KNOWLEDGE, ATTITUDE AND COMPLIANCE WITH ROAD SIGNS AND TRAFFIC RULES AMONG COMMERCIAL DRIVERS IN IBADAN NORTH LOCAL GOVERNMENT OYO STATE

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Abstract

Over the years, road traffic accidents' statistics in Nigeria reveal a serious and growing problem with absolute fatality rate and causality figure rising rapidly from year to year. Numerous studies have illustrated how risky driving behaviour plays a major role in the occurrence of road traffic crashes, leading to the consensus that changes in driver behaviour is one of the key points for traffic safety interventions. Previous studies have largely focused on the vehicle and the environmental conditions in relation to accidents but little has been done on driver (knowledge, attitude and compliance with traffic rules and regulations) in relation to accidents occurrence. This study, therefore, examined knowledge, attitude and compliance with road signs and traffic rules among commercial drivers in Ibadan North Local government, Oyo State, Nigeria.

The study was anchored to Jørgensen-Abane model of traffic accident causation and system theory, while the mixed methods involving survey design of ex-post facto type and qualitative approach was used. The purposive sampling technique was employed to select five hundred commercial cab drivers. The instruments used were Knowledge of Traffic Rules (r=0.75), Attitude Towards Traffic Rules (r=0.73), Compliance With Traffic Rules (r=0.79), Knowledge of Road Signs (r=0.81), and Compliance With Road Signs(r=0.74) scales. Key informant interviews were conducted with 5 park leaders. Quantitative data were subjected to descriptive statistics of Chi-square at α 0.05 while qualitative data were content-analysed.

The respondents' age was 44.60±2.30 years and majority were males (95.6%). There was no significant knowledge (X^2cal= 34.20, X^2crit= 55.76, df= 30,) attitude (X^2cal= 31.63, X^2crit= 55.76, df= 27) and compliance (X^2cal= 28.43, X^2crit= 55.76, df= 27) with traffic rules. There was significant knowledge of road signs (X^2cal= 28.14, X^2crit= 26.30, df= 16) but attitude and compliance with road signs were not significant. There was high disregard for road signs and traffic rules

It was concluded that there was no significant knowledge, attitude and compliance with traffic rules and road signs among commercial cab drivers in Ibadan North Local government, Oyo State, Nigeria. Efforts should be made by health educators, health policy makers and other stakeholders to address the issue of none compliance with traffic rules and road signs through practice, policy and research. This is necessary since the resulting adverse health effects of these variables are preventable.

Key Words: *Traffic rules and regulation, Road signs, Compliance, Prevalence, Accident*

Introduction

In Nigeria, road transport is the dominant mode of movement for both freight and passenger traffic with the relative absence of rail, water and air transportation in most parts of the country. Road traffic crashes constitute a major public health problem, and a greater percentage of these occur in low and middle income countries. For instance, Nigeria recorded 337,301 road traffic crashes from 1990 to 2012, out of which 96,563 (28.6%) were fatal, 150,613 (44.7%) were serious and 90,125 (26.7%) were minor (Afolabi&Gbadamosi, 2017).

Globally, the WHO statistics reported that 1.24 million people lost their life and over 50 million were injured due to motor vehicle accident in 2010 (Rolison, Regev, Moutari& Feeney, 2018). Males younger than 25 years accounted for 73% of deaths due to traffic accidents. The risk of motor vehicle crashes is higher among 16-19 year-old than among any other age group. The factors that contribute to road accidents are over speeding, violation of rules, failure to understand signs, alcohol intake, crossing at wrong places, catching a running bus, damaged roads, illegal speed breakers, and weather conditions (Rolison, Regev, Moutari& Feeney, 2018). In Nigeria, the number and frequency of road crashes have become a growing concern and as such requires urgent attention. Nigerians depend majorly on the road transport system as a means of mobility in preference to cycling and walking, and the rail system is not well developed. Nigeria as a country has not achieved much success in tackling the problem of safety on the road despite the programmes the Federal Road Safety Corps (FRSC) has implemented in the past. For example, data from the FRSC in 2015 revealed that between 2010 and 2014, more than 27 000 people died and about 100 000 were injured in 48,841 road crashes. Federal Road Safety Corps (2017) further revealed that 5053 people were killed in 9694 road crashes in 2016, representing a decrease of 387 in comparison with the death toll of 5440 recorded in 2015 where about 9734 crashes happened.

Transport users' behaviour has been identified as the main cause of road traffic crashes in Nigeria. According to Ogwude (2010), whilst no actual crash may occur in all conflict situations, cases of near crashes are very frequent and leave the impression that the road environment is quite demanding and might be very dangerous. In addition, a study by Ukoji (2014) also shown that unsafe driving behaviours accounted for up to 90% of crashes in Nigeria: this includes inappropriate speeding and speed-related factors, poor knowledge of traffic regulations, including road signs and markings, drink driving, dangerous driving, driver fatigue and inappropriate overtaking. Atubi (2010) examined the patterns of road traffic crashes in Lagos State with the use of secondary data from the FRSC and the Nigerian Police and found that more than 90% of road traffic crashes could be attributed to speeding and recklessness on the part of drivers. Additionally, the environment in which a driver operates can influence behaviour for example, weather conditions, time of day and road design (Hao, Kamga& Wan, 2016).

Road traffic injuries have escalated to serious health, social and economic hazard in developing countries. According to Yar'Adua (2008), Road Traffic Accidents (RTA) cost around US$ 18 billion globally in low income and middle income countries; and that road related injuries will rise to third position ahead of such diseases as Tuberculosis and even

HIV/AIDS. He submitted that a total of 55, 195 Road Traffic Accident were reported in Nigeria from 2003-2007, out of which 25,939 persons were killed and 85,976 others injured. Yar'Adua noted that the situation of Road Traffic Accidents in contemporary world and local perspectives has given an insight into the significance of the existence of the Federal Road Safety Commission. Nigeria loses about 80 billion naira annually to road accidents and of all persons that are involved in road traffic accidents in Nigeria, 29.1 percent suffer disability and 13.5 percent are unable to return to work (Atubi, 2012).

