

Paraga Intake and Accident Occurrence Among Tanker Drivers in Lagos State

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ABSTRACT

Paraga intake has become a norm among tanker drivers in South-Western Nigeria while the daily reports of vehicle accidents are overwhelming, this necessitates the examination of the relationship between paraga intake and road vehicle accident among tanker drivers in Lagos State. Survey and personal interview were the tools used in this study to extract data from 172 drivers in Tanker terminals across Lagos State. However, data obtained were analysed using both descriptive and inferential statistics. Pearson Product Moment Correlation was used to analyse the relationship between active paraga intake by tanker drivers and most common forms of road accident occurrence. The findings of the study showed that there is a positive and significant relationship between active drivers', paraga intake and road vehicle accidents such as vehicle rollover, rear-end collision, side-impact collision and head-on collision. Recommendation was made that tanker driver' should desist from taking paraga while on duty. This will eradicate road accidents emanating from paraga intake. This research will help in making policy on the control and implications of alcohol usage among commercial drivers in Nigeria.

Keywords:-Paraga, accident, tanker drivers, road accident, vehicle

INTRODUCTION

Tanker accident has been one of the 21 century challenges facing Nigerian haulage and logistics industry. Tanker accidents often result from truck operators' negligent or reckless driving which may include driving under the influence of alcohol or drugs among others.

In Nigeria, roads by far handle the largest share of freight transport [17,27,43,44]. stated that about 80% of freight movements in Nigeria are done on the road with about 2,500 trailers in dry cargoes plying Nigerian roads daily. Establishing and maintaining reasonable level of road safety along the roads and highways, especially in terms of the creation of a safe and predictable driving environment and thereby reducing the number of avoidable or preventable accidents has been of the

major safety concerns for government at all levels.

Successful distribution of haulage products relies on the driver, who is a critical component in the delivery system of any nation [7,10,19,25], vehicle wear and tear [34]. Factors such as sleep quality; age [13,28,41], sex, socioeconomic status, and income [45], education, and the physical condition of drivers' had contributed to the accidents [20]. Safe driving has been studied extensively and league tables are produced regularly to monitor the global impacts of road deaths [21].

One of the important part of worldwide trade and economy are tanker drivers. In transportation sector, tankers are used in freight movement over land, transporting oil and gas either from manufacturing

plants or depots to retail distribution centres [6,11,15,18]. According to the study of [24]; truck drivers have been reported as a highly vulnerable working population due to different risk factors including hypertension, fatigue [40], obstructive sleep apnea (OSA) and sleep deprivation [8], and insufficient physical activity [9].

In Nigeria, more than 70% of the population including commercial drivers depends on traditional remedies for the initial treatment of diseases and injuries [23]. These herbs are prepared as a mixture of different types of herbs with mostly alcohol or water according to Adepoju & Akinbode (2019) and in powder form. However, urbanisation has changed this tradition. A new group of itinerant traditional drug peddlers has begun peddling their wares in urban centres in Nigeria. One of the most common herbal preparations being sold among the *Yorubas* of South-western Nigeria is *paraga*, which has been defined by Kehinde & Olusegun [23] as a mixture of unrefined or poorly refined alcohol and herbs which is periodically ingested, as a form of self-medication against certain illnesses.

According to them, *paraga* is one of the most popular forms in which herbal medicines are dispensed on the street and it is commonly sold by vendors in motor parks where commercial drivers have easy access to them and can be easily consumed. *Paraga* is known by different names such as “*agbara*”, *opa-eyin*, *senuebo*, *ale*, *afato*, *pelorie*, *japata*. According to Adepoju & Akinbode (2019), 22.8% of the commercial drivers reportedly consumed *paraga* for mental alertness, 18.8% consumed it for purpose of having energy, while 43.7% consumed it for treatment of illness, 7.1% took it to ward off coldness, 4.1% consumed it

because of its taste while 3.5% consumed it because others are doing so.

Many studies in Nigeria have reported the common use of alcohol and other psychoactive substances among commercial and long-distance vehicle drivers [26,33] found a prevalence of 32% of alcohol drinking before driving. Kadiri [22] in a study of *paraga* usage in a community in Lagos showed that 60% of *paraga* users were taking it on daily basis. Abiona et al [1] based their sample size calculation on the 67.2% prevalence rate of alcohol consumption among commercial drivers in South-west Nigeria while Oluwadiya & Fatoye (2012) found that *paraga* use was popular among drivers. They argued that the prevalence rate in the past one year was 53.6% and 43.2% for the past one month. The alcohol consumption by the truck drivers, besides being detrimental for the health, represented an important public and occupational safety concern, in that this work category is at high risk of occupational accidents and can jeopardize the safety of others.

