

Ibadan Journal of Peace & Development  
Vol. 9 No. 2 September 2019 pp. 26-37

## Predictive Estimates of Demographic and Socio-Economic Factors on Road Safety Practices among Commercial Bus Drivers in Ibadan South-East Local Government: National Development Implications

*Jacob Olusola, Odelola Ph.D. & Olaitan Johnson, Balogun MPH*

### Abstract

Road traffic accident is prevalent and frequently occurring in Nigeria. The occurrences have in most occasions led to loss of lives and properties worth huge amount of money. Experts have identified poor road safety practices of commercial drivers as the cause of the problem. This study examined predictive estimates of demographic and socio-economic factors on road safety practices among commercial bus drivers in Ibadan South-East Local Government: National development implications. Descriptive research design was adopted for the study. Four hundred and ninety-eight respondents were sampled for the study using systematic sampling method. Researchers' developed questionnaire was used. Four hypotheses were tested. Pearson Moment Correlation and Regression Analysis were used to test the hypotheses. The result revealed that joint contribution of demographic variables on road safety practices among commercial bus drivers was significant [ $F(4,493)=4.605; P<0.05$ ]. Also, significant joint contribution of socio-economic variables on road safety practices among the drivers was found  $F(3,494)=8.294; P<0.05$ ). It was concluded that demographic indices (age, years of experience, mode of ownership and marital status) as well as socio-economic variables (income, educational qualification, belief and peer influence) are predictors of road safety practices among commercial bus drivers. It was recommended that Federal Road Safety Corps should enforce traffic safety regulations. Safety education programme for commercial bus drivers should be organized by Government and Non- Governmental Organisations. Also, safety education should be included in the curriculum of education at all levels in Nigeria and should be taught by health education experts. Furthermore, transportation should occupy a pride of place in national development programme.

**Keywords:** Demographic indices, socio-economic variables, commercial bus drivers, road traffic accidents, road safety practices.

## Introduction

Road traffic accident occurrences have in most times led to injuries resulting in permanent disability or outright death. Although it is a public health problem around the globe but developing countries bear larger portion of the burden. In fact, it has distended in the third world countries to the level of grave health, social and economic risk.

Road traffic accident is widely reported in the world over. Sadly, the health problem is affecting mostly people in their productive ages. The Institute of Health Metrics and Evaluation (IHME) estimated about 907,900, 1.3 million and 1.4 million deaths from road traffic injuries in 1990, 2010 and 2013 respectively; also Global Status Report on road safety indicated that African region had the highest rate of fatalities from road traffic injuries worldwide at 26.6 per 100,000 populations for the year 2013 (Adeloye, Thompson, Akanbi, Azuh, Samuel, Omoregbe and Ayo, 2016). According to the National Bureau of Statistics, the number of lives lost to road traffic accidents in the years 2013, 2014, 2015, 2016, 2017 and June to September 2018 are 5,539, 4,430, 5,400, 5,053, 5,049 and 2,749 respectively making Nigeria to be one of the countries with very high road fatalities in the world (Ndujihe and Esekile, 2018).

Road traffic accident has overwhelming effect on physical, social and emotional well-being of the people. Also, destruction of goods and properties constitutes economic loss. Onyemaechi and Ofoma (2016) observed that survivors of road traffic accident often endure a

diminished quality of life from deformities and disabilities, post-traumatic stress and loss of personal income. They further stated that the rest of populace lives in perpetual and pervasive fear of travelling occasioned by not feeling safe on the roads. Rom-Kalilu (2008) identified consequences of road traffic accident to include traffic congestion, pollution, stress, emotional imbalance, depression, time hour loss, destruction of transport facilities, economic loss to individual and the nation in terms of Gross Domestic Product (GDP), injuries, disabilities and death all affecting life span as well as peace and security of the country.

In Nigeria, Adewale, Akinola, Ambrose and Temitope (2015) found in a study that human factor is an important contributor to motor vehicular crashes. In the same vein, the study of Onyi (2018) indicated a poor level of practice of safe driving precautions among commercial drivers. He further listed safe driving precautions to include use of seat belt, use of correct and unexpired tyres, conveying only the correct number of passengers in the commercial vehicles and monitoring of speed with the speedometer to ensure safe speed limits. World Health Organisation lists the causes of accident to include over-speeding, driving under the influence of alcohol and other psychoactive substances, non-use of motorcycle helmets, seat-belt and child restraints; distracted driving; unsafe road infrastructure; unsafe vehicles; inadequate post-crash care; and

inadequate law enforcement of traffic laws (Ndujihe and Esekhi, 2018).

