

# Perception of Automobile Road Users on the Determinant and Implication of Road Traffic Accident

<sup>1</sup>ubani, A.C & <sup>2</sup>adejare, O.G.

<sup>1</sup>Mechanical Engineering Department, Abia State Polytechnic Aba, Abia State.

<sup>2</sup>Department of Metalwork Education, Federal College of Education (Technical), Umunze in Affiliation with Nnamdi Azikiwe University, Awka, Anambra State.

Submitted: 01-08-2022

Revised: 02-08-2022

Accepted: 08-08-2022

## ABSTRACT

This study investigates determinant factors responsible for road accidents in Nigeria. However, unlike developed or high-income countries, many developing countries have made very little progress towards addressing this problem. Nonetheless, there are ways to strengthen the reduction of injured persons due to road accident that will help to lower the toll from road traffic accidents. The purpose of this study was to elucidate ways to accomplish these goals in the context of Nigeria. From Research it was reported that due to reckless driving by some road users many lives, properties and human resources have been lost to road accidents in Nigeria. It was also observed that lack of routine repairs, maintenance, mechanical failure, drug abuse, violation of traffic signs and the existence of potholes are responsible for crashes on the highway. It was recommended that the relevant ministry and its agencies should always effect repairs on bad portions of the highways. Driver's education and sensitization should always be strengthened and enforced to ensure compliance for proper driving habits and law enforcement agency responsible for checkmating road offenders should sit up to their responsibility to secure lives and properties on the road and possibly arrest any road user that go against traffic laws.

## I. INTRODUCTION

Accidents are part of the constant trial and error process of living and they result from the fumbles that start with childhood dreams and continue right through to the forgetfulness or confusion of old age. In other words, accidents can occur at any time during the life span of a man. Accident can be defined as unplanned or unintended occurrence that interrupts or interferes with a work activity". Many accidents, in fact, the

great majority, yield no injury and receive only passing attention, if any, unless they do considerable damage or are otherwise costly (Agbeboh, 2013). Motor vehicle crashes are the leading cause of death in adolescents and young adults (Onokala, 2009) and of the estimated 10,000 road deaths occurring annually worldwide, 74% are in developing countries (World Bank, 2019). Dramatic increases in the proportion and absolute number of traffic fatalities have been witnessed in a number of developing countries, while they decreased by more than 20% in industrialised nations (Ross et al, 1991). In both Nigeria (Oluwasanmi, 2013) and Kenya (NRSC, 1992), for example, a fivefold increase in traffic related fatalities was observed over the last 30 years. African and Asian countries, with relatively low vehicle densities, are experiencing substantially higher fatality rates per 20,000 vehicles than the industrialised European and North American States (WHO, 2014).

Road accident is most unwanted thing to happen to a road user, though they happen quite often. The most unfortunate thing is that we don't learn from our mistakes on road. Most of the road users are quite well aware of the general rules and safety measures while using roads but it is only the laxity on part of road users, which cause accidents and crashes (Alhassan, 2013). Main cause of accidents and crashes are due to human errors.

Road accidents appear to occur regularly at some flash points such as where there are sharp bends, potholes and atbad sections of the highways. At such points over speeding and reckless drivers usually find it very difficult to control their cars, which then result to fatal traffic accidents, especially at night (Atubi, 2012). Different cases of fatal road traffic accidents are reported on daily basis on Nigeria roads especially highways.

Various categories of vehicular traffic law violations are also involved in these fatal road traffic accidents in Nigeria. Many researchers in have investigated cases of road traffic accidents and also collate road traffic accident datas and impact assessment of road safety campaign (Chen, 2010).

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 (Ogunsanya, 1991). The 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, 2012). 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, 2012).

A good transportation system is very essential for rapid economic, industrial and cultural growth of any country. The five modes of transportation are road, rail, water, air and pipeline and they complement one another. The role of transport in spatial and economic development has been recognized in advanced and developing countries. The various modes of transport have their specific roles and service functions. In most cases, however, they serve complementary roles (FRSC, 2010). Road transport in particular has played a prominent role in bridging the gap between producers and consumers, and production zones and consumption zones. Despite its importance in economic development, road transport has its own negative consequences. These include air and water pollution, noise and vibration, visual intrusion, distortion in bio-diversity, road accidents etc. (World Bank, 2014).