A number of experts have suggested several causes of road traffic accident in Nigeria. According to Oyeyemi (2003), human factors constitute about 80% of the cause of road traffic accidents recorded in the country. This includes dangerous overtaking at bends and crest of a hill, over speeding, driving under the influence of alcohol/drugs and the use of mobile phone while driving among others. Oyeyemi continues that this is a situation where drivers operate mechanically deficient vehicles on the roads carrying passengers and property without safety consideration. Such vehicles are not road worthy and they do not meet minimum safety standards. Bad weather condition leading to mist, haze, harmattan and sometimes heavy rainfall resulting in poor visibility could also lead to accidents on the road. Oyeyemi (2003) went further to conclude that road traffic accidents constitute a major cause of death and loss of property in the country, depleting the workforce of the nation and rendering victims and their relatives to suffer severe psychological trauma. Billions of naira worth of property including human beings, most of them belonging to the productive age group are consumed through automobile fire incidents on the roads due to accidents.

Different accident statistics have been presented by a number of stakeholders to underscore the adverse effect of road traffic accidents on the Nigerian economy. According to Rom Kalilu (2008), cases of road traffic accident from 1960 up to 2006 indicate that there were 967, 618 crashes with 1,159,642 casualties. Nwachukwu (1998) affirmed that the observance and enforcement of road safety laws and regulations has contributed positively to the significant reduction of loss of lives and property on the roads. These laws and regulations have suffered violent abuses from motorists and unscrupulous members of the public as well as misinterpretations. Maduagwu (1998) observed that most Nigerian drivers have no regards whatever for traffic laws and regulations: They do not observe speed limit nor obey traffic signs on the highway. With no thought of the other road users, they overtake anywhere and anyhow. Nigerian drivers even park parallel on the middle of the road to greet one another or to chat, holding other Traffic to ransom.

Over the years, road traffic accidents' statistics in Nigeria reveal a serious and growing problem with absolute fatality rate and causality figure rising rapidly (Atubi, 2009c). In majority of developing countries, accident occurrence and related deaths are relative to either population or number of vehicles. Ironically, in Nigeria, studies have indicated that better facilities in terms of good quality and standardized roads have been accompanied by increasing number of accidents (Atubi&Onokala, 2009). This is totally contrary to the trends in countries where even the level of sophisticated road network and volume of vehicular traffic are much higher (Atubi 2010a; 2015a).

A road traffic injury occurs when vehicles collide with each other, pedestrians, trees, animals and other obstacles which results in injury, property damage or death. Human error

is the major cause of road traffic injuries accounting for 64-95% of crashes in developing countries (Al-Zahrani, 2015). Inappropriate or excessive vehicular speed is a major single cause of road traffic injuries worldwide resulting in over 40% of fatal collisions. Other causes include rash driving, mobile telephone use, deliberate violation of rules, inability to understand or obey road signs, driving or walking under the influence of drugs or alcohol, and avoidance of safety gears such as seat belts and helmets (Redhwan and Karim, 2010). Other causes contributing to road traffic injuries include the environment, poor road conditions, and poorly maintained vehicles. The effects of road traffic injuries on victims could include physical injuries, psychological with extreme fear, helplessness and loss of control. Physical injuries could lead to partial or total disability with the major consequence being death which account for 25% of such injuries (Ebrahim and Nikraz, 2012).

Statistics from around the world further revealed that road traffic injury is a major cause of morbidity and mortality with over 1.2 million people dying while 20-50 million get injured every year (Sangowawa and Owoaje, 2011). Also, most road traffic injuries that are over 85% occur in middle and low income countries (WHO, 2009). In Africa and other continents where road traffic injuries are prevalent, it increases their economy burden with high amount of money lost to care for victims. In addition, road traffic injuries cost the global community annually USD 518 billion, with resultant killing or handicap of manpower, destruction of facilities, and creation of new economic crisis as the affected countries require resources to tackle and reduce the negative effects of road traffic injuries (Kohli, Aathi and Sethi, 2013). Furthermore, in Nigeria, Olagunju (2009) observed that lack of efficient and effective traffic law enforcement has been responsible for several accidents in the country especially among motorcycle operators. For example, participants at a one day workshop on motorcycle operations in Nigeria, organized by the Federal Road Safety Corps in March 2006 expressed dismay at the level of disobedience to traffic rules and regulations by the riders. The conduct of these commercial motorcyclists characterized by poor knowledge of traffic rules and regulations, engaging in drugs and use of mobile phones while riding resulted to many motorcycle accidents. In light of the aforementioned statistics and information, this study intends to examine knowledge, attitude, and compliance with road signs and traffic rules among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Numerous studies have illustrated how risky driving behaviour plays a major role in the occurrence of road traffic crashes (RTCs), leading to the consensus that changes in driver behaviour is one of the key points for traffic safety interventions. Data from the Road Traffic Control Unit of the Federal Road Safety revealed that, more than 27 000 people died and about 100 000 were injured in 48 841 road crashes most of which are as a result of disregard for traffic signs and rules (FRSC, 2015). Also several research efforts have focused on the vehicle and the environmental conditions in relation to accidents but little has been done on driver (knowledge, attitude and compliance with traffic rules and regulations) in relation to accidents occurrence. It was also observed by the researcher that some commercial drivers (especially intra-state commercial drivers) ploughingMokola-Ojoo road in Ibadan shows blatant disregard for traffic rules and this attitude has claimed several lives and leaving several road users injured. Studying knowledge, attitude and compliance

to road signs and traffic rule is a right step in stemming the tide of this preventable menace, Several studies have been done on commercial drivers; Amoo (2019) focused on intercity commercial drivers while Awesu 2015 focused on okada riders but little attention has been directed towards intra-city commercial drivers and also most of the studies that have been done on commercial drivers only made use of descriptive design alone while little or no one made use of mixed method. It is based on these that this study will focus on knowledge, attitude and compliance with road signs and traffic rules among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Objectives of the study

1. To ascertain the knowledge, attitude and compliance with road signs among commercial drivers in Ibadan North Local Government, Oyo state.
2. To examine the knowledge, attitude and compliance with traffic rules among commercial drivers in Ibadan North Local Government, Oyo state.

