

Safety Awareness Evaluation of the Behaviour of Niger Delta Drivers

Arisabor Lucky^{1,2} and Atubi A.O¹

¹Department of Geography and Regional Planning, Delta State University, Abraka, Nigeria

²Department of Meteorology and Climate Change, Nigeria Maritime University, Delta State, Nigeria

Corresponding author: **Arisabor Lucky**

Abstract: Drivers' behaviour is more complex when they are using the road. There are no universal guidelines for such behaviour. This research studied the safety awareness evaluation and behaviour of drivers within Niger Delta. For data collection, a cross-sectional research design was adopted. The data were collected through the use of historical/archival data of road traffic crashes from FRSC and the National Bureau of Statistics (NBS), and the use of a Driver Behaviour Questionnaire (DBQ) survey to investigate drivers' Behavioural attitude (BA), Subjective Norms (SN), the perceived Behavioural Control (PBC) in the Niger Delta. The simple random sampling technique was adopted and the selection was based on the long existence of park and registered drivers. The data include extracted accident records containing fatal, serious and minor cases yearly from 1996-2021. The reason for the choice of years includes reliability, consistency, continuity of records and a long range of data. The data generated were analysed using multiple regression and ANOVA. The result obtained revealed that there is a decline in road traffic accidents and fatality index over the last 26 years in the Niger Delta from 24.08% road traffic accidents and 11.58 to 9.94% and 2.23 respectively. The study further revealed that there is a significant difference in drivers' behaviour within the Niger Delta. At $P < 0.05$, there is a statistically significant difference in the driver behaviour of over speeding in the Niger Delta. The drivers in Abia, Akwalbom and Rivers States' over speeding behaviour differs from the way drivers over speed in other states of the Niger Delta. Similarly, there is a significant variation in road traffic accidents within the Niger Delta. The study recommends that supports in control of road safety should have strict regulations and enforcement which would help reduce traffic offences.

Keywords: Safety; Culture; Evaluation; Behaviour; Accident; Awareness

Introduction

The human system is complex, dynamic and interrelated (Ojiakor et al., 2019). There are close associations and influences among varying human behaviours including driving behaviour since the latter influence driving safety. Influencing road user behaviour can be challenging and it is often unclear which behaviour change strategy will be most effective. What makes people behave in a certain manner may also determine to a large extent how behavioural change can be achieved. Goldenbeld et al. (2000) argue that the motivation underlying driver behaviour determines to a large degree how successful behaviour change strategies may be. Road user behaviours vary from new (planned) behaviour to habitual behaviour. Certain habitual road user behaviours can be altered by applying behaviour change strategies in such a way that seizes the underlying motive and therefore enables road users to detect the changes in the traffic situation but risky driving habits will not disappear overnight. When drivers become aware of unsafe driving habits and the associated safety risks, they can identify themselves and correct them.

Influencing attitudes can be done by convincing people of the consequences of behaviour and persuading them, e.g. not to speed, to drive slowly in the vicinity of schools, to drive soberly, to use their seatbelt, and not to use a mobile phone. Interventions or strategies to modify driver behaviour may involve diverse activities such as road safety education and training, mass media campaigns, reward campaigns, and enforcement and rehabilitation programmes. The transfer of knowledge and change of attitude plays a very crucial role in all these programmes. On the other hand, changing behaviour in the long term poses a particular challenge, especially about habitual behaviour. Habits are practised repeatedly without much thinking (Goldenbeld et al., 2000) and therefore relatively automated (Rasmussen, 1983).

This research studied the safety awareness evaluation and behaviour of drivers within Niger Delta. Evans (1991) and Elander et al. (1993) proposed that human factors are composed of two separate components: driving skill (performance) and driving style (behaviour). Driving skill is the information processing, motor and safety skills that are perceived to improve with practice and training. It reflects what drivers can do. While driving style (behaviour) refers to the way drivers choose to drive or usually drive including for example the choice of speed, driving for thrill or fun, attentiveness, lane changing, gap acceptance etc. (Elander et al., 1993). As reported by Evans (1996), driver behaviour has a much greater influence on safety than driver performance. Given that risky driving is a major contributor to road crashes, reducing levels of risky driving would go a long way to reducing the incidence of crashes and injuries on the roads. Doing this would require a good understanding of the factors that influence risky driving among drivers (Fernandes et al., 2006).

Observational studies have been applied in an attempt to investigate driver behaviour. In some of these studies, road users are observed without any intervention by the researcher as they travel through the road system. To explore behaviour and traffic situations, an observational study can focus on the behaviour of all road users at different locations and periods. Ortiz et al. (2017) reported that in 2015, driver distraction contributed to 3447 deaths and 391,000 injuries in the United States. Ortiz et al., in an observational study of road intersections in the United States, stated that driver distraction could be caused by single or multiple distractors. Distractors such as engaging with other road users and the use of cell phones were the two behaviours exhibited the most by road users (Ortiz et al., 2017). Read et al. (2014) observed how pedestrians and cyclists interacted with infrastructure at railway level crossings in Melbourne, Victoria and found that observed behaviour did not always match that expected by the designers of the system, which has implications for the design of level crossings. These studies could be used to record how road users actually interact with particular environmental features and situations and are often used for evaluating the effects of countermeasures or interventions using before-after studies or quasi-experiments. Driver behaviour could also be measured using trained observers. A typical example is the method of observation proposed by Wiener Fahrprobe (Chaloupka&Risser, 1995). This method though widely adopted has been found to contain many lapses. There are concerns about drivers changing their behaviour because of the presence of observers or that observers may not record behaviours correctly and coherently. This is because observers may not be able to describe events adequately or may get distracted at some point. However, it also provides certain information which the driver may not want to report.

Materials and Methods

Study Area

The Niger Delta is a vast coastal plain in the southernmost part of Nigeria where the River Niger drains into the Atlantic Ocean in the Gulf of Guinea (see Fig 1.3). The Niger Delta lies between latitude 3°N and 6°N, and longitude 5°E and 8°E (Ndubuisi& Asia, 2007). About 2,370 square kilometres of the Niger Delta area consist of rivers, creeks and estuaries while stagnant swamp covers about 8,600 square kilometres (Odoemene, 2011). Considered the largest wetland in Africa and among the world's largest, it covers 70000 square kilometres and makes up 7.5% of Nigeria's land mass (Akpabio&Akpan, 2010).

Stretching over 20,000 km² of swamp land in the littoral fringes of the country covered by mangrove forests, swamps, coastal ridges, and forests; it embraces one of the world’s largest wetlands, over 60% of Africa’s largest mangrove forests, and one of the world’s most extensive (Eyinla&Ukpo, 2006; Anthony, 2011). Comprising mainly of a distinct aquatic environment which is very fertile, providing habitat for vast biodiversity and supporting a high population density of people who derive their livelihoods from its rich resource base.

