: IDI TI AWON EEYAN FI MAA PA OFIN PAPA OJU ONA FUN AWON AWAKO MO NI U.I

47. Nje o ni iwe awako to peye? (1) Beeni [ ] (2) Rara [ ]

48. Bi o ba je bee, iru iwe wo ni, igbawo si lo maa nilo atunse?

(1) Type A odun..... (2) Type B odun ..... (3) Type C odun ..... (4) Type D odun .....(5) Type E odun ..... (6)Type F odun .....

49. Bi o ba je bee, bawo lo se gba iwe oko re akoko?

(1) sisan owo ti o ye lalai se idanwo (2) leyin igba ti mo yege ninu idanwo ti mo si san owo ti o ye (3) sisan owo fun eeyan lati se idanwo naa fun mi (4) omiran (dakun fihan ni pato) .....

50. Iru ayewo wo ni wan se fun o ki won to fun o ni ase ati wa oko?

(2) Ayewo oju nikan (2) ayewo oko wiwa nikan (3) ayewo oju ayi oko wiwa (4) kosi ayewo

51. Bawo lo se ko oko wiwa? (1) nipase ore [ ] (2) nipase ile eko fun awon awako [ ] (3) omiran (dakun fihan ni pato) .....

Sedahun "beeni" tabi "rara" si awon ibeere wonyi

S/N	Gbolohun	Beeni	Rara
52	Mo maa pa ofin papa oju ona ninu U.I mo ti won ba maa fiya jemi ti mo ba ru		
53	Mo maa pa lara awon ofin papa oju ona inu ogba U.I mp tori awon ara mi ti o un wo mi		
54	Bi ona tile dara, mo si maa ru lara ofin papa oju ona inu U.I		
55	Mi ko ni pa laraofin papa oju ona inu U.I mo bi o tile je pea won ero le fejo mi sun		

56. Ewo ninu ofin papa oju ona ti ogba U.I lo nira fun o lati pamo?

57. Kini idi? .....

58. Mo maa pa ofin papa oju ona ogba U.I mo ti ipolongo ba wa si nipa awon ofin naa (1) Beeni [ ] (2) Rara [ ]

59. Awako le yera fun sisan faini ti o bar u ofin Kankan ninu awon ofin papa oju ona ti ogba U. (1) Beeni [ ] (2) Rara [ ]

60. Bawo? (1) nipa rira owo ebe si awon asofin (2). Nipa fifun awon amofin ni owo (3). omiran (dakun fihan ni pato)

61. Bi ko ba si ijiya fun awon ti o bar u ofin oju papa ni inu ogba U.I mi ko ni pa lara awon ofin naa mo (1) otito [ ] (2) iro [ ]

62. Jowo fi han bi ikan ninu awon koko yii se kon e lara pipa ofin oju papa inu ogba U.I mo

S/N	Koko	O le koko	O le die	Ko le
i	Idanileko fun awako			
ii	Eru ijiya			
iii	Ti mo ba ri awon osise idaabobo			
iv	Ipinu mi			
v	Wiwa ami oju ona			
vi	Wiwa ona ti o dara			
vii	Wiwa oko ti o un sise dara dara			

Omiran (dakun fihan ni pato)

Adupe sa.