Research Questions

Answer were provided to the following questions

1. What is the prevalence of traffic accidents among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State
2. What do intra-city commercial road drivers in Ibadan North Local Government area of Oyo State attributes accidents to?
3. Do intra-city commercial road drivers in Ibadan North Local Government area of Oyo State perceive any risk while driving?

Hypotheses

The following hypotheses were tested

1. Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant
   a. knowledge
   b. attitude
   c. and compliance with traffic rules
2. Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant
   a. knowledge
   b. and compliance with road signs

Methodology

The mixed methods involving survey design of *ex – post facto* type and qualitative approach were used for the study. The population for this study comprised all intra-city commercial drivers in Ibadan North Local Government area of Oyo State. The sample for this study was five hundred drivers drawn from intra-city commercial cab drivers in Ibadan North Local Government area of Oyo State. Purposive sampling technique was used to select the drivers since all the drivers have similar characteristics. Five park leaders were used for the

Key Informant Interview (KII). Two research instruments were used for this study; self-developed questionnaire and Key Informant Interview (KII). The self-developed questionnaire that was used was designed according to the variables to be tested in the hypotheses. The questionnaire is divided into sections:Section A: Knowledge of Traffic Rules Scale (KTRS), Section B: Attitude Towards Traffic Rules Scale (ATTRS), Section C: Compliance With Traffic Rules Scale (CWTRS), Section D: Knowledge of Road Signs Scale (KRSS) and Section E: Compliance With Road Signs Scale (CWRSS)

The test re-test method was used to obtain the reliability of the instrument. The researcher administered the questionnaire on twenty (20) drivers from Ibadan South Local Government Area of Oyo State who were not part of the actual respondents but share similar characteristics with the actual respondents. The instrument was re-administered to the same group of respondents after two weeks. The two sets of data were subjected to Pearson Product Moment Correlation (PPMC) to establish the reliability co-efficient of the scales. KTRS (r=0.750, ATTRS (r=0.73), ATTRS (r=0.73), CWTRS (r=0.79), KRSS (r=0.81), and CWRSS (r=0.74). Pie chart was used to provide answers to the research questions while inferential statistics of Chi-Square was used to test the hypotheses at 0.05 level of significance. The qualitative data were content analysed

Results

Research question 1: What is the prevalence of traffic accidents among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State?

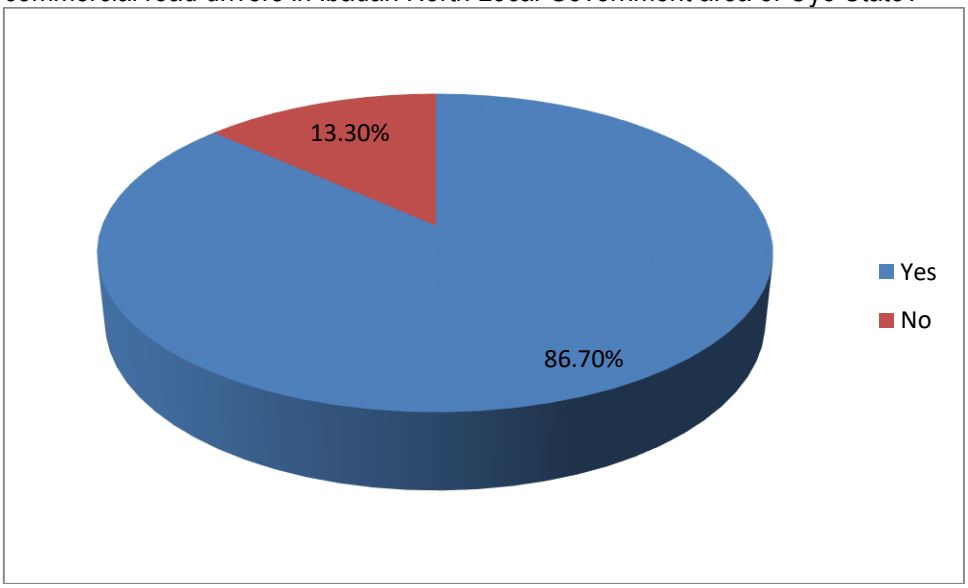


Fig. 4.1: Pie Chart Showing The Prevalence Of Traffic Accidents

The chart above showed the prevalence of traffic accidents among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State. The chart revealed that out of the 413 commercial drivers used for the study, 358 (86.7%) have had accident before

while 55 (13.3%) had not had any form of road accident before. This showed a very high prevalence of accident among commercial cab drivers in Ibadan North Local Government area of Oyo State.

Research question 2: What do intra-city commercial road drivers in Ibadan North Local Government area of Oyo State attributes accidents to?