Sampling Design

The study adopted a cross-sectional survey design of both qualitative and quantitative (empirical evidence). The design involves the use of historical/archival data on road traffic crashes from the Federal Road Safety Corp (FRSC) and the National Bureau of Statistics (NBS), and the administration of questionnaires. The research design for this study was adopted by Wimmer and Dominick (2014), Ojiakor et al. (2019), and Odufuwa et al. (2019). The data used for this research was based on both primary and secondary sources. The primary data were acquired from field-generated data through the administration of questionnaires. The secondary data includes numbers and types of crashes, and numbers of road safety violators and types of violations from the various Federal Road Safety Corps (FRSC) offices in the Niger Delta for a period of twenty-six (26) years.

Sampling Framework

Stratified and systematic random sampling techniques were adopted for this study. Here, motor parks in Niger Delta were selected based on long existence, travel direction and destination (major parks). To achieve this study, twenty-seven (27) existing motor parks with a minimum of ten (10) years long term duration of existence in the nine (9) states within the Niger Delta were selected (Table 1). The choice of sampled parks were based on the influx of commuters and travel trip frequency.

Table 1: Study Location and Sample Sites

States	Motor parks		
	Park 1	Park 2	Park 3
Ondo	Akure Motor park	Ultra-Modern park	Iroko motor park
Delta	Effurun motor park,	Warri main garage	Coka junction park
Edo	Ring road motor park	Auchi motor park	Jetu motor park
Imo	Mbaise motor park	Okigwe motor park	Orlu motor park
Rivers	Rumuokoro motor park	Choba motor park	Waterline park
Cross Rivers	Ugep motor park	Cross central park	Ogoja motor park
Akwalbom	Uyo motor park	Oron motor park	Eket central motor park
Abia	Ohafia motor park	Okigwe motor park	Okputong motor park
Bayelsa	Tombia motor park	Ekeki motor park,	Mbiama motor park

Source: Fieldwork, 2021

Method of data collection

Data on traffic crashes and the number of injured and death cases were obtained from each state road safety office respectively. The accident record contained the number of total casualties for the period of 1996-2021 (26 years). The data were extracted from accident records which contained fatal, Serious and Minor cases every year from 1996-2021. The reasons for the choice of years include the choice of 1996 as a base year is because the most recent state created in the Niger Delta was Bayelsa, which was created in 1996 (Table 2), reliability, consistency, continuity of records and a long range of data. Similar reasons for the choice of data have been used by various researchers on drivers’ behaviour and road crashes (Iversen&Rundmo, 2004; Bener&Crundall, 2008; Delhomme et al., 2013; Abayomi, 2016).

Accident data within the Niger Delta were characterized by historical records obtained from archives of the National Bureau of Statistics from 1996-2021 and were provided by the Federal Road Safety Corps (FRSC). The data retrieved contained the fatal, serious and minor case reports of traffic accidents. The reason for the choice of years of an accident is to determine the demi-decadal trend of road traffic accidents (Adesunkanmi et al., 2002; Agbonkhese et al., 2013; Razzaghi et al., 2013; Arthur, 2015; Atubi, 2015; Abayomi, 2016; Balantine, 2019; Atubi, 2020). Also as part of the study, copies of questionnaires were administered. The questionnaire approach was adopted over an observational study due to the costs associated with observational studies and also due to how wide the roads are in the Niger Delta, which makes the manual observation of drivers and other road users quite impossible from a distance. The questionnaires were administered with participant information leaflets and consent forms with the liberty to withdraw from the study at any time, even without reasons. The survey ethical clearance was obtained from the motor park union leaders and participants who were registered drivers in the Niger Delta (Table 3)

Table 2: Registered drivers in the Niger Delta

States	Registered drivers
Ondo	515
Delta	3421
Edo	3858
Imo	1337
Rivers	2815
Cross Rivers	487
Akwalbom	592
Abia	1034
Bayelsa	538
Total	14597

Source: National Bureau of Statistics / Federal Road Safety Corps (FRSC) (2021)

Furthermore, to get an adequate sample size for questionnaire distribution the population for each State were subjected to the Taro Yamane sample size formula as stated below:

$$n = \frac{N}{1 + N * (e)^2}$$

Where; n = the sample size

N = the population size

e = the acceptance sampling error

* 95% confidence level and p = 0.5 are assumed

Where N is 14597

e is 0.05

The population comprised 14,597 registered drivers and a sample size of approximately 405 persons was obtained through the application of Taro Yamane’s sample size selection formula for a finite population (Yamane, 1978). A total of four hundred and five (405) questionnaires were administered to the twenty-seven (27) motor parks. Fifteen questionnaires were administered to drivers in each Motor park. A simple random sampling technique was used in selecting subjects of 405 (15 participants from each park) commercial drivers from which samples drawn are from the nine (9) states of the Niger Delta. The

selected drivers are registered in their respective motor parks and have affiliations with the National Union of Road Transport Workers (NURTW). The theory of planned behaviour was used for the item questions including Behavioural attitude (BA), Subjective Norms (SN), the perceived Behavioural Control (PBC). The survey questionnaire consisted of cognitive variables which could be divided into four sections. Section A featured the respondents’ demographic characteristics with 4 items, section B deals with the driving background history and traffic violations investigated with 7 items, section C deals with drivers’ behaviour investigated with items, while the last section D contains the drivers’ cognitive variable of 7 items. It is a direct-self reported questionnaire model for data collection as the primary source with these drivers’ behaviour and cognitive questions answered with a 5-point Likert scale (0=Never; 1=Rarely; 2=Some of the time; 3=Most of the time; 4= All the time).

Data Presentation and Discussion of Results
Unsafe Driver Behaviours in Niger Delta

Table 3: Ages of Drivers

Ages	Respondent	Percentage (%)
<18	14	3.46
18-25	60	14.81
26-40	224	55.31
41-50	79	19.51
51 & Above	28	6.91
Total	405	100

Source: Fieldwork, 2022

Table 3 shows the ages of drivers within the Niger Delta. It is revealed 55.31% of the drivers in the Niger Delta are aged 26 to 40 years, while 3.46% of the drivers in the Niger Delta are of ages below 18 years. Thus, most of the drivers in the Niger Delta are of younger ages (see Fig 4.1). The ages of the drivers will influence their likelihood to be involved in accidents as opined by Bener and Crundall (2008) noting that young drivers show a tendency towards risks compared with older drivers. Young drivers are often considered novices with a lack of experience and are likely to commit driving offences and get into crashes (De Craen, 2010).