Traffic crashes also impact on the economy of developing countries at an estimated cost of 1-2% of a country's GNP per annum, as a result of morbidity, mortality and property – related costs (Atubi, 2012). Human error is estimated to account for between 64 and 95% of all causes of traffic crashes in developing countries (Sumaila, 2013). A high prevalence of old vehicles that often carry many more people than they are designed to

carry, lack of safety belt and helmet use, poor road design and maintenance and the traffic mix on roads are other factors that contribute to the high rate of crashes in less developed countries.

Thirty-eight studies described casualties by the category of road-user. Pedestrian fatalities were highest in 75% of the studies accounting for between 41 and 75%, followed by passengers (38-51%) in 62% of the studies. Drivers were third in 55% of the studies, and never ranked first in any country. Pedal and motorcyclists killed ranked first in India (Mohan and Bawa, 1985; Sidhu et al 1993) and Surinam (CAREC, 1987). Passengers ranked first amongst the non-fatal casualties reported in 14 studies. Pedestrians were second, with the exception of one hospital based study by Dessie and Larson (1991) in Addis Ababa that reported a very high proportion of pedestrians, accounting for 91% of all traffic casualties.

Road accident is one of the leading causes of death in so many countries of the world today. Most of the industrialized nations witnessed high rate of road accidents due to bad road and flouting of road safety signs by the motorists (Wikipedia, 2011). Road accident is unwanted hazard usually happened to road users. The most unfortunate thing is that many road users don't learn from their mistakes on the road. Some of the road users are not aware or do not observe the general rules and safety measures while using roads (FMI, 2013). Laxity on the part of some road users is another factor which causes accidents and crashes on the road.

It is the costly accident involving deaths, disabilities, injuries, material lost etc, which are recorded and discussed (Oginni, 2008). Traffic crashes and their associated injuries and fatalities are a world public health problem. Road accidents have claimed an estimated thirty (50) million lives in the last one hundred (100) years and, everyday about three thousand (5,000) people die and thirty thousand (40,000) are seriously injured on the world's roads (Murray and Lopez, 1996). In Europe, forty thousand (40,000) people die in traffic accidents every year and a further one million seven hundred thousand (1.7 million) people are injured, directly costing some one hundred and sixty (160) billion Euros (European Commission, 2013). For male adults aged between fifteen (14) and forty four (46), road accidents are the main causes of death, and some projections indicate that by year 2030 road traffic crashes will have moved from ninth (9th) to second (2nd) place in the world ranking of the burden of disease (Murray and Lopez, 1997).

Atubi (2010c) examined the variation

patterns of RTA in Lagos state using data for 32 years (1970-2001) and observed the number and type of vehicles involved in road traffic accidents. The study revealed that private cars, buses and taxis were more prone to accidents in Lagos State. The 16 Harmonies as for the selected Local Government Areas considered contribute above 90% of the total variance in the time series. This means that 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. Also, the dominant cycles of road traffic accidents observed in this study area have periodicities of 32.00 and 16.00 years with the most dominant being 32 years. This means that the dominant and strongest road traffic accident pattern of Lagos State repeats itself every 32 years. Various road safety strategies and counter measures have been used at different stages of network development. This method of seeking to prevent road accident mainly involves conscious planning, design and operations of roads. One of the most important factors in this method is the systematic identification and treatment of hazardous locations. The main objective of the study is to develop a model necessary to identify these hazardous locations on roads commonly termed as black spots. In general, the various factors that cause accidents can be broadly categorised into road related, vehicle related and driver related.

According to Filani (2007), Nigeria, losses billion of dollars yearly to road crashes. The amount translates to about twelve per cent of Gross Domestic Product and about seventeen per cent of the current foreign reserve. He also lamented that many of the people who died as a result of road crashes were men in their active years between 25 years and 45 years. "There are a lot of social problems arising from road crashes including economic and health issues. The number of people in hospital having broken legs and arms from road crashes are major losses in our society". Chen (2010) observed that youths were involved in about sixty five per cent of road accidents. According to him, it is sad that youths between the ages of 15 years and 45 years, who also are in their productive years, are often killed in most of the road accidents. This indeed, is a great challenge toward achieving the vision 2030". An increasing number of road accidents not only mean a considerable loss of human lives but also important economic costs to society. According to the Transport Road Research Laboratory (TRL), traffic accidents annually cost developing countries about US\$53billion (TRL, 1995). In Great Britain, estimates show that each