Evidence from Fashola found that sellers of intoxicants such as drugs and liquor in truck and tanker parks were the one responsible for drug and alcohol-related road accidents. He emphasised that drivers patronising *paraga* sellers are prone to loose focus and unable to concentrate while on the road [35]. Oyeniyi argued that there have been numerous anecdotes (stories) and newspapers reports that *paraga* makers sometimes include psychoactive herbs such as cannabis and cocaine as well as alcohol in *paraga* to add some ‘kick’ to their product.

Also, the World Health Organization has reported a link between drivers’ hazardous use of alcohol and road traffic accidents in Nigeria[40]. Contrary to the report of the World Health Organisation, [32]

concluded that there is no significant relationship between abuse of alcohol by commercial vehicle drivers and their involvement in road accidents while several studies conducted over the past 10 years have shown a significant association between alcohol misuse and traffic accidents [12,30, 38,39]. The study of Makanjuola et al [26] acknowledged the relationship between psychoactive substance use and accidental injury or death. There have been several studies on prevalence, pattern, and psychosocial correlates of alcohol and other psychoactive substance use among various groups and subgroups in Nigeria[2,5,27,42] including long-distance vehicle drivers [27].

However, to the best of researchers' knowledge, no study on *paraga* intake has been conducted among the tanker drivers in related to the accident occurred while they are on the road. Thus, this study attempted to fill this gap in the literature. It explores the nexus between *paraga* intake and accident among the tanker drivers in Lagos State while testing the following hypotheses:

H₀₁: There is no significant relationship between Active tanker driver *paraga* intake and vehicle rollover accident.

H₀₂: There is no significant relationship between Active tanker driver *paraga* intake and single-vehicle accidents.

H₀₃: There is no significant relationship between Active tanker driver *paraga* intake and single-vehicle accident.

H₀₄: There is no significant relationship between Active tanker driver *paraga* intake and Side Impact collision accident.

H₀₅: There is no significant relationship between Active tanker driver *paraga* intake and Head-on-collision accident.

The structure of the paper is such that section two represents the methodology addressing the issue of study area, population, sampling together with

questionnaire design and administration. Data collected was analysed and discussed in section three and finally, section four presents a conclusion based on the research objectives and recommendations.

METHODOLOGY

The study was carried out in Lagos State. Lagos State is the most industrialised city in Nigeria followed by Kano State with a population estimate of 17 million people according to National Population Census (NPC, 2006) and also it is popularly referred to as the hub of economic activities in Nigeria [16]. The choice of Lagos State was borne out that the city has a high proportion of articulated vehicles and tankers coming in and out of Lagos seaports and fuel depots, to and from to parts of the country.

The researchers conducted a survey and personal interview between October to December 2020 immediately after the relief of lockdown in Lagos State. Lagos has ten (10) truck terminals according to Nigeria Ports Authority (2020) and twenty (20) respondents which were drivers were randomised in each of the terminals and data was analysed based on 86% response rate. To identify the prevalence usage of *paraga* among the drivers, a drug survey methodology by WHO was adopted, and this validated in Nigeria.

Active *paraga* users were defined as drivers who had taken *paraga* at least once in the past 30 days (Oluwadiya and Fatoye, 2012). The respondents (the drivers) were allowed to fill the questionnaire by themselves; however, assistant was given to those who did not understand written or spoken English. Moreso, all in the terminal as at the time of conducting the survey were eligible for the study. Data collected were analysed using Pearson Product Moment Correlation analysis.

RESULT AND DISCUSSIONS

The prevalence of *paraga* intake was measured by asking the last time the drivers took *paraga*. The findings on table 1 revealed that 4% of the respondents have taken *paraga* in a year ago, 10% took it over a month ago. However, 86% falls

between daily and regular prevalence. This implied that 86% of the respondents were active *paraga* users. This result corroborated the findings of Oluwadiya & Fatoye (2012) on the intake of *paraga* among commercial drivers in Nigeria.