However, Fig 1 shows the age distribution of younger and older drivers in the Niger Delta. Edo and Delta States are the states with the younger drivers, while Bayelsa, Ondo and Cross Rivers are states with the older drivers. This is an indication that Edo and Delta State drivers are less experienced and are likely to be involved in road traffic accidents owing to youthful exuberance. Similarly, Bayelsa, Ondo and Cross Rivers drivers are older drivers who tend to be more careful while driving.

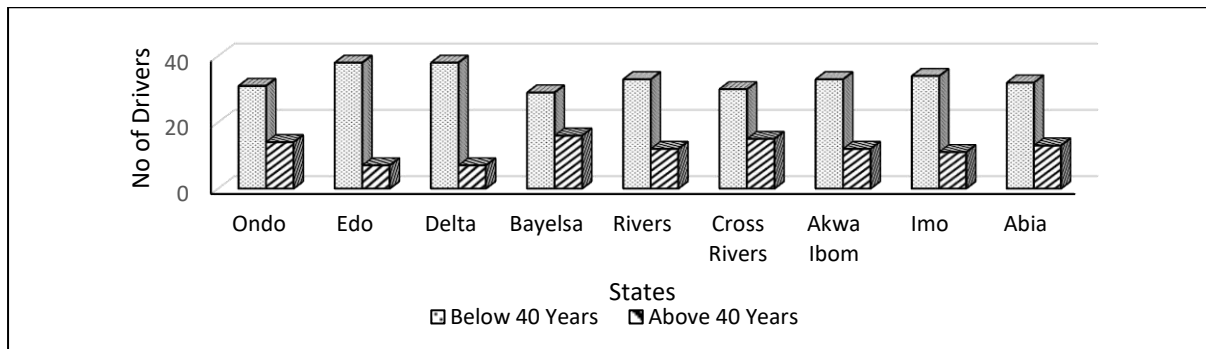


Fig 1: Drivers in the Niger Delta region that falls between the ages of 26-40 years

Table 4: Education levels of the Driver

Education	Respondent	Percentage
Formal	70	17.29
Primary	119	29.38
Secondary	155	38.27
Tertiary	61	15.06
Total	405	100

Source: Fieldwork, 2022

Table 4 shows the educational levels of drivers in the Niger Delta. It is revealed that 38.27% of the drivers in the Niger Delta have acquired secondary education, while 15.06% of the drivers in the Niger Delta have acquired Tertiary education. This implies that most of the drivers have acquired secondary education, thus they can read and write. Despite their educational status in the Niger Delta, they still don't keep to safety traffic rules. Education is fundamental to traffic safety (Garba, 2009; Akinmusere&Oladunmoye, 2011).

However, Fig 2 shows the educational levels of drivers in the Niger Delta. Rivers and Edo States are the states with the most drivers who have attained tertiary education, while Bayelsa and Cross Rivers are the states with the most drivers who have attained formal Education. This is an indication that Edo and Rivers States drivers are more educated and are likely to be well-learned on Road traffic safety, while Bayelsa, and Cross Rivers States drivers are the least educated states with drivers who could hardly understand road traffic safety.

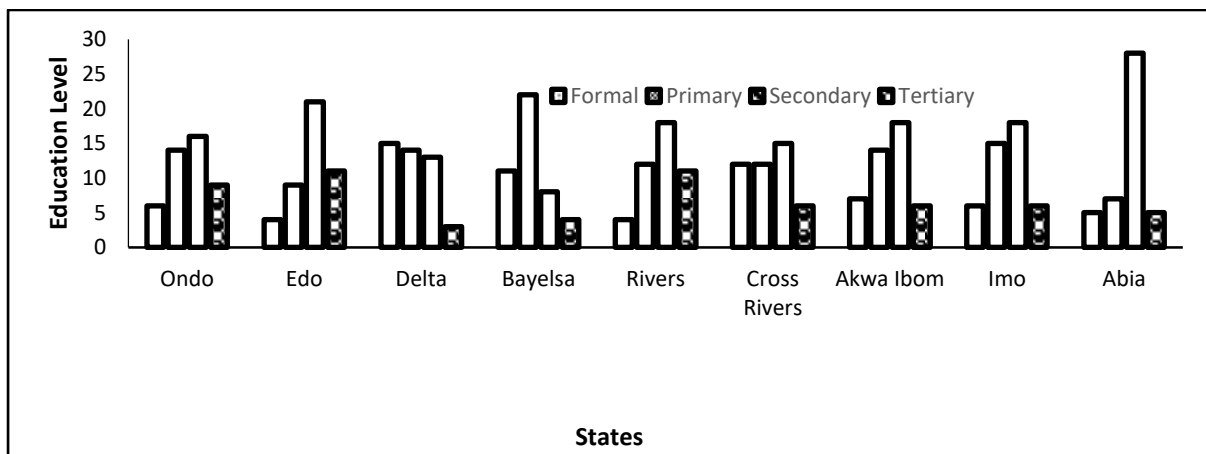


Fig 2: Educational status of Drivers in the Niger Delta region

Table 5: Drivers' Experience

Drivers Experience	Respondent	Percentage
<2 Years	60	14.81
2-5 years	118	29.14
6-10 years	162	40.00
>11 years	65	16.05
Total	405	100

Source: Fieldwork, 2022

Table 5 shows drivers' experience years in the Niger Delta. It is revealed that 40% of the drivers in the Niger Delta have 6-10 years of driving experience, while 14.81% of the drivers in the Niger Delta have below 2 years of experience. In the same vein, 56% of the drivers have had over six years of experience in driving, while 44% of the drivers had below six years of driving experience. Thus, the drivers in the Niger Delta had more driving experience years. This is an indication that they are more cautious and hopefully more conversant with traffic laws. Mayhew et al. (2003), opined that the crash risk of novice drivers decreases with increased driving experience.