fatal accident costs US\$2,665,000 while a serious casualty costs US\$310,000 (DETR, 2002). What these show is that traffic safety remains an important public and social priority issue as well as an economic challenge. As a matter of fact, economic losses in terms of loss of life and life quality, property damage and loss of output due to temporary incapacitation is between one (1) and two (2) percent of Gross Domestic Product (GDP) in OECD countries or up to 4 percent if estimates are based on the 'willingness to pay' methodology (Barnett et al, 1999; Jara Diaz et al, 2000). In Nigeria, the genesis of road traffic accidents is intricately linked with road transport development in the country. Road traffic accidents started in Nigeria in 1906 in Lagos. However, whether at the global or national level, human and material resources vital for development process are destroyed in road crashes. Apart from the social costs of road accidents in terms of pain, grief and suffering, the economic effects are many. The economic impact include output loss due to death and injury, replacement cost of damaged vehicles, roads and road accessories, opportunity cost of delays in traffic hold ups and accident clearing, cost of 'goods in transit' destroyed in the accident etc (Adekunle, 2010).

Some of the common errors which usually results to accidents and crashes on the road are:

#### **Over Speeding:**

Over speeding is responsible for some of the fatal accidents that occur on the road. Research has shown that increase in speed multiplies the risk of accident and severity of injury during accident. Faster vehicles are more prone to accident than the slower one and the severity of accident. Most vehicles on high speed are very difficult to control and needed greater distance to stop or even fail brake when the brake is applied appropriately while a moderate speeding vehicle or slower vehicle comes to halt immediately brake is applied (FRSC, 2010). An over speeding vehicle will have greater impact during the crash and hence will cause more death and injuries to road users.

#### **Drinking and Driving:**

Many drivers who drive on the influence of alcohol and drugs are prompt to road accident especially if the alcohol or drug is abused. Drugs and Alcohol abuse may cause dizziness and reduces concentration while driving. Overdose of alcohol always decreases reaction time of a human body due to the configuration of the human brain that controls the functions of the human body. Some human parts like the Limbs react more to the instructions from human brain. It hampers vision

due to dizziness. Overdose of alcohol dampens fear and incite humans to take risks.

#### **Use of Mobile Phone of the road**

A lot of road accidents are caused by lack of concentration and distraction from mobile phone by the road users. Talking on phone occupies major portion of brain and the smaller part handles the steering. The division in the function of the brain hampers reaction time, concentration and ability of judgments while driving. Most of the death on the road today is caused by mobile phones.

#### **Too Many Potholes on the Road**

Nigeria roads are the worst and most unfortunately roads to plight with vehicles in the world. Potholes are bowl-shaped depression in the roads due to wear and tear and further deepened by the rain water. Motorists try to avoid these potholes and end up risking their lives. Potholes not only cause strain on the spinal and overall health of the motorists when they drive, but they also ruin the vehicles' suspension and cause road accidents quite often.

#### **Poor lighting on roads and highways**

There is a great lack of proper lighting on the Nigeria roads and express highways. Lack of lighting on the road usually cause the decrease of visibility to the drivers. This may lead to fatal accidents on the highways.

#### **Disobedient to Road Signs**

Many road users today thought that observing and waiting for red light signal is a waste of time. Research has shown that proper observation of road traffic signals saves time, life and make road users arrived safely to their destination. Red light offenders usually jeopardize their lives and those other road users. This act by one driver incites other driver to attempt it and finally causes chaos at crossing. This chaos at intersection is the main cause of traffic jams. Eventually everybody gets late to their destinations.

#### **Disobedient to the Use of Seat Belt and Helmet**

Disobedient to the use of seat belt in a car and wearing of helmet on motor cycles is very dangerous while driving because it may lead to serious injury while driving. Wearing seat belts and helmets doubles the chances of survival in a serious accident. Safety Gears keep you intact and safe in case of accidents. Two wheeler deaths have been drastically reduced after use of helmet has been made mandatory. One should use safety gears of prescribed standard and tie them properly for optimum safety. The researchers tend to investigate the mechanical problems perceived as significant determinant of road traffic accidents among automobile road users, the effects of disobedience

to road traffic signals and safety rules by the road users in Nigeria.