Safety is freedom from condition that can cause injury to the body. Efforts made by an individual to protect oneself and others from physical harm or reduce level of risk are safety practices. Road traffic accident can be prevented with good concentration of driver, obedience to traffic signs, exercising patience, avoidance of distraction, provision and use of headlights, use of turn signals and not driving under the influence of alcohol or other intoxicants.

Safety of commuters depends largely on safe driving behaviour of the drivers. This is why the safety practices of commercial drivers should be the concern of everyone. Incidentally, a large proportion of people in Nigerian cities make use of commercial means of transportation. Although in Ibadan metropolis available means of transportation include motorcycle, tricycle, taxi and bus but the proportion of the users of buses is significant. Commercial buses in most cases are operated by private individuals. Probably this is why they are uncontrollable. In most times they drive recklessly without regard for traffic laws, road signs and traffic officer directives.

In this study the independent variables are demographic and socio-economic factors. Demographic characteristics include a person's age, gender, educational attainment and marital status. Safety practice of a driver can to great extent be influenced by demographic indices. Safety practices of commercial driver can be

influenced by age and sex. Socio-economic status covers a person's social and economic characteristics. The indices of social and economic factors are income, educational status, employment and belief. Socio-economic status has been known to affect an individual's safety practices when driving.

Age is associated with maturity and careful way of handling things. Therefore, age can to a great extent influence road safety practices. Practice makes perfection thus consistently driving for a good number of years can influence safe driving. A person tends to handle what belongs to him/her with utmost care, therefore a person driving his own bus is most likely to be careful ensuring accident free journey in order not to lose his life and property. Married person tends to be more safety conscious than the unmarried one. The individual whose income is satisfactory from an undertaking tends to put safety into consideration, to stay alive in order to enjoy the money. Education can influence human behaviour including safety practices. Religious belief is an important determinant of human behaviour. Nigerians are known to be highly religious, therefore belief can largely influence road safety practices among commercial bus drivers. Persons tend to imitate what friends and relatives are doing in the immediate surrounding especially at places of work. Therefore, peer influence is important when it comes to safe driving.

National development is indicated when government practically demonstrates its commitment to the welfare of the citizenry in terms of provision of quality education, effective transport system, health care service, electricity, good roads, potable water, security among others. According to Sid-Israel (2018) the purpose of development is a rise in the level and quality of life of the population, and the creation or expansion of local regional income and employment opportunities, without damaging the resources of the environment. The transport sector is an important driver of the economy which can be a potent instrument for national development.

### Statement of the Problem

Frequent occurrence of road traffic accident in our society is worrisome. This is because it has been responsible for the loss of lives and destruction of valuable property. World Health Organisation reported that in Nigeria the number of road traffic injury and death rates which stood at 4,120 per 100,000 and 160 per 100,000 population respectively happened to be the highest recorded in any single study in Africa (Adeloye, Thompson, Akanbi Samuel Omoregbe and Ayo, 2016). According to Oyeyemi (2004), human factors constitute about 80% of the cause of road traffic accidents recorded in the country. Specifically, experts identified poor safety practices among commercial drivers as the cause of accident on our roads. Therefore, this study was designed to examine predictive estimates of demographic

and socio-economic variables on road safety practices among intra-city commercial bus drivers in Ibadan South-East Local Government: National development implications.

### Significance of the study

The finding of this study could make significant contribution to the efforts of Federal Government through its agencies aimed at ensuring safety on the roads. Public Health Educators and Educational institutions can make use of the findings to design appropriate safety education programme to educate students and enlighten the public.

### Hypotheses

1. There is no significant joint effect of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.
2. There is no significant relative effect of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.
3. There is no significant joint effect of socio-economic variables (income, educational qualification, belief and peer influence) on road safety practices

among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.

- 4 There is no significant relative effect of socio-economic variables (income, educational qualification, belief and peer influence) among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.

### Methodology

The descriptive survey research design was adopted for this study. All members of National Union of Road Transport Workers (NURTW) in Ibadan South-East Local Government Area of Oyo State Nigeria formed the population.