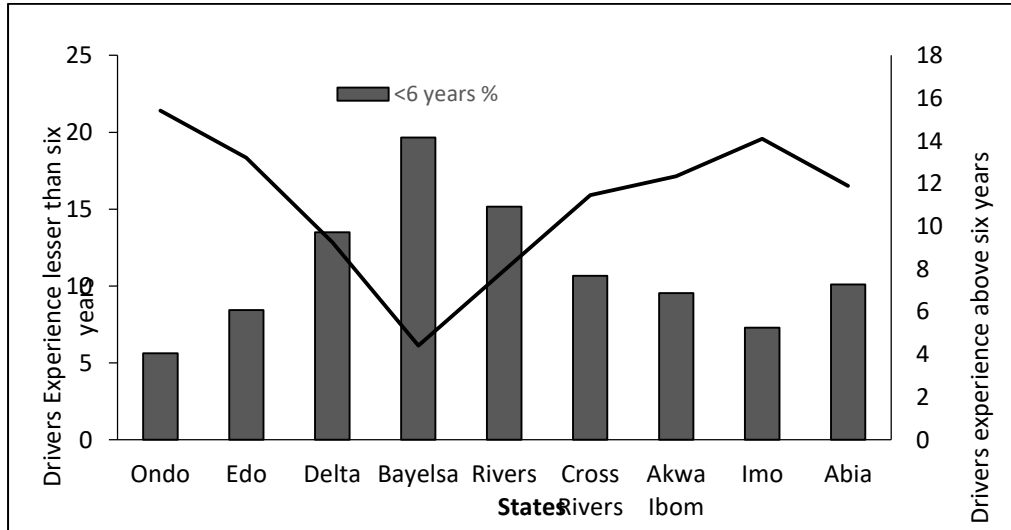


Fig 3: Years of Drivers Experience in the Niger Delta

However, Fig 3 shows the years of drivers' experience in the Niger Delta. Bayelsa and Rivers States are the states with the most drivers who have attained less than three years of experience, while Ondo and Imo are the states with the most drivers who have attained over six years of experience. This implies that drivers in Ondo and Imo states are very cautious and experienced driving.

Table 6: Drivers' trip frequency

Drivers Trip Frequency	Respondent	Percentage
Many times/day	72	17.78
Twice/day	156	38.52
Daily	123	30.37
Weekly	54	13.33
Total	405	100

Source: Fieldwork, 2022

Table 6 shows the drivers' trip frequency in the Niger Delta. It is revealed that 38.52% of the drivers make double trips per day, while 13.33% of drivers cover a trip per week in the Niger Delta. However, the number of drivers that make at least double trips per day is more than that of drivers that make at most a single trip per day in the Niger Delta (see Fig 4). This is an indication that drivers in the Niger Delta tend to make more trips, thus; over-speeding to complete more trips. The consequences of such driving result in enormous accidents.

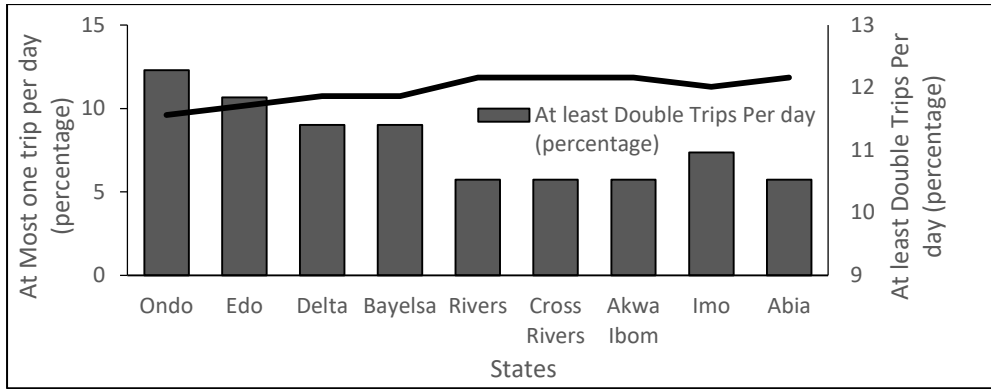


Fig 4: Drivers' Trip frequency by States in the Niger Delta

However, Fig 4 shows the drivers' trip frequencies by State in the Niger Delta. Ondo and Edo States are the states where drivers make at least double trips per day, while Abia and Akwalbom states are states where drivers make at most one trip per day. This implies that drivers in Ondo and Edo states are making more trips than any other state in the Niger Delta. The drivers become prone to fatigue, thereby increasing the rate of accident crashes.

Table 7: Reasons why drivers violate traffic laws

Reasons for Violation	Respondents	Percentage
Pressure from Passenger	174	42.97
Reduction of travel time	135	33.33
Coping bad habits of others	68	16.79
Poor Knowledge of traffic signs	28	6.91
Total	405	100

Source: Fieldwork, 2022

Table 7 shows the reasons why drivers violate traffic laws in the Niger Delta. It is revealed that 42.97% of drivers' violation of traffic law is attributed to pressure from the passenger, 33.33% and 16.79% of drivers' violation of traffic law is attributed to a reduction of travel time and copying bad habits of other drivers respectively, while 6.91% of drivers' violation of traffic law is attributed to poor knowledge of traffic signs. This is an indication that very few numbers of drivers are yet to understand traffic signs in the Niger Delta. Similarly, the reason for the violation of traffic laws in the Niger Delta is as a result of pressure from passengers. This is in line with the views of Iversen&Rundmo (2004) who opined that commuters' pressure contributes to shaping attitudes towards rule-breaking and risk-taking behaviour by drivers.

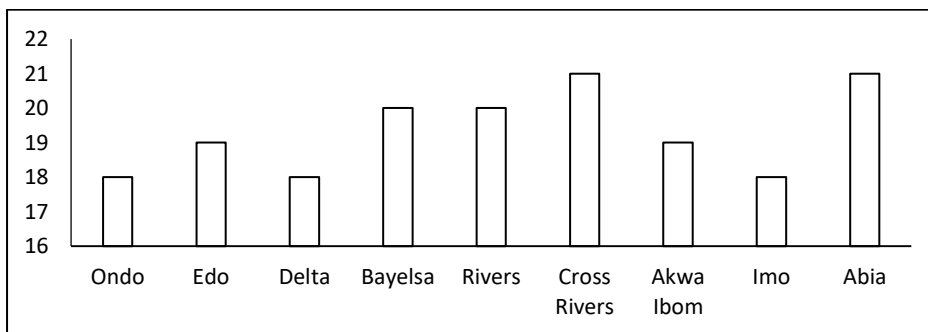


Fig 5: Pressure of Passengers on Drivers in the Niger Delta State

However, the pressure from passengers on drivers in the Niger Delta is high in Cross Rivers and Abia states, while in Ondo, Delta and Imo States, the pressure from passengers on drivers is low (see Fig 5). This is an indication that drivers in the Cross Rivers and Abia states tend to be under pressure by passengers to get to their destination in no time, thus; making drivers in those states ignore traffic laws and signs.

Table 8: Drivers Overtaking at curves

Response	Respondents	Percentage
Never	44	10.86
Rarely	147	36.30
Some of the time	125	30.86
Most of the Time	53	13.09
All the time	36	8.89
Total	405	100

Source: Fieldwork, 2022

Table 8 shows the drivers overtaking at curves in the Niger Delta. It is revealed that 36.30% of the drivers rarely overtake at curves, while 8.89% and 10.86% of the drivers overtakes at curves all the time and never overtakes respectively in the Niger Delta. This is an indication that very few drivers do not overtake at curves in the Niger Delta.