#### **Types of Mechanical Failures That Cause Car Accidents in Nigeria**

Car accidents can be caused by a variety of factors such as mechanical failure. Mechanical failures cause some car accidents. A tire may blow out, causing a driver to swerve into another vehicle; or the brakes may fail, resulting in a multi-vehicle collision. When mechanical failures occur in a vehicle, they present a real danger to the driver and others on the road. According to Federal Road Safety Corp, mechanical failures contributed to over 5 million severe car accidents during a period of five years. In 50,000 of those cases, mechanical issues that could have been prevented with proper maintenance caused serious car accidents. The following are the most common mechanical issues listed as critical causes for devastating car accidents in Nigeria.

#### **Brake Problems**

Brake problems account for about 30% of car accidents caused by mechanical failure. In some cases, the brake lines are faulty, or they become worn. When there are leaks within brake lines, they can allow brake fluid to drain, compromising the brakes' performance. In other cases, the anti-lock brake systems are designed to automatically prevent wheels from locking up when drivers slam on the brakes may fail to work properly. ABS malfunction can result in complete brake failure. In other cases, worn brake pads and discs make it harder for the driver to stop the vehicle, causing longer stopping distances and increasing the risk of a car accident.

#### **Engine Failure**

Car engines are designed to operate well with very little maintenance. However, there are problems that can occur that can result in a broken down vehicle and confusion about what went wrong. Engine failure can not only leave you stranded, but it can also stall your car in the middle of the road, potentially causing a car accident. It's important to keep an eye on your car's temperature gauge. If you notice your vehicle's temperature shifting towards the red, it may indicate that there is a serious problem with the car's liquid cooling system. Without a properly working cooling system, the combustion process can overheat the car's engine, resulting in engine failure.

Lack of oil in your car can also lead to engine failure and expensive repairs. Oil provides lubrication for your car's engines. Without it, metal parts would scrape and grind together, causing friction and overheating. Over time, oil loses its ability to lubricate and needs to be replaced.



Waiting too long to change the oil can cause overheating and damage to your car's engine. An undetected oil leak can lead to low oil pressure and potential damage to your engine. Keeping up with routine maintenance for your car will prevent damage to your engine from old oil and oil leaks, as well as reduce the chance of your vehicle suffering from engine failure on the road.

#### **Headlights/Taillights**

In low-visibility conditions, such as nighttime, cloud formation, rainfall, foggy roads, or during storms, it becomes much harder to see other vehicles on the road. Headlights and taillights increase visibility significantly, showing you not only more of the road, but making it so that other drivers are better able to see your vehicle too. Broken vehicle lights make your car much harder to see in the dark or in inclement weather, increasing your risk of getting rear-ended or sideswiped. Vehicle lights are important even on a clear day. Turn blinkers signal to left or right to signal other drivers for change of lane or slow down for a turn. Without working blinkers, your lane changes are made unannounced. This increases the risk that other drivers may not be able to tell where you're going; which also increases your car accident risk during a lane change or turn.

#### **Tire Problems**

Tire problems account for approximately 35% of car accidents caused by mechanical failure. Tire failure can be deadly, causing a vehicle to spin out of control and collide with other vehicles. Every year, 10,000 car accidents in the Nigeria occur due to problems with a vehicle's tires. The consequences of tire failure can be disastrous. Cars may roll over, veer off the road, or swerve into oncoming traffic. When car accidents are caused by tire failure, the driver and his or her passengers may become injured, as well as pedestrians and occupants of other vehicles. The most common causes of defective tire accidents include the following:

- Manufacturing defect
- Tread separation
- Older tires that are worn but appear to be good
- Inadequate repair of punctures
- Retread failure
- Tires that are unsuitable for the vehicle
- Tires that become damaged while being mounted

#### **Steering Issues**

Steering, suspension, transmission, and engine-related issues accounted for 3% of all car accidents caused by mechanical failure. Steering issues can be more difficult to document during the post-crash investigation. It is easy to spot worn

brakes and tires, but it is more challenging to identify steering issues. Steering issues can cause a loss of control over a person's vehicle at the worst moments. For example, when someone is merging onto the freeway, and the steering wheel fails to work correctly, he or she could swerve into another car at high speeds, causing a deadly accident.

#### **Engine and Transmission Problems**

Engine failure is rare, but it can cause a severe car accident. When an engine fails in the middle of the road, there is always the potential for a car accident. A lack of oil in a vehicle can cause engine failure and require expensive repairs. Without enough oil, the metal parts of the engine can scrape together, causing overheating and friction. In other cases, the engine itself is defective, and the victim can sue the car manufacturer, distributor, or retailer.