A sample size of 500 intra-city commercial bus drivers from the local government area who are registered and attend meetings regularly were selected. The method of selection involved two stages. In the first stage, purposive sampling technique was used to select ten garages where they have places of meeting. At the second stage, in each of the selected meeting places using attendance register as sample frame, 50 members each from 10 selected garages were sampled through systematic random sampling method making

500 respondents in all. However, only 498 questionnaire forms were filled and returned.

The questionnaire used to obtain information from respondents was self-developed. The questionnaire was divided into four sections: Section A was on demographic information about the respondents, Section B was used to collect data on demographic variables predicting safety practices, (DVPRSPQ). The Section C was on socio-economic variables predicting road safety practice (SVPRSPQ). The section D was on road safety practices. (RSPQ). The measure of internal consistency was determined using Cronbach Alpha correlation and reliability coefficients and 0.84, 0.80 and 0.89 were obtained for demographic factors, socio-economic factors and road safety practices respectively.

Data collected were analysed using inferential statistics of regression. All the stated hypotheses were tested at 0.05 alpha level.

### Results

**Hypothesis one:** There is no significant joint effect of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.

**Table 1: Regression table showing the joint effect of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers**

R	=.190				
Multiple R	=.036				
Multiple R2 adjusted	=.28				
Standard Error Estimate	= 6.30677				
Analysis of Variance					
Model	Sum of Square	Df	Mean Square	F	P
Regression	732.670	4	183.168	4.605	.001
Residual	19609.249	493	39.775		
Total	20341.920	497			

The table above revealed that the joint contribution of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers was significant ( $F(4,493) = 4.605, p < .05$ ). The Independent variable also yielded a coefficient of multiple regressions (R) of .190, meaning that about

19.0% of the variation is accounted for by the independent variables.

**Hypothesis two:** There is no significant relative effect of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.

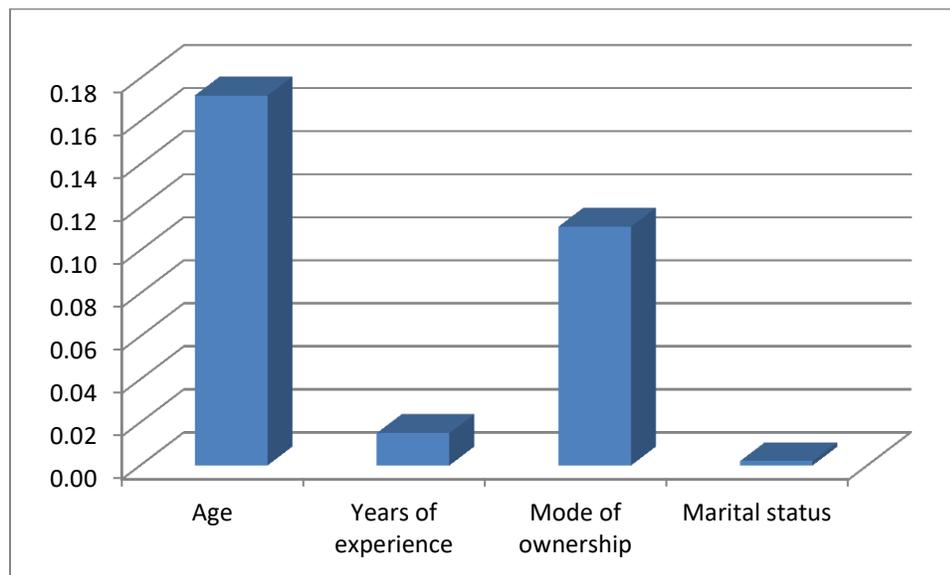
**Table 2: Regression table showing the relative contribution of demographic variables (age, years of experience, mode of ownership and marital status) on road safety practices among commercial bus drivers**

Model	Unstandardized Coefficient		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	47.205	2.814		16.775	.000
Age	.516	.152	.172	3.389	.001
Years of experience	.058	.198	.015	.293	.047
Mode of ownership	.430	.177	.111	2.430	.015
Marital status	.007	.199	.002	.0360	.971

Table above shows relative contributions of demographic variables to road safety practices among commercial bus drivers. Furthermore, the table revealed that age has the highest contribution ( $\beta=.172$ ,  $t=3.389$ ,  $p<0.05$ )

followed by mode of ownership ( $\beta=.111$ ,  $t=2.430$ ,  $p<0.05$ ). This is followed by years of experience ( $\beta=.015$ ,  $t=0.293$ ,  $p<0.05$ ) while marital status contributed the least ( $\beta=.002$ ,  $t=.0360$ ,  $p>0.05$ ). Therefore, the null hypothesis is rejected.