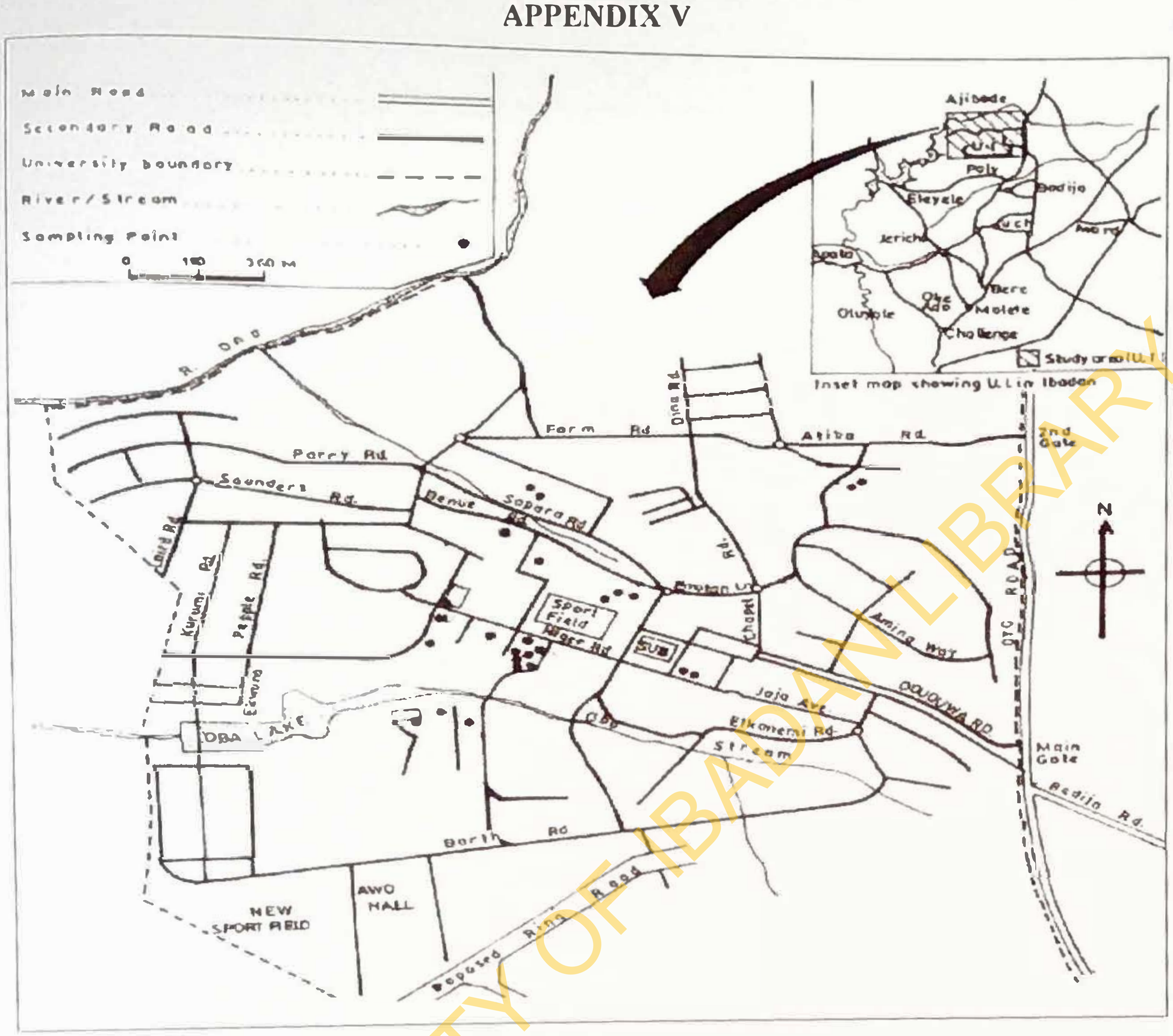
APPENDIX IV

Table 1: University of Ibadan Approved Traffic Regulations and Penalties

S/N	TRAFFIC RULES	PENALTIES (₦)
1.	Violation of road signs/signals	1000.00
2.	Obstruction of free-flow of traffic, broken down vehicle, stopping, parking in unauthorized places, double parking etc	1000.00
3.	Disobedience/ rudeness, impolite attitude to, and physical attacks on authorized traffic and security agents and staff. Other similar offences	2000.00
4.	Driving against traffic flow	5000.00
5.	Absence of current vehicular/driver's particulars such as insurance, Driver's license, road worthiness document, etc	2000.00
6.	Inability to settle one's penalty at the expiration of deadliness	200/day for maximum of 2 weeks
7.	Driving/riding at night with faulty light or without full complement of lights	1500.00
8.	Damage to University properties, like buildings, roads, lawns, poles,	1000 + full costs road signals, etc of repairs as appropriate
9.	Driving without any of the 2 side-mirrors or the rear mirrors	500
10.	Use of old type vehicle plate number	500
11.	(a) overloading of vehicles (b) motorcycles (commercial and private) that carry more than a passenger	500
12	Exceeding speed limit 40km/reckless driving, driving under the influence of alcohol/drug	500
13.	Disturbing and polluting the environment such as shouting, hooting and blaring of horns, sooty smoky vehicles, noisy	2000.00

	engines and loudspeakers. In the case of students' carnivals and promotional events, advance notice must be given to CSO, and a copy of the notice forwarded to Dean of students, and chairman ICTC	
14.	Shunting/jumping of queues; failing to queue up as necessary	1000.00 (GROUP)
15.	Disturbing traffic flow at the University gate, reluctance, resistance, to the checking of vehicles, car boots, etc	1000.00
16.	Collecting/dropping of people/passengers at places other than designated bus-stops on campus	1000.00
17.	Violation of road-ethics and norms at car parks	1000.00
18.	Cases of accidents involving vehicles and/or (to be handled jointly by the passengers Security Unit, FRSC and ICTC)	500
19	Parking of vehicles along walk ways	1000.00
20.	Receiving/making calls while driving	1000.00
21.	Safety belt violation	2000.00
22.	Learners driving without display of "L" label and/or without a licensed driver by the side	2000.00
23.	Under-aged drivers	2000.00
24.	No use of safety helmets by motorcyclists	500.00

APPENDIX V



Road Network within U.I Campus

Source: Google map U.I image (2014).