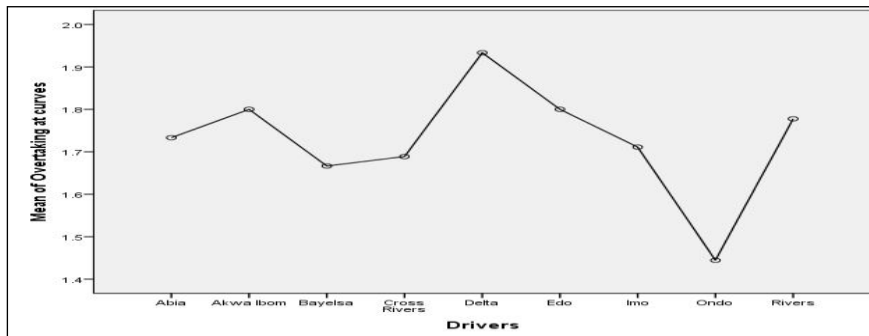


Fig 8: Drivers overtaking at curves in the Niger Delta

However, the drivers in Delta, Edo and AkwaIbom states are driving recklessly at curves in the Niger Delta, while in Ondo and Bayelsa States, the drivers are very careful while driving at curves (see Fig 4.6). This is an indication that drivers in Delta, Edo and AkwaIbom states tend to drive recklessly at curves.

Table 9: Traffic Light Violation

Traffic Light Violation	Respondent	Percentage
Never	34	8.40
Rarely	39	9.63
Some of the time	132	32.59
Most of the Time	141	34.81
All the time	59	14.57
Total	405	100

Source: Fieldwork, 2022

Table 9 shows traffic light violations in the Niger Delta. It is revealed that 34.81% of the drivers violate traffic lights, while 8.40% and 14.57% of the drivers have never violated traffic lights and drivers who violate traffic lights always respectively in the Niger Delta. This is an indication that most of the drivers violate traffic lights in the Niger Delta. Most drivers do not want to wait in line or observe other traffic lights, they drive aggressively (Ogwude, 2010).

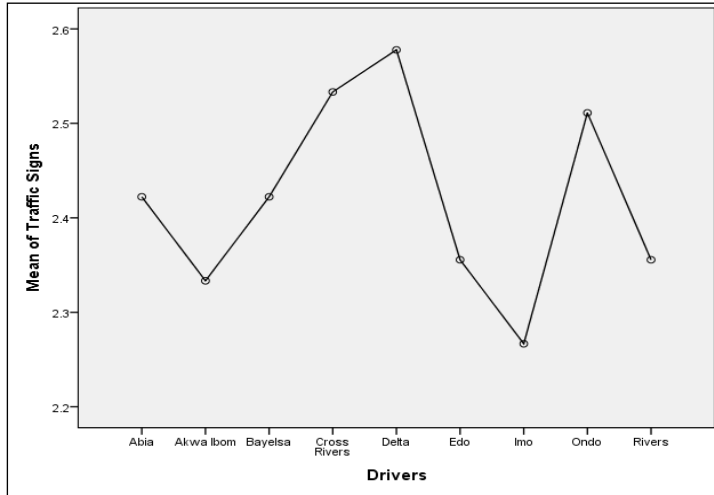


Fig 7: Drivers who violate Traffic Lights in the Niger Delta

However, the drivers in Delta, Cross Rivers and Ondo states violate traffic lights, while drivers in Imo and Akwalbom states are the least states to violate traffic lights (see Fig 7). This is an indication that drivers in Delta, Cross Rivers and Ondo states tend to disobey traffic lights.

Table 10: Use of Seat Belt

Seat Belt	Frequency	Percentage
Never	144	35.56
Rarely	122	30.12
Some of the time	65	16.05
Most of the Time	42	10.37
All the time	32	7.90
Total	405	100

Source: Fieldwork, 2022

Table 10 shows drivers who violate the use of seat belts in the Niger Delta. It is revealed that 35.56% of the drivers have never used seat belts, while 7.90% of the drivers use seat belts in the Niger Delta. This is an indication that over 60% of the drivers hardly ever use seat belts in the Niger Delta. This finding is in line with the works of Zambon et al. (2008) who observed a high non-compliance rate of seatbelt usage in Nigerian states.

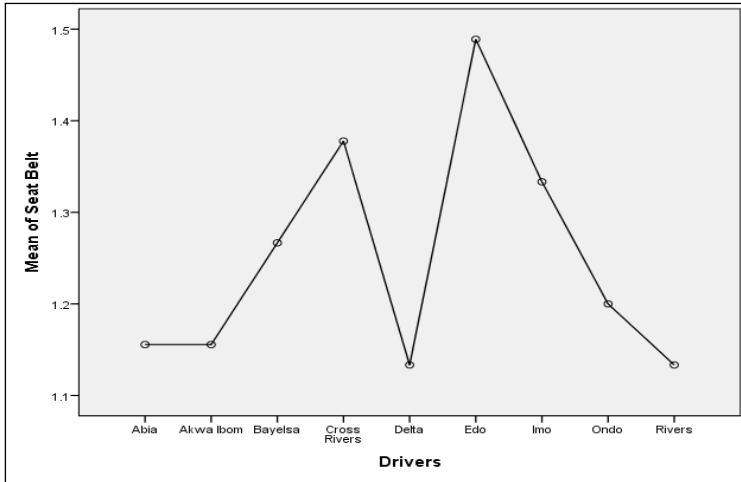


Fig 8: Drivers' use of seat Belts in the Niger Delta

However, the drivers in Edo and Cross Rivers states use seat belts the most, while drivers in Delta and Rivers states are the least states to use seat belts (see Fig 8). This is an indication that drivers in Delta and Rivers states tend to obey the use of seat belts.

Table 11: Overspeeding

Over Speeding	Frequency	Percentage
Never	21	5.19
Rarely	35	8.64
Some of the time	171	42.21
Most of the Time	141	34.82
All the time	37	9.14
Total	405	100

Source: Fieldwork, 2022

Table 11 shows drivers who indulge in overspeeding in the Niger Delta. It is revealed that 42.21% of the drivers now and then are involved in overspeeding, while 5.19% of the drivers have never indulged in overspeeding in the Niger Delta. This is an indication that most of the drivers are involved in overspeeding in the Niger Delta. Speeding decreases the chance to avoid a collision (Svenson et al., 2012).