#### **Windshield Wipers**

Never underestimate the importance of windshield wipers in avoiding a crash, especially when it comes to car accidents in Florida. When it's raining hard, visibility is greatly reduced. But do not use your hazard lights, it's actually illegal. Stick with your windshield wipers to help clear rain and debris from the windshield, helping improve visibility so you can see where you're going a bit better. Worn out wiper blades are less effective at clearing rain and debris, leaving streaks that continue to block your sight. Worse yet, if the motors controlling the wipers malfunction or break, the sudden loss of vision could cause a car crash right away if you're in heavy traffic or traveling at high speed.

Check your windshield wipers once every month or so, or if you notice that they're not clearing your windshield effectively during a light rainstorm. If the blades are damaged, replace them as soon as possible. Most major auto parts stores have a booklet that tells you which blades are the right ones for your make and model of car—if not, you may want to talk with your manufacturer.

#### **Safety Policies and Procedures**

##### **Regular equipment maintenance**

Regular car maintenance is key for drivers' safety. Several safety-related complications can arise from poor or inadequate maintenance of cars. For one thing, poorly maintained cars are likely to malfunction without warning and put any nearby drivers at risk. Another effect of infrequent maintenance is that there is a higher tendency that the maintenance unit will waste a lot of time grappling with reactive maintenance because of unplanned breakdowns.

##### **Safety and warning signs**

The city roads and highways have a great

number of automobiles plying and it is very much advisable to have ample number of road signs put up to warn and alert the drivers.

#### **Traffic signals**

Traffic signals should be installed wherever there is haphazard traffic and this will reduce the confusion and road accidents caused. Traffic signals will help in the regulated movement of traffic. These signals should also have the CCTV facilities to identify the violators.

#### **Fines and penalties**

Collection of huge amount of money as fine will help in making the civilians be more alert to the road conditions and situations. People driving without driving licences, using cell phones while driving or motorcycle riders without helmets should be fined heavily. This will prevent them from making such mistakes in the future.

#### **Strict scrutiny before provision of driving licence**

Strict scrutiny should be undertaken before issuing driving licences to new drivers. The new drivers should undergo tough driving exams and written exams to filter the inefficient drivers. Also, the drivers should undergo proper and frequent medical examinations for the diagnosis of epilepsy and heart diseases so that these will not be a problem for safe driving.

#### **Severe punishment for drunk driving**

There should be severe punishment given to drunk drivers and the drivers of hit and run cases. The people who cause fatal or severe accidents shouldn't be let-go easily and should undergo severe punishments like imprisonment or heavy fines and their driving licence should be confiscated.

#### **Public awareness programmes**

The government and the city traffic police should organize the public awareness programmes to educate the civilians about the importance of road safety. Also, the public should be made aware of first aid and the importance of the golden hour and proper medical care in case of a road accident.

#### **Proper care and safety measures in the hilly areas**

The steep and dangerous curves of the hilly areas should be considered and necessary arrangements like barricades and road signs should be put up to warn the drivers about the imminent dangerous curves. The steep roads and cliffs should have reflective signs to warn the drivers especially at night.

#### **Use of helmets**

Helmets are useful as safety gear to prevent injuries in an uncontrolled environment. A helmet can thus prevent or minimize injury to the

head and brain. Helmets certified by the federal road safety corps should be used meticulously. Helmets should be sturdy and cover the head as well as the neck. The helmets that cover only the top of the head aren't advisable.

#### **Citizens should be compassionate**

The citizens should have the social responsibility and help others in need. They should attend to the casualties and take immediate action. They should inform the police force about the road accidents and also call for an ambulance in case of an emergency. They should have the social responsibility to help elders, disabled and small children when in need, for example, crossing the road. Also, they should have the courtesy to always leave way for an ambulance.

#### **Maintenance of vehicles**

The vehicle owners and drivers should always maintain their vehicles in top condition. They brakes, tyres and other components of the vehicle should be replaced and services as when necessary.

#### **Purchase of safe vehicles**

During the purchase of a vehicle, the buyer should give a great deal of importance to the safety aspects. The vehicle should have power steering, air bags, seatbelts, four wheel drive, good braking systems and similar safety features.