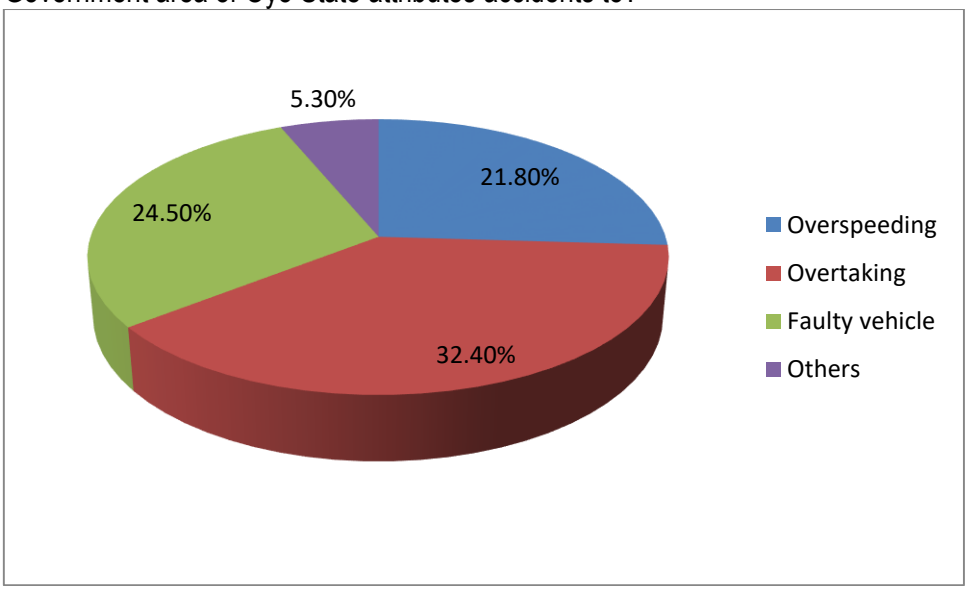


Fig. 4.2: Pie Chart Showing Causes of Traffic Accidents

The chart above showed the causes of traffic accidents among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State. The chart revealed that out of the 413 commercial drivers used for the study, 90 (21.8%) attributed the cause of accident to overspeeding, 134 (32.4%) attributed it to dangerous overtaking, 101 (24.5%) attributed it to faulty vehicle while 22 (5.3%) attributed the cause of accident to other factors apart from the listed. This indicated that dangerous overtaking is the most predominant cause of accident among intra-city commercial road drivers in Ibadan North Local Government area of Oyo State.

Research question 3: Do intra-city commercial road drivers in Ibadan North Local Government area of Oyo State perceive any risk while driving?

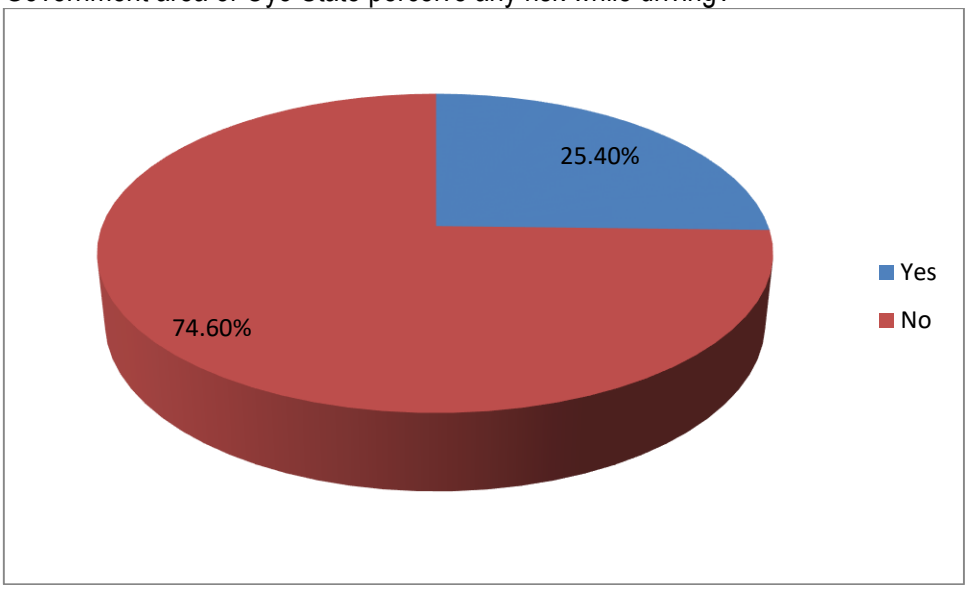


Fig. 4.3: Pie Chart Showing Perception of Risk by Drivers

The chart above showed risk perception of intra-city commercial road drivers in Ibadan North Local Government area of Oyo State. The chart revealed that out of the 413 commercial drivers used for the study, 105 (25.4%) do perceive risk while driving while 308 (74.6%) do not perceive any risk while driving. This revealed that majority of the respondents do not perceive any risk while driving and this may be the cause of the high prevalence of accident among the intra-city commercial road drivers in Ibadan North Local Government area of Oyo State.

Hypotheses

The following hypotheses will be tested

Hypothesis 1a: Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant knowledge of traffic rules and regulations.

Table 4.2a: Table showing knowledge of traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Items	Yes	No	I Don't know	X^2Cal	X^2Crit	Df	P
Drivers need to use seat belt when driving	18 4.4%	42 10.1	353 85.5	34.20	55.76	30	.094
Alcohol consumption is not advisable while driving	45 10.9%	49 11.9%	319 77.2%				
Road have speed limit	97 23.5%	29 7.0%	287 69.5%				
One can only overtake from the right	48 11.6%	49 11.9%	316 76.5%				
In a round about the driver on ones left side has right of way	52 12.6%	44 10.7%	317 76.8%				
Mobile phone must not be used while driving	55 13.3%	40 9.7%	318 77.0%				
It is not advisable to overtake when another vehicle is driving uphill	46 11.1%	38 9.2%	329 79.7%				
Minimum age for a person to drive is eighteen years	59 14.3%	30 7.2%	324 78.5%				
Blaring of horns should not be done near a school	72 17.4%	37 9.0%	304 73.6%				
I know I should not drive a faulty car	54 13.1%	38 9.2%	321 77.7%				
I should always check the expiry date of my tyres	65 15.7%	32 7.7%	316 76.5%				
I know I should obey all road signs	57 13.8%	37 9.0%	319 77.2%				
Driving with tyres that has not been used but is more than five years old is not safe	67 16.2%	31 7.5%	315 76.2%				
I should renew my vehicle particulars as at when due	44 10.7%	36 8.7%	333 80.6%				
It is important to check water and oil levels in a vehicle before driving it in a day	65 15.7%	17 4.1%	331 80.1%				
Four tyres of a vehicle must be of the same size and air content	49 11.9%	21 5.0%	343 83.1%				

Table 4.2a revealed that there is no significant knowledge of traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State, Nigeria (X^2cal= 34.20, X^2crit= 55.76, df= 30, p > .05), hence, the null hypothesis is accepted.