Fig. 1.0: Bar Chart showing the relative contribution of demographic variables (age, years of experience, mode of ownership and marital status) to road safety practices among commercial bus drivers.



The chart above shows the relative contribution of demographic variable (age, years of experience, mode of ownership and marital status) on road safety practices among commercial drivers. The chart revealed that age has the highest contribution with .172 to road safety practices among intra-city commercial drivers followed by mode of ownership .111, followed by the years of experience .015 while marital status contributed least .002. This

shows demographic variables of the respondents contributed significantly to road safety practices among intra-city commercial bus drivers.

**Hypothesis three:** There is no significant joint effect of socio-economic variables (income, education qualification, belief and peer influence) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria

**Table 3: Regression table showing the joint effect of socio-economic variables (income, educational qualification, belief and peer influence) on road safety practices among commercial bus drivers**

R	= .219				
Multiple R	=.048				
Multiple R <sup>2</sup> adjusted	=.042				
Standard Error Estimate	=6.26127				
Analysis of Variance					
Model	Sum of Square	Df	Mean Square	F	P
Regression	975.417	3	325.139	8.294	.000
Residual	19366.503	494	39.203		
Total	20341.920	497			

The table above revealed that the joint contribution of effect of socio-economic variables (income, educational qualification, belief and peer influence) on road safety practices among commercial bus drivers was significant ( $F(3,494)=8.294$ ,  $p<0.05$ ). The independent variable also yielded a coefficient of multiple regressions (R) of .219, meaning that

about 22% of the variation is accounted for by the independent variables.

**Hypothesis four:** There is no significant relative effect of socio-economic variables (income, educational qualification, belief and peer influence) among commercial bus drivers in Ibadan South-East Local Government Area, Oyo State, Nigeria.

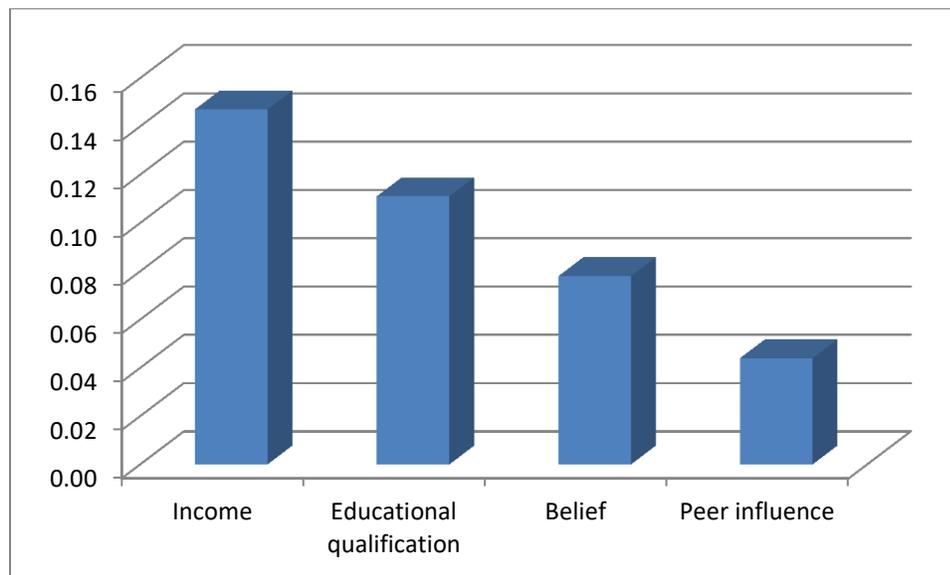
**Table 4: Regression table showing the relative contribution of socio-economic variables (income, educational qualification, belief and peer influence) on road safety practices among commercial bus drivers in Ibadan South-East Local Government Area of Oyo State**

Model	Unstandardized Coefficient		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	36.793	2.434		15.116	.000
Income	.509	.170	.147	3.000	.003
Educational qualification	.298	.139	.111	2.144	.032
Belief	.231	.139	.078	1.665	.097
Peer influence	.131	.133	.044	.990	.323

Table above shows relative contribution of each of the socio-economic variables to road safety practices among commercial bus drivers. The table also revealed that income has the highest contribution ( $\beta=.147$ ,  $t=3.000$ ,  $p<0.05$ )

followed by educational qualification ( $\beta=.111$ ,  $t=2.144$ ,  $p<0.05$ ). This is followed by belief ( $\beta=.078$ ,  $t=1.665$ ,  $p>0.05$ ) while peer influence contributed the least ( $\beta=.044$ ,  $t=0.990$ ,  $p>0.05$ ). Therefore, the null hypothesis is rejected.