#### **Avoid distractions**

The motorists should always give utmost attention while driving. They should avoid loud music in cars and the motorcycle or scooter riders should avoid using headphones. Also, the motorists should completely avoid using their cell phones while driving. The co-passengers should avoid distracting the driver.

#### **Adequate sleep**

The motorists should have adequate sleep before driving, especially before driving long distances. This will eliminate the risk of the drowsy drivers.

#### **Careful road-crossing**

Pedestrians should take care before crossing the roads with heavy traffic. They should always cross at designated pedestrian crossings. They should always be aware of the oncoming traffic and look both ways before crossing the road.

#### **Utilize proactive safety controls**

From the safety audit information, your focus can now be directed at creating a proactive system that is effective at preventing accidents before they happen. This is achievable through:

#### **In-built safety controls**

Most reputable manufacturers provide machines that come with in-built controls that can

help to minimize injuries. So, before procuring work equipment, it's important to check that they come with operating controls that enhance safe usage. Some common but very effective examples include emergency stop devices, fail-safe features, machine guarding, etc.

#### Compliance checks

If you follow the above steps carefully, you could find that a few years have gone by and car has been seriously crashed on the road. In fact, safety professionals have observed that complacency on the road is what often leads to a big incident. This happens because after performing tasks repetitiously, the tendency for boredom or complacency to set in is high. Conducting planned and unplanned inspections at intervals is one of the proven ways to address this problem. Such checks will help to ensure that the agreed procedures are still being followed over time.

## II. RECOMMENDATIONS

This study hereby recommends the following to curb incessant road accidents in Nigeria roads:

1. Nigerians should embrace shift hour works so that all workers do not leave for work at the same time. This would reduce the number of workers plying the roads during day and thus ease traffic congestion.
2. Traffic officers should make sure they strengthen the state's traffic patrol effort by (i) ensuring that local traffic police work closely with the Federal Road Safety Commission (FRSC), (ii) Regularly patrolling the highways and side streets and, (iii) Ensuring that local police are familiar with the temporal and spatial distribution of road traffic accidents within their area of jurisdiction.
3. Federal and State Government should make and implement preventive road accident measures including proper design of road networks as well as the planning of the general public transport system to ensure that it runs in an effective and efficient manner as this would reduce the volume of the vehicles plying the roads.
4. There should be proper and frequent repairs of roads, many of which are currently in need of repair and maintenance. For this to happen the institutional machinery needed to ensure the timely construction and repair of roads should be strengthened.

## III. CONCLUSION

Certainly, employers need to be vigilant with safety in their plants because if they fail to

take the recommended steps to protect workers from the hazards of machine-related injuries, they may be liable for injuries sustained. Nevertheless, creating a safe plant is easier when machine safety is regarded as everybody's responsibility. Traffic accident injuries and fatalities are a serious problem all over the world. The incidence of road accident in Nigeria has become a very disturbing and worrisome as the country is presently ranked among the countries with the highest traffic accident injuries and deaths in the world (NBS, 2010). Moreover, the country's road safety campaigns are inadequate and often limited to festive seasons. At other times, such campaigns are often limited to media and roadside slogans like "drive carefully", "accident kill more passengers", "drive to stay alive", and "only living celebrates". For these campaigns to be effective, they must be year-round and not just limited to festive seasons.

## REFERENCES

- [1]. Agbeboh G. U. and Osabuohien-Irabor, O (2013) Empirical Analysis of Road Traffic Accidents: A case study of Kogi State, North-Central Nigeria, Department of Mathematics, Ambrose Alli University, Ekpoma, Nigeria.
- [2]. Agbonkhese, O, Yisa, G.L, Agbonkhese, E.G, Akanbi, D.O, Aka, E.O, Mondigha, E.B (2013), Road Traffic Accidents in Nigeria: Causes and Preventive Measures. Civil and Environmental Research, ISSN 2224-5790 (Paper) ISSN 2225-0514 (Online), Vol.3, No.13
- [3]. Adekunle JA (2010). Road Traffic Accident deaths and Socio-economic Development in Nigeria. *Int. Rev. Bus. Soc. Sci.* 1(5):47-60.
- [4]. Alhassan U. B (2013). Herdsmen and Farmers Conflicts in North-Eastern Nigeria: Causes, Repercussions and Resolutions. *Academic Journal of Interdisciplinary Studies* Published by MCSER-CEMAS-Sapienza University of Rome.
- [5]. Atubi, A.O. (2012). Determinants Of Road Traffic Accident Occurrences In Lagos State: Some Lessons For Nigeria. *International Journal of Humanities and Social Science.* Vol. 2 No. 6.
- [6]. CAREC (1987) Blood Alcohol Levels in Traffic Accident Victims, Surinam, February, 1987. CAREC Survivor Report, 13, 1-14.
- [7]. Chen, G. (2010). Road Traffic Safety in African Countries – Status, Trend, Contributing Factors, Counter Measures And Challenges, *International Journal of*