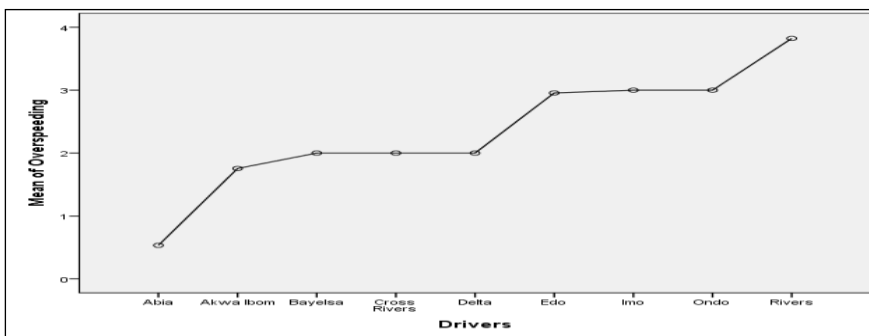


Fig 9: Drivers who are involved in overspeeding in the Niger Delta

However, the drivers in Rivers are fond of overspeeding the most in the Niger Delta, while drivers in Abia and Akwalbom states, hardly are involved in overspeeding in the Niger Delta (see Fig 9). This is an indication that drivers in Abia and Akwalbom tend to drive safely with the recommended speed limit. This reduces the related risk of vehicular accidents (Aaarts& Van Schagen, 2006; Agbonkhese et al., 2013; Siyan et al., 2019; Atubi, 2021; Olawole et al., 2022).

Table 12: Drivers making calls while driving

Making Calls While Driving	Respondent	Percentage
Never	33	8.15
Rarely	129	31.86
Some of the time	141	34.81
Most of the Time	58	14.32
All the time	44	10.86
Total	405	100

Source: Fieldwork, 2022

Table 12 shows drivers who indulge in making a call while driving in the Niger Delta. It is revealed that 34.81% of the drivers are some of the times involved in making calls while driving, while 8.15% of the drivers have never indulged in making calls while driving in the Niger Delta. This is an indication that most of the drivers are involved in making calls while driving in the Niger Delta. The use of mobile phones is a distraction which can adversely affect road traffic safety (Woo & Lin, 2001; Eze, 2012; Agbonkhese et al., 2013; Olubiyi et al., 2017).

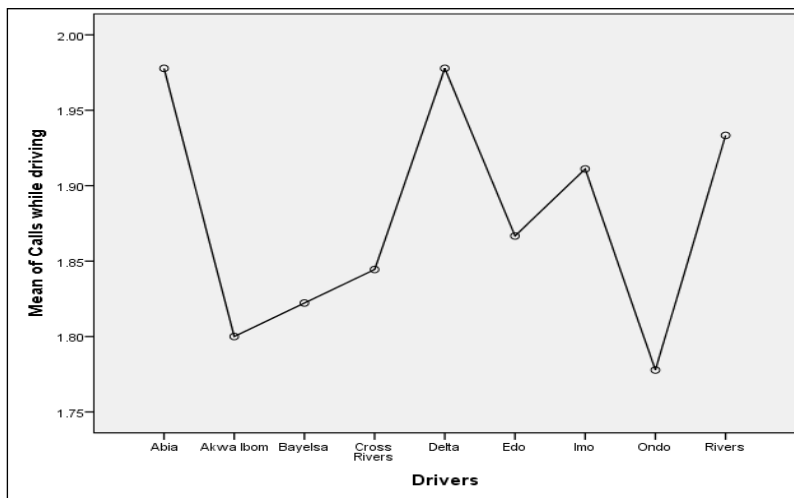


Fig 10: Drivers making calls while driving in the Niger Delta

However, the drivers in Abia, Delta and Rivers states indulged mostly in making a call while driving, while drivers in Ondo and Akwalbom states are the least states to be involved in making a call in the Niger Delta (see Fig 4.10). This is an indication that drivers in Abia and Akwalbom tend to drive safely without making a call. This finding corroborates the works of Olubiyi et al. (2017), noting that most drivers in Nigeria admit to the use of their mobile phones while driving.

Table 13: Drivers Drinking Habits

Drinking Habits	Respondent	Percentage
Never	24	5.92
Rarely	37	9.15
Some of the time	185	45.68
Most of the Time	124	30.61
All the time	35	8.64
Total	405	100

Source: Fieldwork, 2022

Table 13 shows drivers who indulge in drunk driving habits in the Niger Delta. It is revealed that 45.68% of the drivers are some of the times involve in drunk driving habits, while 5.92% of the drivers have never indulged in the drunk driving habit in the Niger Delta. However, most of the Drivers in the Niger Delta are involved in drunk driving habits. In the same vein, Ukoji (2014) opined that drunk driving is one common driver factor that accounts for more crashes in Nigeria as well as the Niger Delta.

However, the drivers in Rivers state indulged mostly in the drink while driving, while drivers in Cross Rivers and Akwalbom states are the least states where drivers involved in drinking while driving in the Niger Delta (see Fig 11). This is an indication that drivers in Rivers state tend to drink while driving the most. Drinking while driving is a problem for drivers’ thus hampering their quick response to curves and bends while driving (World Bank, 2018).

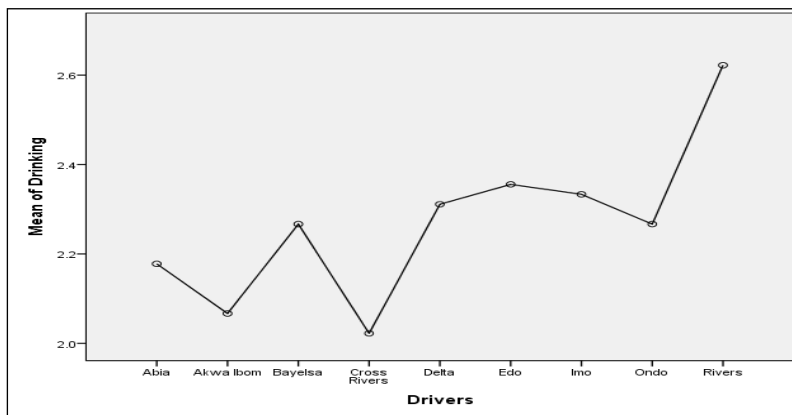


Fig 11: Drivers’ drinking habits in the Niger Delta

Table 14: Disobeying Traffic Rules

Disobeying Traffic Rules	Respondents	Percentage
Never	27	6.67
Rarely	46	11.36
Some of the time	127	31.36
Most of the Time	140	34.57
All the time	65	16.04
Total	405	100

Source: Fieldwork, 2022

Table 14 shows drivers who indulge in disobeying traffic rules in the Niger Delta. It is revealed that 34.57% of the drivers are most of the time involved in disobeying traffic rules, while 6.67% of the drivers have never indulged in disobeying traffic rules in the Niger Delta. However, most of the drivers in the Niger Delta are involved in disobeying traffic rules. This is in line with Uzondu and Ikeogu (2013) assertion that most traffic accidents occur in Nigeria owing to the failure of drivers to disobey traffic rules and regulations.