Hypothesis 1b: Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant positive attitude towards traffic rules and regulations.

Table 4.2b: Table showing attitude towards traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Items	SA	A	D	SD	X^2Cal	X^2Crit	Df	P
It is only amateur drivers that uses seat belt all the time	304 73.6%	28 6.8%	40 9.7%	41 9.9%	31.63	55.76	27	.104
Speeding shows how good a driver is	233 56.4%	103 24.9%	60 14.5%	17 4.1%				
It is only those who are just learning how to drive that should not use phone while driving	263 63.7%	56 13.6%	70 16.9%	24 5.8%				
Road signs are meant for drivers to obey	27 6.5%	64 15.5%	118 28.6%	204 49.4%				
Taking alcohol before driving clears the eyes and make one drive correctly	250 60.5%	82 19.9%	57 13.8%	24 5.8%				
Servicing of vehicle regularly is a waste of money	210 50.8%	120 29.1%	59 14.3%	24 5.8%				
There is so much to do with money than caring about expiry dates of tyres	235 56.9%	80 19.4%	60 14.5%	38 9.2%				
I careless if the speedometer of my vehicle works or not	198 47.9%	106 25.7%	82 19.9%	27 6.5%				
Over-taking can be done at the bend so far one is a good driver	246 59.6%	68 16.5%	68 16.5%	31 7.5%				
Any good driver can overtake from any side regardless of the type of road	218 52.8%	103 24.9%	71 17.2%	21 5.1%				

		Value	Approx. Sig.
Nominal by Nominal	Phi	.181	.069
	Cramer's V	-.168	.072
	Contingency Coefficient	.134	.077
Interval by Interval	Pearson's R	-.156	.021[c]
Ordinal by Ordinal	Spearman Correlation	-.018	.149[c]
N of Valid Cases		413	

Table 4.2b revealed that there is no significant positive attitude towards traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State State, Nigeria (X^2cal= 31.63, X^2crit= 55.76, df= 27, p > .05). The crammer V result shows that their attitude is negative. Therefore, the null hypothesis is accepted.

Hypothesis 1c: Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant compliance to traffic rules and regulations

Table 4.2c: Table showing compliance to traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Items	SA	A	D	SD	X^2Cal	X^2Crit	Df	P
I use my seat belt anytime I am driving	37 9.0%	34 8.2%	70 16.9 %	272 65.9%	28.43	55.76	33	.112
I do not use phone whenever I am driving	35 8.5%	68 16.5 %	129 31.2 %	181 43.8%				
I always have good extra tyre while driving	33 8.0%	52 12.6 %	104 25.2 %	224 54.2%				
I obey all road signs whenever I am driving	42 10.2 %	48 11.6 %	127 30.8 %	196 47.5%				
I check the speedometer regularly whether it works	26 6.3%	61 14.8 %	99 24.0 %	227 55.0%				
I renew my vehicle paper as at when due	33 8.0%	56 13.6 %	142 34.4 %	182 44.1%				
I always observe speed limit	27 6.5%	68	92	226 54.7%				

		16.5 %	22.3 %					
I do not drink alcohol before driving	22 5.3%	70 16.9 %	137 33.2 %	184 44.6%				
I give consideration to learners (person just learning how to drive) on the road	31 7.5%	64 15.5 %	101 24.5 %	217 52.5%				
I always give the right of way to any car by my right	22 5.3%	73 17.7 %	105 24.5 %	213 51.6%				
The electrical wiring and lighting of my vehicle are always in good condition	12 2.9%	82 19.9 %	90 21.8 %	229 55.4%				
I always check the expiry date of my tyres	41 9.9%	59 14.3 %	83 20.1 %	230 55.7%				

		Value	Approx. Sig.
Nominal by Nominal	Phi	.211	.064
	Cramer's V	.231	.058
	Contingency Coefficient	.197	.081
Interval by Interval	Pearson's R	.221	.033[c]
Ordinal by Ordinal	Spearman Correlation	.027	.137[c]
N of Valid Cases		413	

Table 4.2c revealed that there is no significant compliance to traffic rules and regulations among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State State, Nigeria (X^2cal= 28.43, X^2crit= 55.76, df= 27, p > .05). The crammer V value of 0.231 showed that their level of compliance is very low. Therefore, the null hypothesis is accepted.

Hypothesis 2a: Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant knowledge of road signs.

Table 4.3a: Table showing knowledge of road signs among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

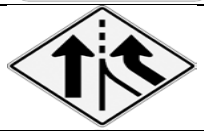
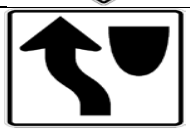
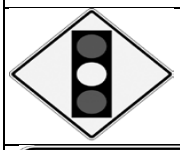
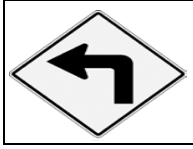
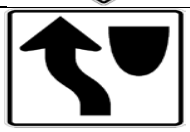
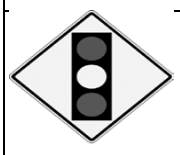
Items	Yes	No	I Don't know	X^2Cal	X^2Crit	Df	P
 This road sign means do not turn right	314 76.0%	54 13.1%	45 10.9%	28.14	26.30	16	.043
 This road sign means no U turn	261 63.2%	25 6.1%	127 30.8%				
 This road signs means lane added	211 51.1%	38 9.2%	164 39.7%				
 This road sign means right lane ends	221 53.5%	49 11.9%	143 34.6%				
 This road sign means keep to left divider	24 5.8%	224 54.2%	165 40.0%				
 This road sign means no pedestrian crossing	131 31.7%	135 32.7%	147 35.6%				
 This road sign means signal light ahead	355 86.0%	44 10.7%	14 3.4%				
 This road sign means seat belt is mandatory	99 24.0%	19 4.6%	295 71.4%				
 This road sign means warning left turn	30 7.3%	42 10.2%	341 82.3%				

