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BOOK OF ABSTRACTS

COLLABORATING INSTITUTIONS & ORGANIZATIONS:



ANALYSIS OF ROAD SAFETY CONSCIOUSNESS AMONG URBAN PUBLIC TRANSPORT OPERATORS IN THE CITY OF ILARO

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Abstract: *This study analyzes road safety consciousness among urban public transport operators, with the aim of assessing the level of road safety awareness and examining the relationship between compliance with driving rules and road safety consciousness. Primary data were collected using structured questionnaires administered to 211 randomly selected urban public transport operators from public transport parks in the city of Ilaro, Ogun State, Nigeria. Correlation and regression analyses were used to determine the relationships between driver consciousness and compliance with traffic laws. Findings revealed a low rate (26%) of consciousness of traffic rules and regulations, safety measures, and rules of the road among the operators. Correlation analysis showed a moderate positive relationship between awareness and compliance ($r = 0.457$, $p < 0.01$). Regression results further indicated that awareness significantly predicts compliance, explaining about 20.9% of its variation. The study concludes that engineering and enforcement of rules can bring about desired changes in drivers' attitudes, especially when combined with adequate education. It therefore recommends that policymakers and traffic management agencies promote road safety education programmes to complement the enforcement of traffic regulations.*

Keywords: *Road safety, Public transport operators, Traffic compliance, Driver consciousness*

ANALYSIS OF ROAD SAFETY CONSCIOUSNESS AMONG URBAN PUBLIC TRANSPORT OPERATORS IN THE CITY OF ILARO

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This study analyzes road safety consciousness among urban public transport operators, with the aim of assessing the level of road safety awareness and examining the relationship between enforcement of driving rules and road safety consciousness. Primary data were collected using structured questionnaires administered to 211 randomly selected urban public transport operators from public transport parks in the city of Ilaro, Ogun state, Nigeria. Correlation and regression analyses were used to determine the relationships between drivers' consciousness and enforcement of traffic laws. Findings revealed a low rate (26%) of consciousness of traffic rules and regulations, safety measures, and rules of the road among the operators. Correlation analysis showed a moderate positive relationship between awareness and enforcement ($r = 0.457$, $p < 0.01$). Regression results further indicated that enforcement significantly predicts awareness, explaining about 20.9% of its variation. The study concludes that engineering and enforcement of rules can bring about desired changes in drivers' attitudes, especially when combined with adequate and effective education programme. It therefore recommends that policymakers and traffic management agencies promote road safety education programmes with complementary enforcement of traffic rules and regulations.

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Introduction

Public transport operators dominate urban transport operations, they use different types of vehicles ranging from para-transit to high capacity buses, many of them spent the whole day on the road in a bid to make more money, often some have a designated route they ply throughout the day while some other operate on a flexible route depending on the available demand, this of course make them more vulnerable to road traffic crashes. The driver's education system in Nigeria is such that provide a one-time training to drivers in his life-time, refresher or retraining courses is not very common among the public transport operators, especially those in the informal sector. Drivers education as a strategy of road traffic management has not been given adequate attention, few agencies of government and some advocacy group who embark of road safety education only focus on certain period of the years during which they take road safety campaign to motor parks and garages to sensitize public transport operators,

UN action plan on road safety identifies as one of the key pillar ‘safer road users’, which suggest a road safety conscious road users including the drivers, pedestrian, and others. Effort by the road traffic management agencies in Nigeria at raising the consciousness of road users are in the area of periodic public enlightenments, radio jingles, television and radio talk show etc. to what extent as all these effort increased the consciousness of the road users is the fundamental question this paper aim to answer by assessing the level of road safety awareness and examining the relationship between enforcement of driving rules and road safety consciousness

Road safety awareness of public transport operators emphasizes the critical role of professional driver training, regulation, and certification to improve safety outcomes and reduce accidents caused largely by human error. The International Road Transport Union (IRU), during the 8th United Nations Global Road Safety Week 2025, highlighted that heavy-duty vehicle-related accidents, including those involving buses and coaches, are mainly linked to human behavior, and thus increasing awareness and education among drivers is essential. They advocate for formalizing and professionalizing the public transport sector with safety standards and certifications to reduce road deaths and injuries (International Road Transport Union, 2025).

Effective interventions highlighted in recent studies identified among others capacity building, and comprehensive training programs tailored for public transport operators has been particularly impactful in raising awareness in low and middle-income countries (National Highway Traffic Safety Administration, 2025). Corroborating this, the US National Roadway Safety Strategy 2025 reinforces the importance of road safety education to enhance road safety awareness and reduce casualties among all road users, including public transport operators (U.S. Department of Transportation, 2025). Ajayi & Solomon, 2024 similarly identified major risk factors contributing greatly to road safety outcome in Nigeria, the study pointed out that driver behavior significantly impacting safety negatively, and recommends driver training, and infrastructure improvements to enhance safety awareness and outcomes in public transport operations.

Stakeholder engagement and public education campaigns are foundational to road safety awareness. Studies show that public education and information dissemination through media, religious institutions, community outreach, and social media are perceived as very effective and relatively easy to implement methods to raise awareness among both drivers and passengers (Uzundu, Jamson, & Marsden, 2022). Mustapha, (2025) corroborated that Tailored training programs that consider age, experience, and risk perception increase awareness, induce adherence or compliance to safety regulations and improve driver behavior.

Finally, modern technological solutions such as speed control devices and smart traffic management systems have shown promise in pilot projects within African urban contexts, though their adoption in Nigeria is still evolving (EIT Urban Mobility, 2024). Together, these methodological components—public education, formal driver training, legislative enforcement, infrastructure development, and technology adoption—form an integrated strategy necessary to

significantly increase road safety awareness among Nigeria's public transport operators.