However, the drivers in Delta, Bayelsa and Ondo states indulged mostly in disobeying traffic rules, while drivers in Abia and Imo states are the least states where drivers are hardly involved in disobeying traffic laws in the Niger Delta (see Fig 12).

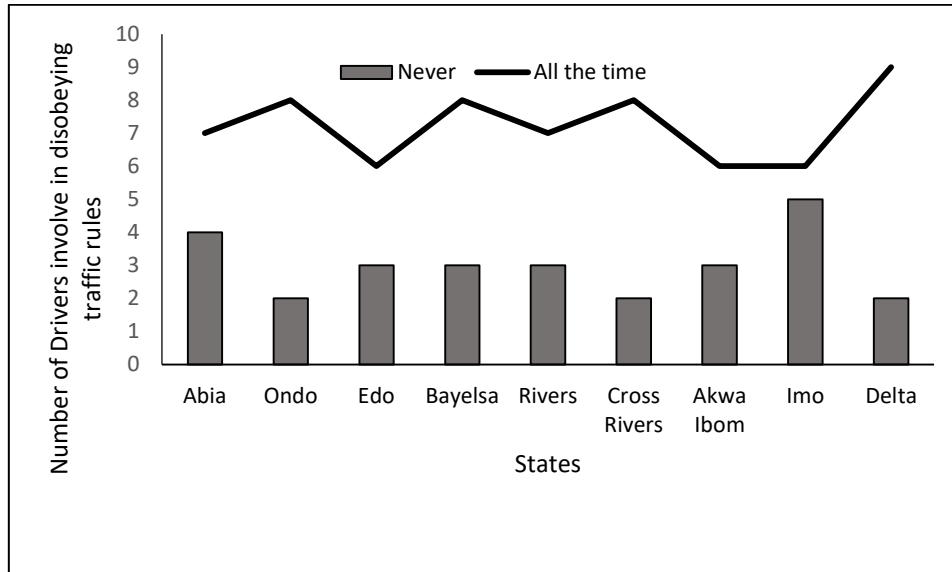


Fig 12: Drivers disobeying traffic rules in the Niger Delta

Table 15: Impatient with other drivers driving slow

Impatient with Slow Driving	Respondents	Percentage
Never	24	5.92
Rarely	34	8.39
Some of the time	82	20.25
Most of the Time	102	25.19
All the time	163	40.25
Total	405	100

Source: Fieldwork, 2022

Table 15 shows drivers who are impatient with other drivers driving slowly in the Niger Delta. It is revealed that 40.25% of the drivers are impatient with other drivers driving slow, while 5.92% of the drivers are patient with other drivers driving slow in the Niger Delta. However, most of the drivers in the Niger Delta are very impatient with other drivers driving slowly. Ogwude (2010) opined that drivers are generally impatient and aggressive leading to accidents on the highways

However, the drivers in Imo and Delta states are very impatient with other drivers driving slowly, while drivers in Bayelsa and Akwalbom states are very patient with other drivers driving slowly in the Niger Delta (see Fig 13).

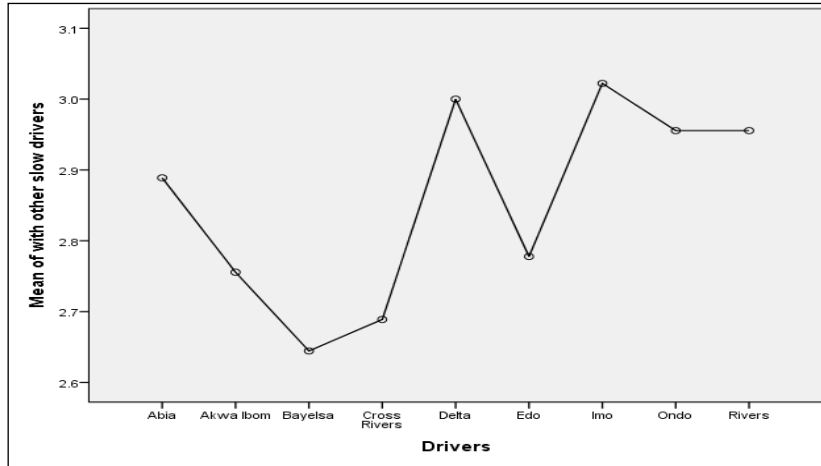


Fig 13: Drivers impatient with other drivers driving slow

Table 16: ANOVA on the differences in drivers' behaviour within the Niger Delta

		Sum of Squares	df	Mean Square	F	Sig.
Overtaking at curves	Between Groups	6.346	8	.793	.649	.736
	Within Groups	483.778	39	1.222		
	Total	490.123	40			
Overspeeding	Between Groups	332.978	8	41.622	588.657	.000
	Within Groups	28.000	39	.071		
	Total	360.978	40			
Disobeying Traffic Signs	Between Groups	3.842	8	.480	.397	.922
	Within Groups	478.800	39	1.209		
	Total	482.642	40			
Alcohol Drinking	Between Groups	11.175	8	1.397	1.552	.138
	Within Groups	356.489	39	.900		
	Total	367.664	40			
Making Calls while driving	Between Groups	2.005	8	.251	.204	.990
	Within Groups	487.067	39	1.230		
	Total	489.072	40			
Seat Belt	Between Groups	5.768	8	.721	.450	.890
	Within Groups	634.044	39	1.601		

	Total	639.812	40			
Impatient with other slow drivers	Between Groups	7.116	8	.890	.606	.773
	Within Groups	581.289	39	1.468		
	Total	588.405	40			

Table 16 shows the statistical analysis of the difference in drivers' behaviour within the Niger Delta. At $P < 0.05$, the model is significant. Therefore, there is a statistically significant difference in the driver behaviour of overspeeding in the Niger Delta. In the Turkey HSD post hoc test, there are values lesser than 0.05 (see table 17).