Table 1:-Measure of Active Paraga intake

S/N	Measure of <i>Paraga</i> intake among the drivers	Number of Respondents (%)
1	One year prevalence (i.e. taken one year ago)	7 (4.0%)
2	Past one month prevalence (i.e. taken one month ago)	17 (10.0%)
3	Today prevalence (i.e. taken today)	148 (86.0%)
4	Regular prevalence (i.e. taken always)	148 (86.0%)

Source: Authors' compilation (2021)

Drivers' involvement in different types of Road Accidents in the Past

The types of road accidents experienced by drivers in the past were examined. The findings in table 2 revealed that 68% of the drivers were involved in vehicle rollover accidents and this type of accident involved the interactions of the drivers', road, vehicle, and environmental factors and mostly it involves a single-vehicle crash. Moreso, 24% of the drivers were involved in a single-vehicle accident and this type of accident usually involved only one vehicle and mostly is a run-off-road collisions crash, collisions with fallen debris, collision with animals, or rollovers.

However, 76% of the drivers had a rear-end collision accident before and in this type of accident, the vehicle crashes with another vehicle in front of it. In case of a side-impact collision, 57% of the drivers experience this type of accident in the past which is typically known as broadside or T-bone collisions and the side of one vehicle is impacted. It commonly occurs at intersections. Finally, approximately 95% of the drivers had a head-on collision type of accident before, and typically, this type of accident occurred when the ends of two vehicles hit each other in opposite directions and mostly occurs when driver neglected traffic signs or street conditions.

Table 2:-Types of road accidents involved by Driver in the past

S/N	Road accidents	Number of Respondents (%)
1	Vehicle rollover	120 (68.0%)
2	Single vehicle accident	41 (24.0)
3	Rear-end collision	131 (76.0)
4	Side-impact collision	98 (57.0)
5	Head-on collision	163 (94.7)

Source: Author's compilation (2021)

H₀₁: There is no significant relationship between Active Tanker Driver *Paraga* intake and vehicle rollover accident

Table 3 indicated that there is a positive and significant relationship between

drivers active *paraga* intake and road accident (vehicle rollover) given the t-value of .000, which is significant at 0.05% level of significance, therefore the null is rejected. This implied that there is

possible for the tanker drivers to have an accident when active in taking *paraga*. This was consonance with the findings of Junaid & Salisu (2014) that there was no

significant difference between **teachers' ICT knowledge** and students' academic performance.

Table 3:-Relationship between Active Paraga Intake and Vehicle rollover

		Active paraga intake	Vehicle rollover
Active paraga intake	Pearson Correlation	1	.313**
	Sig. (2-tailed)		.000
	N	172	172
Vehicle rollover	Pearson Correlation	.313**	1
	Sig. (2-tailed)	.000	
	N	172	172

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' compilation (2021)

H₀₂: There is no significant relationship between Active Tanker driver Paraga intake and Single vehicle Accident

Table 4 indicated that there is no significant relationship between drivers' active *paraga* intake and drivers involving in a single vehicle accident given the t-

value of .132, which is not significant at 0.05% level of significance, therefore the null is accepted. This implied that there is slightly possible for the tanker drivers to involve in a single vehicle accident when he is an active *paraga* taker.

Table 4:-Relationship between Active Paraga Intake and Single Vehicle Accident

		Active Paraga intake	Single Vehicle Accident
Active Paraga Intake	Pearson Correlation	1	.115
	Sig. (2-tailed)		.132
	N	172	172
Single Vehicle Accident	Pearson Correlation	.115	1
	Sig. (2-tailed)	.132	
	N	172	172

Source: Author's compilation (2021)

H₀₃: There is no significant relationship between Active Tanker driver Paraga intake and Single-vehicle Accident

Table 5 indicated that there is a positive and significant relationship between drivers' active *paraga* intake and they are involved in rear-end collision accidents given the t-value of .000, therefore the null

is rejected. This implied that the tanker driver can involve in rear-end collision accident when he is an active *paraga* taker. Thus, the number of times the driver consented to have a rear-end collision accident as indicated in table 2 is most likely occurred as a result of *paraga* intake.