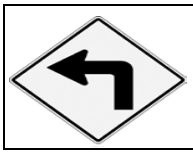
Table 4.3a revealed that there is significant knowledge of road signs among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State, Nigeria (X^2cal= 28.14, X^2crit= 26.30, df= 16, $p < .05$), hence, the null hypothesis is rejected. It could also be deduced from the table that majority of the .Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State, Nigeria have knowledge of some of the

road signs (no left turn, no U turn, no pedestrian crossing and signal light ahead) but not all. Majority had no knowledge of lane added, keep to left divider, right lane ends and warning left turn.

Hypothesis 2b: Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State will not have significant compliance with road signs.

Table 4.3b: Table showing compliance with road signs among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State

Items **What do you do when you see these road signs while driving**	**F**	**%**	**X^2Cal**	**X^2Crit**	**Df**	**P**
 (a)I turn left (b)I do not turn left (c)I ignore it	54 53 315	10.9 12.8 76.2	8.34	26.30	16	.194
 (a)I make U turn (b)I do not make U turn (c)I ignore it	25 127 261	6.1 30.8 63.2				
 (a)I maintain my lane (b)I do not maintain my lane (c)I ignore it	211 38 164	51.1 9.2 39.7				
 (a)I keep left (b)I do not keep left (c)I ignore it	49 143 221	11.9 34.6 53.5				
 (a)I keep left of divider (b)I do not keep left divider (c)I ignore it	24 165 224	5.8 40.0 54.2				
 (a)I walk through the road (b)I do not walk through the road (c)I ignore it	131 135 147	31.7 32.7 35.6				
 (a)I obey the signal light (b)I do not obey the signal light (c)I ignore it	44 14 355	10.7 3.4 86.0				
 (a)I use seat belt (b)I do not use seat belt (c)I ignore it	19 99 295	4.6 24.0 71.4				

	(a)I turn left (b)I do not turn left (c)I ignore it	30 42 341	7.3 10.2 82.6				

		Value	Approx. Sig.
Nominal by Nominal	Phi	.201	.064
	Cramer's V	.207	.083
	Contingency Coefficient	.185	.077
Interval by Interval	Pearson's R	.201	.029c
Ordinal by Ordinal	Spearman Correlation	.025	.142c
N of Valid Cases		413	

Table 4.3b revealed that there is no significant compliance with road signs among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State State, Nigeria (X^2cal= 8.34, X^2crit= 26.30, df= 16, p > .05), hence, the null hypothesis is accepted. It could also be deduced from the crammer V value of 0.207 that the level of compliance with road signs among Intra-city commercial road drivers in Ibadan North Local Government area of Oyo State State, Nigeria is very low.

Result of the qualitative data

What can you say about the prevalence of accident on Nigeria road?

The prevalence of accident is high o, awon eniyankan peme anyhow. Anywhere on the road is not safe. Ore ofe ni awanlo o. Another park leader said: awa ti lose count of accident. It is a normal part of our everyday experience

What do you think are the causes of road accident?

Accidents on the road can be caused by anything. It can be driver fault, bad road and weather condition. What people think about the cause of accident is not true. Most people say it is alcohol, iro niyen, ogogoro gan ma mu ki oju la dada. I can not drive well except I shark. It is when im high that I drive very well. One of the participant stated that awon were to wa loju ona, to won gbowolon cause gbogbo accident yi

What roles do obedience to traffic laws and road signs play in accident occurrence?

Woo, traffic law and road signs are for baby drivers. Awa ti n wa moto lati inu oyun, awagan ni traffic laws. One participant said that traffic laws and road sign play a great role in accident occurrence but they are not the sole cause of accident. Ise awon aye ni accident.

Do intra-city commercial drivers comply with traffic rules and road signs?

We do not have regard for any traffic rules nor road sign. All we are concerned with is for our daily amount to be complete. One participant said emi o le so but for me,

I no get any time for any yeye road sign. Another participant said, nigbatiowo deliver o tipe ni mo ma mawo road sign. Ko wop e nikoko

Discussion of findings

The result of hypothesis one corroborated the finding of Riaz and Shahid (2018) in their study conducted in Pakistan on knowledge, attitude and practice of drivers towards traffic rules and regulations in Multan using a cross sectional research design to generate data. The study revealed that most road accidents occur because of inadequate knowledge, poor attitude and risky practices of drivers to road safety measures in Pakistan, 65% of commercial Motorcyclists do not use personal protective equipment when riding motorcycle because of low knowledge which lead them to fail to comply with road traffic rule and regulations, and it was concluded that lack of knowledge about traffic laws and practices of drivers are contributing factors to road traffic accidents in any country. The finding of this study also tallied with that of Cent and Afr, (2015) in their study done in Nigeria on effects of safety education on knowledge of and compliance with road safety signs among commercial motorcyclists, revealed that knowledge to commercial motorcyclists is very low (Johnson & Adebayo, 2011), as at base line was 21% and, after educating them (intervention), the level of knowledge to road safety measures raised to 82%. Contrary to the study done in Tanzania revealed that knowledge on using personal protective equipment among Commercial Motorcyclists was high at 91.5% where Commercial Motorcyclists were having high knowledge.