APPENDIX VI

INTRA-CAMPUS TRANSPORT, TRAFFIC REGULATIONS AND PENALTIES FOR OFFENDERS

APPROVED TRAFFIC REGULATIONS

EFFECTIVE FROM 26 JANUARY, 2009

S/N.		Penalty ₦
1	Violation of road signs/signals	1,000.00
2	Obstruction of free-flow of traffic, broken down vehicle, stopping, parking in unauthorized places, double parking etc	1,00000
3	Disobedience/rudeness, impolite attitude to, and physical attacks on authorized traffic and security agents and staff. Other similar offences	2,000.00 5,000.00
4	Driving against traffic flow	2,000.00
5	Absence of current vehicle/driver's particulars such as insurance, Driver's license, road worthiness document etc	100/day for an old car 1,500.00
6	Inability to settle one's penalty at the expiration of deadliness	
7	Driving/riding at night with faulty light or without full compliment of lights	
8	Damage to University properties, like buildings, roads, lawns, poles, 1,000+ full costs Rode-signals, etc of repair as appropriate	
9	Driving without any of the two side-mirrors or the rear mirror	500.00
10	Use of old type of vehicle plate numbers	500.00 500.00
11(a)	Overloading of vehicles	
	(b) Motorcycles (commercial and private) that carry more than a passenger	500.00
12	Exceeding speed limit 40km/reckless driving, driving under the influence Of alcohol/drugs	2,000.00
13	Disturbing and polluting the environment such as shouting, hooting and blaring of horns, sooty smoky vehicles, noisy engines and loudspeakers. In the case of students' carnivals and promotional events, advance notice must be given to CSO and a copy of the notice forwarded to Dean of stuoents, and chairman ICTC	1,000(GROUP)
14	Shouting/jumping of queues, failing to queue up as necessary	1,000.00
15	Disturbing traffic flow at the University gate, reluctance, resistance to the checking of vehicles car-boots etc	1,000.00
16	Collecting/dropping of people/passengers at places other than designated bus stops on campus	1,000.00
17	Violation of the road-ethics and norms at car parks	500.00
18	Cases of accidents involving vehicle and/or (To be handled jointly by the passengers Security Unit, FRSC & ICTC)	1,000.00
19	Parking of vehicles along walk ways	1,000.00
20	Receiving/making calls while driving	2,000.00
21	Safety belt violation	2,000.00
22	Learners driving without display of L label and/or without a licensed driver by the side	2,000.00 500.00
23	Under-aged drivers	
24	No use of safety Helmet By Motorcyclist	

Members of the University Community and visitors are therefore enjoined to observe the rules and regulations in other to ensure safety on campus roads.

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT)
COLLEGE OF MEDICINE, UNIVERSITY OF IBADAN. IBADAN, NIGERIA.

Director: Prof. A. Ogunniyi, B.Sc(Hons), MBChB, FMCP, FWACP, FRCP (Edin), FRCP (Lond)

Tel: 08023038583, 08038094173

E-mail: aogunniyi@comui.edu.ng

UI/UCH EC Registration Number: **NHREC/05/01/2008a**

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

Re: Compliance of Commercial Motorists with Road Traffic Regulations in the University of Ibadan

UI/UCH Ethics Committee assigned number: UI/EC/14/0129

Name of Principal Investigator: **Ayokunle A. Emoruwa**

Address of Principal Investigator: Department of Health Promotion & Education,
College of Medicine,
University of Ibadan, Ibadan

Date of receipt of valid application: 07/04/2014

Date of meeting when final determination on ethical approval was made: **21/08/2014**

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and *given full approval by the UI/UCH Ethics Committee.*

This approval dates from 21/08/2014 to 20/08/2015. If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the* UI/UCH EC *assigned number and duration of* UI/UCH EC *approval of the study.* It is expected that you submit your annual report as well as an annual request for the project renewal to the UI/UCH EC early in order to obtain renewal of your approval to avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. *No changes are permitted in the research without prior approval by the* UI/UCH EC *except in circumstances outlined in the Code. The* UI/UCH EC *reserves the right to conduct compliance visit to your research site without previous notification.*

UI/UCH EC
21 AUG 2014
APPROVED

Dr. O. M. Bolaji
Ag. Director, IAMRAT
Chairman, UI/UCH Ethics Committee
E-mail: uiuchirc@yahoo.com

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT)
COLLEGE OF MEDICINE, UNIVERSITY OF IBADAN. IBADAN, NIGERIA.

Director: Prof. A. Ogunniyi, B.Sc(Hons), MBChB, FMCP, FWACP, FRCP (Edin), FRCP (Lond)

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UI/UCH EC
21 AUG 2014
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