Table 5:-Relationship between Active Paraga Intake and Rear-end collision accident

		Active Paraga intake	Rear-end collision Accident
Active Paraga intake	Pearson Correlation	1	.368**
	Sig. (2-tailed)		.000
	N	172	172
Rear end collision Accident	Pearson Correlation	.368**	1
	Sig. (2-tailed)	.000	
	N	172	172

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' compilation (2021)

H₀₄: There is no significant relationship between Active Tanker driver Paraga intake and Side Impact Collision Accident

Table 6 indicated that there is a positive and significant relationship between driver active *paraga* intake and they're involved in vehicle side-impact collision accident given the t-value of .002 which is

significant at 0.05% level of significance, therefore the null is rejected. This implied that the tanker driver can involve in a side-impact collision accident when he is an active *paraga* taker. Thus, the number of times the driver consented to have a side-impact collision accident as indicated in table 2 is most likely occurred as a result of *paraga* intake.

Table 5:-Relationship between Active Paraga Intake and Side Impact Collision Accident

		Active paraga intake	Side impact collision Accident
Active paraga intake	Pearson Correlation	1	.237**
	Sig. (2-tailed)		.002
	N	172	172
Side impact collision Accident	Pearson Correlation	.237**	1
	Sig. (2-tailed)	.002	
	N	172	172

** . Correlation is significant at the 0.05 level (2-tailed).

Source: Authors' compilation (2021)

H₀₅: There is no significant relationship between Active Tanker driver Paraga intake and Head-on-Collision Accident

Table 6 indicated that there is a positive and significant relationship between drivers' active *paraga* intake and they are involved in a head-on-collision accident

given the t-value of .000 which is significant at 0.05% level of significance, therefore the null is rejected. This implied that there is the possibility for the tanker driver to be involved in a head-on-collision accident when he is an active *paraga* taker.

Table 6:-Relationship between Active Paraga Intake and Head-on-Collision type of Accident

		Active paraga intake	Head-on-collision Accident
Active paraga intake	Pearson Correlation	1	.877**
	Sig. (2-tailed)		.000
	N	172	172
Head-on-collision Accident	Pearson Correlation	.877**	1
	Sig. (2-tailed)	.000	
	N	172	172

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's compilation (2021)

CONCLUSION AND RECOMMENDATIONS

This study critically examined tanker drivers' intake of *Paraga* and their involvement in the most common types of road accidents. It was revealed that in the past, all drivers examined were involved in one type of accident or the other. The most common types of road crashes were identified to be: vehicle rollover accident, single-vehicle accident, rear-end collision accident, side-impact collision accident and head-on collision accident.

The findings revealed that there is a positive and significant relationship between active drivers' *paraga* intake and vehicle rollover, rear-end collision, side-impact collision and head-on collision types of road vehicle accident. It was only a single vehicle type of accident that is not significant when it comes to drivers' *paraga* intake. Hence, it is recommended that tanker driver should desist from taking *paraga* while on duty, to eradicate road accident emanating from *paraga* intake. The caretaker of Truck parks and garages in Lagos state should ban *paraga* sellers in the parks and garages, which will have a positive impact on driver *paraga* intake in the park before embarking on their journey.

REFERENCES

1. Abiona T, Aloba O, & Fatoye F (2009). Pattern of alcohol consumption among commercial road transport workers in a semi-urban community in south western Nigeria. *East Afr Med J* 2009, 83:494–499.
2. Abiodun, O. A., Adelekan, M. L., Ogunremi, O. O., Oni, G. A., & Obayan, A. O. (1994). Pattern of substance use amongst secondary school students in Ilorin, northern Nigeria. *West African journal of medicine*, 13(2), 91-97.
3. Adelekan, M.L., Makanjuola, A.B., Ndom, R.J.E., Fayeye. J.O., Adegoke, A.A., Amusan, O. & Adeloje, D., Olawole-Isaac, A., Auta, A., Dewan, M. T., Omoyele, C., Ezeigwe, N., & Adewole, I. F. (2019). Epidemiology of harmful use of alcohol in Nigeria: a systematic review and meta-analysis. *The American journal of drug and alcohol abuse*, 45(5), 438-450.
4. Idowu, A.I (2001). 5-Yearly Monitoring of Trends of Substance Use Among Secondary School Students In Ilorin, Nigeria, 1988-1998. *West African Journal of Medicine*; 20 (1): 28-36.
5. Aina, O.F & Olorunshola, D.A. (2008). Alcohol and substance use portrayals in Nigerian Video Tapes. An analysis of 479 films and implication for public Drug Education. *International quarterly of Community Health Education*; 28(1): 63-71.
6. Apostolopoulos, Y.; Sönmez, S., Shattell, M.M. & Belzer, M. (2010). Worksite-induced morbidities among truck drivers in the United States. *AAOHNJ*, 58, 285–296.
7. Bellard, C., Leroy, B., Thuiller, W., Rysman, J. F., & Courchamp, F. (2016). Major drivers of invasion risks throughout the world. *Ecosphere*, 7(3), e01241.
8. Burns, N. (2014). An integrative review of screening for obstructive sleep apnea in commercial vehicle drivers. *Workplace health & safety*, 62(3), 114-120.
9. Cashman, C.M.; Ruotsalainen, J.H.; Greiner, B.A.; Beirne, P.V. & Verbeek, J.H. (2009). Alcohol and drug screening of occupational drivers for preventing injury. *Cochrane Database Syst. Rev.* 15, CD006566.
10. Chopra, S. (2003). Designing the distribution network in a supply chain. *Transportation Research Part E: Logistics and Transportation Review*, 39(2), 123-140.