**Fig. 2.0:** Bar chart showing the relative contribution of socio-economic variables (income, educational qualification, belief and peer influence) on road safety practices among commercial bus drivers



The chart above shows the relative contribution of socio-economic variable (income, educational qualification, belief and peer influence) on road safety practices among commercial bus drivers. The chart revealed that income has the highest contribution with .147 to road safety practices among intra-city commercial bus drivers, followed by educational qualification .111 followed by belief .078 while peer influence contributed least .044. This shows that socio-economic variables of the

respondents contributed significantly to road safety practices among commercial bus drivers.

### Discussion of the Findings

The results of this study show significant joint contribution of demographic variables to road safety practices. In other words, the combined effects of age, years of experience, mode of ownership and marital status predicted significantly road safety practices among commercial bus drivers.

In this study, age independently contributed significantly to road safety practices of commercial bus drivers. Age is an important determinant of safe driving. Edwards (2006) found in a study significant relationship between age of driver and road safety practices. Underage driver could suffer youthful exuberant which could make him to be careless, impatient and disregard traffic signs and order. Also, a too old driver may be suffering from poor visual and auditory function which can affect negatively his safe driving. Also, in this study years of experience made significant contribution to road safety practices. Having long years of driving experience can make one to be careful on the road.

Experienced driver must have built a good reputation for himself over a long period of practice which he would not want to destroy hence he will drive carefully to avoid confrontation with traffic officers. Mode of ownership contributed significantly. It is a known fact that a driver who is the true owner of the bus will drive carefully and consider the safety of lives and the vehicle while a driver who is not the owner of the bus will be in haste to make money also, he tends to disregard all aspects of road safety practices. The relative contribution of marital status towards road safety practice is significant. The finding is in support Morowatis (2005) who found in a study that risky driving behaviour and disregard for safety precautionary measures are higher in unmarried drivers compared with married ones.

The married drivers are more committed to safe driving bearing in mind that they have wives and children who depend on them for their living.

In this study socio-economic variables (income, educational qualification, belief and peer influence) jointly predicted road safety practices among commercial bus drivers. This result is in support of the finding from a study by WHO (2009) in Europe on driving behaviour which implicated low socio-economic status in the progressive increase in the risk of road traffic crash. Income played significant role in influencing road safety practices. Educational qualification independently contributed to road safety practices in this study. This result is in complete agreement with Mayheme and Simpson (2002) who found that significant correlation exists between level of education and road safety practices among the participants in their study. A well-educated driver will be able to read and interpret traffic regulation hence a better road safety practice.

Belief relatively contributed to road safety practices among commercial bus drivers in this study. The belief of an individual about the cause of road accident can to a great extent influence one's road safety practices. A driver who do not believe in supernatural power as the cause of accident but rather believe that if all precautionary measures are put in place accident can be averted will ensure road safety practices. Peer influence significantly

contributed to road safety practices of commercial bus drivers in this study. Similarly, Egbule (2018) found in a study that peer pressure influenced health behaviour. In a group, peer pressure can affect both the young and the old and can be overwhelming on an individual to the extent of behaving in such a way to please peers.

### National development implications

Efficient transport system can pave way for social and economic opportunities that include tourism, exchange programme, job, technical skill acquisition, investment and business which are all germane to national development. The implication is that the issue of transportation should be considered as important to national development. Also, the operators of transport business who are majorly commercial drivers should be empowered using the instrument of education. Suffice it to say, education is key to development. Road infrastructure should be given serious consideration in the national budget. Furthermore, ensuring safety on the roads is step towards national development.