We do not have regard for any traffic rules nor road sign. All we are concerned with is for our daily amount to be complete. One participant said emi o le so but for me, I no get any time for any yeye road sign. Another participant said, nigbati owo deliver o tip e nimoma mawo road sign. Ko wop e nikoko

Also the finding of this study is in agreement with Ndagire, Kiwanuka, Paichadze, and Kobusingye, (2019) in a study conducted in Uganda on road safety compliance among motorcyclists using a cross sectional design revealed that most of commercial motorcyclists in Kampala know that before starting riding a motorcycle one should have a driving trainings in order to reduce the likelihood of road crashes to occur. It is open that road traffic accidents in the road can be reduced by increasing knowledge of traffic rules, good attitude and good practices among drivers and other road users on complying with road safety rules and regulations. Wu and Loo, (2015) in a study done in China on safety among motorcycle taxi drivers and non-occupational motorcyclists in developing countries, using a case study of Maoming, South China revealed that not only motorcycle taxi drivers had poor attitude towards road safety but even the motorcyclists who are non-occupants have reported to have unsafe driving behaviour, so it is important to have programmes to improve local road safety among all motorcyclists in Maoming. The motorcycle taxi drivers were more likely to road safety risks than non-occupational motorcyclists under some circumstances like speed rate. Then it later concluded that in Maoming the attitude toward road safety among motorcyclists was poor; thus, there was a need of intervention to improve and strengthening road safety by targeting all motorcyclists over Maoming.

The findings of this study also support that of Isah, Yakubu, and Raji (2018) in a study conducted in Nigeria on knowledge, attitude, and compliance with safety protective measures and devices among commercial motorcyclists, using a cross sectional descriptive study, the study revealed that 52.8% out of 307 respondents perceived that using safety protective devices is not important and can only be observed in the case of meeting authorities on the road, the overall attitude of the respondents towards safety protective devices was poor.

The result of hypothesis two tallied with the findings of WHO (2011) when she stated that road traffic signs contribute majorly to the smooth running of the road and also control traffic in case of congestion, but in Nigeria, the reverse was the case. Nigeria road is a death trap, a bomb ready to explode, going by the report given by the Federal Road Safety Corps recently as researched by WHO (2011), out of 192 countries ranked, Nigeria came 191 in number of deaths caused by road accidents, (Olaifa 2011) also stated further that most of the roads in Nigeria do not have traffic signs, the few roads with signs are poorly marked and most drivers have not gone through any formal drivers training or assessments to learn the signs. People simply get on the road and just drive their cars. Mwakapasa (2011) in a study conducted in India on assessing the knowledge and attitude regarding road safety measures among college going two wheeler rider, revealed that attitude among college students was 70% towards road safety (Jacob & Rajeev, 2018). Majority of commercial motorcyclists in the developing countries, like Tanzania, have poor attitude towards motorcycle protective devices like helmet as they do not like to use them because of having poor attitude towards personal protective equipment.

The result of hypothesis two is also in line with Kwadwo, Harold, Nana and Emmanuel (2016) who concluded that comprehensibility of traffic signs is very important in road safety since when signs are understood and followed it safeguards road users from rapid road accidents. The results generally showed a fair understanding of the traffic signs with the exception of the Informatory Signs which recorded a below acceptable limit of 62.3%, both the regulatory and warning signs recorded a satisfactorily 90.9 % and 78.7 % respectively. Averagely, a score of 82.53 % was recorded which is also satisfactory per ISO 3864 and DVLA, Ghana standards. The study further established that driving experience had a part to play in traffic sign comprehension as from the results drivers who had driven more understood the signs better. The results also revealed that the older drivers above 45 years and younger ones below 24 years understood the signs less. Another point to note, can be drawn from the trend established that drivers with higher educational backgrounds performed much better than those with low educational backgrounds. This presupposes that education has a significant effect on traffic sign comprehensibility,

The findings of hypothesis three is in agreement with Uwem, Nsikan and Promise (2015) from the findings of their study on the communicativeness of road traffic, they concluded that although road signs in Uyo Urban are highly communicative, the level of compliance with the demands of the signs is low. It is also concluded that educational qualification is not a major factor in understanding and interpreting road traffic signs. Makinde and Akinyiwola (2012) concluded from their study that education had a significant effect on the understanding of traffic signs as observed in the results. In general, gender

had no effect on the understanding of traffic signs since there was no female driver as an inter-city driver. The findings agree with other research work that drivers generally have problems in understanding traffic sings.

The result of hypothesis four tallied with Umar, (2019) in his study on comprehension of road traffic signs by various road users in Kano state concluded that the low comprehension level among truck drivers and tricycle users may be associated with their low education level as the majority of road users in this category hardly make it to the high school. Another factor is the manner in which driver's license are issued in Nigeria as most drivers do not undergo the required training before obtaining the license. Asaduand Ijoh-Ayuwo (2018) concluded that transportation causes the movement of humans, goods and services from the area of abundance to the areas of scarcity for human development. The increase in traffic on the road and other human factors have led to road crashes resulting in loss of lives and other valuables. The introduction of road signs is to inform or communicate to the driver the nature of the road, what he/she needs to do and to be disciplined on the road. This study has found out that even when the highway drivers understand these signs, they simply ignore them and drive recklessly on the highway.