11. Criezzle, A.M.; Bigelow, P.; Adams, D.; Gooderham, S.; Myers, A.M.; Thiffault, P. (2017). Health and wellness of long-haul truck drivers and bus drivers: A systematic review and directions for future researches. *Journal of Transportation Health* 7, 90–109.
12. Drummer, O. H., Gerostamoulos, J., Batziris, H., Chu, M., Caplehorn, J., Robertson, M. D., & Swann, P. (2004). The involvement of drugs in drivers of motor vehicles killed in Australian road traffic crashes. *Accident Analysis & Prevention*, 36(2), 239-248.
13. Duke, J., Guest, M., & Boggess, M. (2010). Age-related safety in professional heavy vehicle drivers: A literature review. *Accident*
14. Edwards, R., Larivé, J. F., & Beziat, J. C. (2011). Well-to-wheels analysis of future automotive fuels and powertrains in the European context. JRC, CONCAWE and Renault/EUCAR, 74.
15. Ehinomen, C., & Adeleke, A. (2012). An assessment of the distribution of petroleum products in Nigeria. *E3 Journal of Business Management and Economics*, 3(6), 232-241.
16. Fadare, S. & Ayantoyinbo, B. B. (2010) A Study of the Effects of Road Traffic Congestion on Freight Movement in Lagos Metropolis. *European Journal of Social Sciences*, 16(3),429-437
17. Filani, M. O. (1993). Transport and rural development in Nigeria. *Journal of Transport Geography*, 1(4), 248-254.
18. Giroto, E.; de Andrade, S.M.; Mesas, A.E.; González, A.D. & Guidoni, C.M. (2015). Working conditions and illicit psychoactive substance use among truck drivers in Brazil. *Occup. Environ. Med.* 72, 764–769.
19. Halvani, G., Nodoushan, R., & Nadjarzadeh, A. (2012). Relation between road accidents and sleep quality of heavy vehicle drivers in Yazd. *International Journal of Environmental Health Engineering*, 1(1), Article 40.
20. Haleem, K., & Gan, A. (2015). Contributing factors of crash injury severity at public highway-railroad grade crossings in the US. *Journal of safety research*, 53, 23-29.
21. Jamson, S. L., Hibberd, D. L., & Jamson, A. H. (2015). Drivers' ability to learn eco-driving skills; effects on fuel efficient and safe driving behaviour. *Transportation Research Part C: Emerging Technologies*, 58, 657-668.
22. Kadiri, A. B. (2008). "Evaluation of Medicinal Herbal Trade (Paraga) in Lagos State of Nigeria." *Ethnobotanical Leaflets* 1, Article 90.
23. Kehinde, O. S., & Olusegun, F. F. (2012). Taking alcohol by deception II: Paraga (alcoholic herbal mixture) use among commercial motor drivers in a south-western Nigerian city. *BMC research notes*, 5(1), 1-5.
24. Kimala, N. (2019). Knowledge and Practices of Bus Drivers on Non-Communicable Diseases and Their Risk Factors in Singida Municipality (Doctoral dissertation, Mzumbe University).
25. Machin, M. A., & Sankey, K. S. (2008). Relationships between young drivers' personality characteristics, risk perceptions, and driving behaviour. *Accident analysis & prevention*. 40(2), 541-547.
26. Makanjuola, A.B., Oyeleke, A.S & Akande, T.M (2007a). Psychoactive substance use among long distance vehicle driver in Ilorin. *Nigerian Journal of Psychiatry*; 5 (1): 14-18.
27. Makanjuola A.B., Daramola, T.A & Obemebe, O.A (2007b). Psychoactive Substance use among medical