### Conclusion

The much needed panacea to the frequent occurrence of road traffic accident has been identified as good road safety practices among commercial bus drivers. Based on the findings of this study it was concluded that age, years of experience, mode of ownership and marital status as variables of demographic factor

and socio-economic indices which include income, educational qualification, belief and peer influence can enhance the practice of road traffic safety. Awareness of the importance of road safety practices to accident prevention is glaringly lacking among commercial bus drivers. Good transport system is important to national development.

### Recommendations

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

1. Relevant agency in charge of road safety, specifically Federal Road Safety Corps should enforce the recommended age at which a person can drive without fear or favour.
2. Government must put in place continuing education programme which can accommodate adult commercial bus drivers.
3. Educational institutions in Nigeria especially faculties of education in universities should come up with safety education programme to create awareness among commercial busdrivers on the importance of road safety practice.
4. Government should encourage commercial busdrivers to buy buses of their own by giving loan with little interest. This will reduce the rate at which commercial bus drivers are in haste to look for money to pay the owners of vehicle they hire.
5. Religious leaders should encourage members to put in place precautionary

measures in addition to their prayers to ensure safety on the road.

6. The issue of transportation should be given serious consideration in national development planning.

### References

- Adeloye, D., Thompson, J.Y., Akanbi, M.A., Azuh, D., Samuel, U., Omoregbe, N. and Ayo. N. 2016. The burden of road traffic crashes, injuries and deaths in Africa; a systematic Review and meta-analysis. *Bulletin of the World Health Organisation*. Accessed online [http://www.int/bulletting/volumes/a4/7/15/-](http://www.int/bulletting/volumes/a4/7/15/) 163121/len/dx.doi.org/10.247/BLT.15.163121on5-7-2017
- Adewale, M.A., Akinola, A.F., Ambrose, R and Temitope, A. 2015. Epidemiology of road traffic crashes among long distance drivers in Ibadan Nigeria. *African Health Science* 15(2) 480-488. Accessed online from <http://dx.doi.org/10.4314/ahs.u.512.22> on 05-07-2017.
- Edwards, A. 2006. Deprivation and Road Safety in London. London School of Hygiene and Tropical Medicine Journal Retrieved online from <http://www.tfi.gov.uk/assets/download/s/deprivation-and-road-safety> on 06-06-2017.
- Egbule, E.O. 2018. Peer influence and mass media as correlates of students sexual behavior: Implication for schooling in a depressed economy. *Perspective of multi-disciplinary Journal and Learning* 7(1) 1-10.
- Mayhew, D.R. and Simpson, H. 2002 The safety value of driver's education and training. *Journal of Injury Prevention*. 8, 113 – 118.
- Morowatis, M.A. 2010. The Health Belief Model variables as Predictors of risky behaviour among commuters in Yard, Iran *Traffic Injury* 11(1), 141-148.
- Ndujihe, C. and Esekhihe, N. 2018. Highways of Death 28,195 killed in road accidents in 68 months. *Vanguard*.
- Sid-Israel 2018. What is development academic and training? Accessed online on <http://www.smartsoftsweb.com> on 12-07-2018
- Onyemaechi, N.O.C. and Ofoma, U.R. 2016. The public Health of Road Traffic Accidents in Nigeria: A call to Action *Annals of Medical and Health Sciences Research* 6(4): 199-204.
- Onyi, T. 2018. Occupational injuries among commercial motor driver in Bauchi Nigeria. *World Journal of Pharmaceutical and medical Research* 4(10) 175-182. Accessed online from [www.jpmp.com](http://www.jpmp.com) on 01-01-2019.
- Oyeyemi, B. O. 2003. Productivity and Road traffic administration in Nigeria: Impediment and strategies Ibadan. Clemeva Media Consult.
- Rom-Kalilu, R.O. 2008. Dysfunctional Integrated Transport System and the challenges of Road Safety in Nigeria. *Paper presented at the International Conference on Road Safety in Nigeria Abuja Federal Road Safety Corp.*
- WHO 2014. World Ranking on road accident: Live longer Live Better Retrieved online from <http://www.worldlifeexpectancy.com/c-cause-of-death/roadtraffic-accidents/by-country/> on 02-07 2017
- WHO. 2009. Addressing the socio-economic divide: *Policy briefing*.
- WHO 2006. Socio-economic factors in the causation of Road Traffic Crash. Implication for Policy making. Retrieved online from <http://www.roadtraffic-crash.html> on 02-07-2017