The result of hypothesis five is also in line with Al-Madani, (2000) who investigated the influence of drivers' comprehension of signs on accidents involvement, citation received and seat belt usage. While knowledge of signs was increasing with seat belt usage, no significant association with accident involvement was observed: even when age was incorporated with the accidents. Similarly, no significant difference with no citation received was observed. Furthermore, those with no speed citations or low number of speed citations were not significantly better than those with high number of speed citations

The result of hypothesis six tallied with Johson and Adebayo (2011) who stated that knowledge plays a great role on determining road traffic safety measures as it is a person with knowledge on road safety can observe road signs and control speed while riding or driving. Also in a study conducted in Nigeria by Johson and Adebayo (2011), it was revealed that compliance with road safety signs is important to reduce accidents. Also, another study conducted in Maharlika Highway in Nueva by Castillo, Macabangon, Garcia III, Felipe, and Villar (2019) revealed that most drivers are aware and have knowledge about road signs and markings but do not strictly abide by it. Traffic signs are very important if we want to reduce road accidents, it is not an option we can ignore. There are several categories of road signs we need to enact as advised by the Vienna Convention on Road Signs and Signals of (1968), part of these signs are danger warning signs, priority signs, prohibitive or restrictive signs, mandatory signs, special regulations signs, direction, position and indication signs, also information, facilities and service signs. These and more signs need to be enacted in Nigeria, it will guide non-local drivers and help to drastically bring down road accident figures in Nigeria (Balogun, 2005). Failure to comply with critical safety legislation for example through drinking and driving, excessive speed, failure to wear seat belts or crash helmets, and failure to observe junction controls is a major contributor to road accidents. Road traffic injuries can be prevented. Experience suggests that an adequately funded lead agency and a national plan or strategy with measureable targets are crucial components of a sustainable response to road safety (Freeman, Freeman and Ware, 2003).

Effective interventions include incorporating road safety features into land-use and transport planning; designing safer roads and requiring independent road safety audits for new construction projects; improving the safety features of vehicles; effective speed management; setting and enforcing laws requiring use of seat-belts, helmets and child restraints; setting and enforcing blood alcohol concentration limits for drivers; and improving post-crash care for victims of road crashes (Agunloye, 2000).

The finding of hypothesis seven is in line with FRSC, (2007) who stated that road traffic situation in terms of the rate of indiscipline and accident on Nigerian road cannot be overemphasized. Literature revealed that there was absence of good driving culture on most Nigerian roads and Highways. According to Balogun, (2006), Nigerian roads are dominated by abundant combination of inexperienced, drunk and overconfident drivers who were unconcerned about the lives of other road users as well as theirs. Many commercial vehicle drivers knew nothing more than the rudiments of moving vehicles and hooting their horns ostensibly to attract the attention of passengers. Maduagwu (1998) corroborated this when he stated that most Nigerian drivers have no regard whatsoever to traffic rules and regulations. They do not observe speed limit or traffic signs on highways, many drivers overtake anywhere and anyhow on roads and highways, while some park their vehicles anyhow on the roads with no thought of the other road users. Hence, there was high rate of road traffic accident and fatalities.

The result of hypothesis eight is in line with Balogun, (2005) who stated that powerful social and economic factors influence and control the normative pattern of the work of the drivers who operate commercial transport services. He stated further that statistics indicate that over 90 percent of traffic accident situations in the country can be attributed to driver errors. The role of these factors in influencing driver safety outcomes has gained increased attention from policy makers in recent times. A typical example is in Scotland whereby an exercise to control drunk driving reduced accident fatalities by 28 percent in 1999. This result is also in line with Haulle and Kisiri (2016) in their study conducted in Tanzania on the impact of road accidents to the community revealed that several and mal practices which done by drivers when riding or driving their vehicles cause road traffic accidents. These included high speed, driving under the influence of alcohol, failure to observe road signs, recklessness and poor adherence to road accidents prevention measures.

> *Woo, traffic law and road signs are for baby drivers. Awa ti n wa moto lati inu oyun, awa ganni traffic laws. One participant said that traffic laws and road sign play a great role in accident occurrence but they are not the sole cause of accident. Ise awon aye ni accident.*

This result is also in tandem with that of Al-Naggar and Al-Jashamy, (2010) in their study which was done in Malaysia revealed that about 93.6% of subjects strongly agreed that fastening seat belts and wearing helmets were significantly important to reducing the severity of injuries when accidents occurred. It was also mentioned that high speed and drivers' non-compliance to road traffic rules and regulation had a significant role in the occurrence of road accidents on roads (Boniface et al., 2016). Chukwu, (2007). Also

corroborated this finding when he stated that the primary causes of most road accidents include acts of indiscipline such as: overloading, reckless driving, impatience, dangerous overtaking, ignorance of traffic rules and regulations among others According to Chukwu (2007) during an interview in punch news paper, many drivers overtake at corners or bends with the hope that no other vehicle is coming from the opposite direction at that moment and at times when they run out of luck, it often results in disasters. This was corroborated by Chidoka in Idoko (2010) that many drivers (most especially commercial vehicle drivers) behave irrationally on roads as they overtake at all odd spots and some even emerge from the side of the road to the main road without bothering about their own lives or those of the other road users.

Conclusion

Based on the findings of this study, it was concluded that there was no significant knowledge, of traffic rules and regulation , no significant positive attitude towards road signs as well as traffic rules and regulations and no significant compliance with road signs as well as traffic rules and regulations among commercial cab drivers in Ibadan North Local Government area of Oyo state, Nigeria. However, there was significant relationship between knowledge and attitude towards traffic rules and regulation, significant relationship was also found between prevalence of accident and knowledge, attitude and compliance with both traffic rules and regulations as well as road signs among commercial cab drivers in Ibadan North Local Government area of Oyo state, Nigeria. Based on the findings of this study, the following recommendations were made:

1. There should be continuous education facilitated by leadership of drivers with assistance of experts to upscale level of knowledge among the commercial drivers on safe driving in the state.
2. Federal Road Safety Corps (FRSC) and other relevant stakeholders as matter of urgency must sanitize the license issuing procedure in such a way that, all prospective drivers must undergo training through where they will learn a lot and be familiarized with all necessary traffic signs before been issued with a driving license. The organisation should also institute refresher programmes for drivers at regular intervals for the drivers to have fresh thoughts of safe driving in their minds.
3. Traffic signs booklets should be made available to every driver at the issuance of driving license and traffick signs on all roads especially in the cities and towns with many vehicles.

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