- Injury Control and Safety Promotion, 17(4): 247 – 255.
- [8]. Daramola, A.Y. (2004) “Innovative Options for Financing Transport Infrastructure in Nigeria” In Nisereel, The Magazine of the Nigerian Institute of Social and Economic Research, Nos 4 & 5, December, Ibadan.
- [9]. Filani, M.O. and Gbadamosi, K.T. (2007) Spatial and Temporal Pattern of Road Traffic Accident Occurrences in Nigeria: 1970-1995. Nigerian Geographical Journal. Vol. 5, No. 1, Pp. 55-70.
- [10]. Fouracre, P. R. and Jacobs, G.D. (1976) Comparative Accident Costs in Developing Countries. TRRL Supplementary Report 206. Crowthorne: Transport and Road Research Laboratory.
- [11]. Federal Road Safety Corp (2010). Report on Road Traffic Crashes (RTC) Involving Buses on Nigerian Roads (2007 – 2010).
- [12]. Federal Ministry of Information (2013) Road Accident Report
- [13]. Federal Road Safety Commission (2010) Research Monograph No. 2, Road Mirror
- [14]. Jacobs, G.D. and Sayer, I.A. (1983) Road Accidents in Developing Countries’. Transport and Road Research laboratory, TRRI Supplementary Report 897 Crowthorne.
- [15]. Mohan, D. and Bawa, P.S. (1985) An Analysis of Road Traffic Accident Fatalities in Delhi, India. Accident Analysis and Prevention, 17: 33-45.
- [16]. Mohan, D. and Romer, C.J. (1991) Accident Mortality and Morbidity in Developing Countries. In Manciaux M. and Romer, C.J. (ed) Accidents in Childhood and Adolescence: The Role of Research, Pp. 31-38. Geneva: World Health Organisation.
- [17]. National Road Safety Council of Kenya (1992) Accident Statistics, 1983-1990. Nairobi: Ministry of Public Works, Government of Kenya.
- [18]. OECD, (1994) Managing the Environment: the Role of Economic Instrument. Paris
- [19]. Oginni, F.O. (2008) ‘Causes and outcomes of road traffic accidents in developing countries’ in Bartley, G. P (ed) (2008) ‘Traffic accidents: Causes and outcomes’. NOVA Science Publishers.
- [20]. Ogunsanya, A.A. (1991) Empirical Cases Studies of Accident and Safety Control of Mass Transit Agencies in Nigeria. In Bolade T, and Ogunsanya A. (eds) Accident Control and Safety measures in Mass Transit Operations in Nigeria. Ibadan: University Press. Pp. 87-115.
- [21]. Oluwasanmi, A.J. (2013) Road Accident Trends in Nigeria. Accident Analysis Prevention 25 (4) Pp. 485-487. Omojola, A.S.(2004) “Transport and Communication” in
- [22]. Onokala, P.C. (1995) The Effect of Landuse on Road Traffic Accident in Benin-City, Nigeria. Journal of Transport Studies, Vol. 1, No. 1, Pp. 34-44.
- [23]. Ross, A. Baguley, C. Hills, V. Mchonald, M. and Silcock, d. (1991) Towards Safer Roads in Developing Countries: A guide for Planners and Engineers. Crowthorne, U.K.; Transport Research laboratories.
- [24]. Sumaila, AbdulGaniyu Femi (2013). Road crashes trends and safety management in Nigeria, Department of Transport Management Technology, Federal University of Technology, Minna.
- [25]. Taket, A. (1986) Accident Mortality in Children, Adolescence and Young Adults. World Health Statistics Quarterly, 39:232-256.
- [26]. World Bank (2019) “Road Safety Problem in the Third World”. The Urban Edge. Vol. 14, No. 1.
- [27]. World Health Organisation (2014) Road Traffic Accidents in Developing Countries, Geneva: WHO, TRS 703.