Table 17: Turkey HSD Post Hoc Test

Dependent Variable	Location Drivers	Location Drivers	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Over speeding	1 Abia	2 AkwaIbom	-1.222*	.056	.000	-1.40	-1.05
		3 Bayelsa	-1.467*	.056	.000	-1.64	-1.29
		4 Cross Rivers	-1.467*	.056	.000	-1.64	-1.29
		5 Delta	-1.467*	.056	.000	-1.64	-1.29
		6 Edo	-2.422*	.056	.000	-2.60	-2.25
		7 Imo	-2.467*	.056	.000	-2.64	-2.29
		8 Ondo	-2.467*	.056	.000	-2.64	-2.29
		9 Rivers	-3.289*	.056	.000	-3.46	-3.11
		2 AkwaIbom	1 Abia	1.222*	.056	.000	1.05
	3 Bayelsa		-.244*	.056	.001	-.42	-.07
	4 Cross Rivers		-.244*	.056	.001	-.42	-.07
	5 Delta		-.244*	.056	.001	-.42	-.07
	6 Edo		-1.200*	.056	.000	-1.37	-1.03
	7 Imo		-1.244*	.056	.000	-1.42	-1.07
	8 Ondo		-1.244*	.056	.000	-1.42	-1.07
	9 Rivers		-2.067*	.056	.000	-2.24	-1.89
	3 Bayelsa		1 Abia	1.467*	.056	.000	1.29
		2 AkwaIbom	.244*	.056	.001	.07	.42
		4 Cross Rivers	.000	.056	1.000	-.17	.17
		5 Delta	.000	.056	1.000	-.17	.17
		6 Edo	-.956*	.056	.000	-1.13	-.78
		7 Imo	-1.000*	.056	.000	-1.17	-.83
		8 Ondo	-1.000*	.056	.000	-1.17	-.83
		9 Rivers	-1.822*	.056	.000	-2.00	-1.65
		4 Cross Rivers	1 Abia	1.467*	.056	.000	1.29
	2 AkwaIbom		.244*	.056	.001	.07	.42

		3 Bayelsa	.000	.056	1.000	-.17	.17
		5 Delta	.000	.056	1.000	-.17	.17
		6 Edo	-.956*	.056	.000	-1.13	-.78
		7 Imo	-1.000*	.056	.000	-1.17	-.83
		8 Ondo	-1.000*	.056	.000	-1.17	-.83
		9 Rivers	-1.822*	.056	.000	-2.00	-1.65
	5 Delta	1 Abia	1.467*	.056	.000	1.29	1.64
		2 AkwaIbom	.244*	.056	.001	.07	.42
		3 Bayelsa	.000	.056	1.000	-.17	.17
		4 Cross Rivers	.000	.056	1.000	-.17	.17
		6 Edo	-.956*	.056	.000	-1.13	-.78
		7 Imo	-1.000*	.056	.000	-1.17	-.83
		8 Ondo	-1.000*	.056	.000	-1.17	-.83
		9 Rivers	-1.822*	.056	.000	-2.00	-1.65
	6 Edo	1 Abia	2.422*	.056	.000	2.25	2.60
		2 AkwaIbom	1.200*	.056	.000	1.03	1.37
		3 Bayelsa	.956*	.056	.000	.78	1.13
		4 Cross Rivers	.956*	.056	.000	.78	1.13
		5 Delta	.956*	.056	.000	.78	1.13
		7 Imo	-.044	.056	.997	-.22	.13
		8 Ondo	-.044	.056	.997	-.22	.13
		9 Rivers	-.867*	.056	.000	-1.04	-.69
	7 Imo	1 Abia	2.467*	.056	.000	2.29	2.64
		2 AkwaIbom	1.244*	.056	.000	1.07	1.42
		3 Bayelsa	1.000*	.056	.000	.83	1.17
		4 Cross Rivers	1.000*	.056	.000	.83	1.17
		5 Delta	1.000*	.056	.000	.83	1.17
		6 Edo	.044	.056	.997	-.13	.22
		8 Ondo	.000	.056	1.000	-.17	.17
		9 Rivers	-.822*	.056	.000	-1.00	-.65
	8 Ondo	1 Abia	2.467*	.056	.000	2.29	2.64
		2 AkwaIbom	1.244*	.056	.000	1.07	1.42
		3 Bayelsa	1.000*	.056	.000	.83	1.17
		4 Cross Rivers	1.000*	.056	.000	.83	1.17
		5 Delta	1.000*	.056	.000	.83	1.17
		6 Edo	.044	.056	.997	-.13	.22
		7 Imo	.000	.056	1.000	-.17	.17
		9 Rivers	-.822*	.056	.000	-1.00	-.65
	9 Rivers	1 Abia	3.289*	.056	.000	3.11	3.46
		2 AkwaIbom	2.067*	.056	.000	1.89	2.24
		3 Bayelsa	1.822*	.056	.000	1.65	2.00
		4 Cross Rivers	1.822*	.056	.000	1.65	2.00

		5 Delta	1.822*	.056	.000	1.65	2.00
		6 Edo	.867*	.056	.000	.69	1.04
		7 Imo	.822*	.056	.000	.65	1.00
		8 Ondo	.822*	.056	.000	.65	1.00
*. The mean difference is significant at the 0.05 level.							

These values are 0.00, 0.01, and 0.00. These values correspond with the comparison between the differences in drivers' behaviour of overspeeding in Abia, Akwalbom and Rivers States but differ from that of other States in the Niger Delta. Succinctly, drivers' overspeeding in Cross Rivers, Delta and Bayelsa states are not significantly different but they are, however, significantly different from that of Abia, Akwalbom and Rivers states. Moreso, the drivers' behaviour of overspeeding in Edo, Imo and Ondo States are not significantly different but they are, however, significantly different from that of Abia, Akwalbom and Rivers state. The drivers' behaviour of overspeeding in Abia, Akwalbom and Rivers States differs from the way drivers over speed in other states of the Niger Delta.

Conclusion

The study examined the influence of road safety culture on drivers' behaviour in the Niger Delta. Behavioural change processes are more complicated than simply telling people how to think or what to do when they are using the road. There are no universal guidelines to change behaviour, but different groups of people need to be approached in different ways to optimise the likelihood of affecting behaviour change. The models and theories are important as they help to identify how to target initiatives aimed at influencing behaviour. In addition, understanding how people perceive risk and how they behave accordingly is critical in designing road safety countermeasures that are effective in reducing road accidents. This thesis investigated the road safety culture, focusing on drivers' behaviour and how behavioural change or modification can be achieved. The findings from this study show a high non-compliance rate to traffic safety rules and laws by drivers in the Niger Delta.

Policy Implications

Based on the observations, it is suggested that there is a need to strengthen the argument for an expanded and better study of road safety culture and drivers' behaviour. Several research gaps have to be addressed. There has to be continued and more detailed work on the road safety culture and drivers' behaviour in Nigeria at large. Future research could mitigate this issue by observing all road users including those not involved in accidents and comparing unsafe behaviours across each group. It is suggested that future studies should involve more road safety agencies to gain more understanding of their responsibilities and their views on road safety and general transport management. While we understand that the lack of a drivers' registry or list in the region could sometimes make the direct selection of drivers impossible. Future studies could collaborate with the state drivers' union and the road safety corps to supply them with a list of drivers.

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