- students in a Nigerian University. *World Psychiatry*, 6:48-50.
28. McCall, B., & Horwitz, I. (2005). Occupational vehicular accident claims: A workers' compensation analysis of Oregon truck drivers 1990-1997. *Accident Analysis & Prevention*, 37, 767-774.
29. National Population Census (2006). Lagos Population.
30. Movig, K. L., Mathijssen, M. P. M., Nagel, P. H. A., Van Egmond, T., De Gier, J. J., Leufkens, H. G. M., & Egberts, A. C. (2004). Psychoactive substance use and the risk of motor vehicle accidents. *Accident Analysis & Prevention*, 36(4), 631-636.
31. Okpataku, C. I. (2016). Sociodemographic correlates of substance use among long distance commercial vehicle drivers. *Journal of Medicine in the Tropics*, 18(1), 6.
32. Olaniyi, D.T. (2020). Substance abuse and criminal behaviours among commercial vehicle drivers in Lagos state, Forensic Research & Criminology. *International Journal*, 8(1):42-50
33. Omolase, C.O., Afolabi, O.T., Omolase, B.O & Ihemedu, C.O. (2011). Drink-driving among commercial drivers in a Nigerian community. *Middle East Journal of Psychiatry and Alzheimer's*; 2: 15-19.
34. Tamir, A., & Topaz, I. (2010). U.S. Patent No. 7,821,421. Washington, DC: U.S. Patent and Trademark Office.
35. The Guardian (2020). Lagos to tackle truck drivers menace with ember months campaign, 28 August, 2020. <https://guardian.ng/features/lagos-to-tackle-truck-drivers-menace-with-ember-months-campaign/>
36. Oshodi, O. Y., & Aina, O. F. (2007): Paraga ('Masked Alcohol') Use and the Associated Socio-Cultural Factors among the Yoruba of South West Nigeria: A Case Study of Secondary School Students in Lagos. *Quarterly Journal of Mental Health* 1: 1.
37. Oni, S. I., & Okanlawon, K. (2006). Nigeria's transport infrastructural development: an integral part of the national economic empowerment and development strategy (NEEDS). *Journal of Social and Policy Issues*, 3(2), 7-13.
38. Perkins, H. W. (2002). Surveying the damage: a review of research on consequences of alcohol misuse in college populations. *Journal of Studies on Alcohol*, supplement, (14), 91-100.
39. Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *The Lancet*, 365(9458), 519-530.
40. Sadeghniaat-Haghighi, K., & Yazdi, Z. (2015). Fatigue management in the workplace. *Industrial psychiatry journal*, 24(1), 12.
41. Saltzman, G., & Belzer, M. (2007). Truck driver occupational safety and health: 2003 conference report and selective literature review. Retrieved from <http://www.cdc.gov/niosh/...2007-120/pdfs/2007-120.pdf>
42. Sowunmi, O. A., Amoo, G., Onifade, P. O., Ogunwale, A., & Babalola, E. (2019). Psychoactive substance use among outpatients with severe mental illness: A comparative study. *South African journal of psychiatry*, 25(1), 1-7.
43. (1), 1-7.
44. Ubogu, A. E. (2011). The Potentials of Rail-Road Integration for Port-Hinterland Freight Transport in Nigeria. *International Journal for Traffic & Transport Engineering*, 1(2).
45. Ukoji, V. N. (2014). Trends and patterns of fatal road accidents in Nigeria (2006-2014). Internet: <http://www.infra-nigeria.org/IMG/pdf/fatalroad-accidents-nigeria.pdf> Nov, 28.
46. Zhang, G., Yau, K., & Chen, G. (2013). Risk factors associated with

traffic violations and accident severity in China. *Accident Analysis & Prevention*, 59, 18-25.
doi:10.1016/j.aap.2013.05.004

47. World Health Organization. (2009). *Global Status Report on Road Safety: Time for Action*. Geneva, Switzerland.