Increased road safety awareness or consciousness among public transport operators has been shown to have a positive effect on road safety outcomes by reducing risky driving behaviors and lowering accident rates. Enhanced awareness leads to improved compliance with traffic laws, safer driving practices, and greater attention to passenger and pedestrian safety. For instance, safety training and behavior monitoring programs in public transit operations have demonstrably reduced instances of speeding, unsafe following, and incomplete stops, contributing to fewer crashes and injuries (Denver Regional Transportation District, 2025).

Data from the National Transit Database in the U.S. reveal that passengers traveling by bus are significantly safer than those traveling by car, with bus occupant fatality rates approximately ten times lower per mile than car occupants. Increasing awareness and professionalization among bus drivers is a key factor in maintaining these safer outcomes, especially as buses engage extensively in urban routes with vulnerable road users (Transit Advisory Committee for Safety, 2024). Public transportation investments, combined with awareness efforts, further contribute to safer travel environments by decreasing traffic casualties in communities, highlighting the broader positive externalities of enhanced road safety consciousness among public transport operators (American Public Transportation Association, 2016).

Moreover, reducing risky behaviors through awareness campaigns and safety programs not only enhances driver performance but also promotes safer road conditions for all users, including pedestrians and cyclists, who are often most vulnerable in traffic environments involving public transport (Morency et al., 2018). In sum, the evidence indicates that increased awareness among public transport operators is a cost-effective and impactful method for improving road safety outcomes by lowering fatality and injury rates, thereby saving lives and reducing the social and economic costs of traffic accidents.

The key gap in road safety awareness and consciousness among public transport operators in Nigeria, as reflected in the three reviews, centers on the incomplete translation of awareness into consistent, widespread safe driving behaviors and the systemic enforcement of safety regulations. While education and training programs exist, there is a persistent challenge in fully embedding road safety culture due to inadequate infrastructure, weak traffic law enforcement, and cultural attitudes that diminish respect for safety measures such as pedestrian rights and speed limits (Kange, 2025; Uzundu et al., 2022).

Further, road safety initiatives often focus on broad awareness campaigns but lack sustained, data-driven, and localized interventions tailored to specific contexts of informal and formal public transport sectors. There is also a shortage of comprehensive, reliable data on driver behavior and accident causation which hampers targeted policy action (Kange, 2025). Behavioral change efforts are challenged by the societal and systemic norms that tolerate risky behaviors like speeding, overloading, and non-compliance with traffic signs.

Moreover, emerging gaps include insufficient engagement with vulnerable road users such as cyclists and pedestrians, who regularly interact with public transport vehicles but face high risks due to poor infrastructure and driver attitudes (Kange, 2025). The integration of modern technology for driver monitoring and enforcement is minimal in Nigeria compared to other contexts, limiting effectiveness of road safety consciousness programs.

In summary, the existing literature reveals that while increased awareness has positive effects,

the gap lies in translating this into sustained behavior change through stronger enforcement, infrastructure improvements, culturally appropriate education, better data collection, and technology adoption within Nigeria's public transport sector.

Methodology

Ilaro is a city with administrative functions and a hub for socio-economic activities of the Ogun west district of Ogun state. Apart from been local government headquarters for the Egbado or Yewa south local government, it also server as the political headquarters of the Yewa-Awori people of Ogun state, thus became socio-economic, political and economic hubs of the region, with a good number of towns, cities and rural area that are looking up to it as the center. Ilaro is geographically located in the western part of Ogun state which boarder with Ifo, Idi-Iroko, Yewa North and Ipokia Local Government Area of Ogun State. The town house a tertiary educational institution, Dangote cement factory in its neighboring village, hospitality industry and a good number of agro-production industry. The city is accessible mainly by road and public transport is the major mean of both intra and inter-city movement of goods and people.

This study was design on questionnaire survey, for the collection of primary data from the public transport operators. Structured questionnaires was administered on 211 randomly selected public transport operators from public transport parks in the city. The data obtained were processed with descriptive statistics mean score and percentages to determine the level of consciousness, and Correlation and regression analyses were used to determine the relationships between driver consciousness and enforcement of traffic laws as well as the contribution of enforcement in awareness. The analysis was carried out using SPSS version 24.

Presentation of Results

The result is presented under three sub-headings, the level of awareness, correlation between the enforcement and awareness and the prediction of contribution by enforcement to the awareness of traffic rules and regulations by the transport operators.

Level of awareness among the transport operators

Eight variables were used to assess the level of road safety awareness among the public transport operators, each variable assess key issues of awareness and the summary score were analysis in Table 1.

Table 1: level of awareness of traffic rules and regulations

	Variables	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1	Seatbelt usage is not always necessary	89	60	5	24	33	
		445	240	15	48	33	156.2
2	Speeding on highway is good	71	84	27	6	23	
		355	336	81	12	23	161.4
3	Alcohol and drugs keep drivers alive	56	70	53	20	12	
		280	280	159	40	12	154.2
4	Parking at intersection is good provided is not obstructing	112	34	17	27	21	
		560	136	51	54	21	164.4
5	Obstructing other road users from overtake you is good	51	81	11	25	43	
		255	324	33	50	43	141
6	Not necessary to give way when a smaller vehicle is approaching	8	36	61	63	43	
		40	144	183	126	43	107.2
7	Pedestrian don't have a right of ways anywhere on the road	20	138	17	30	6	
		100	552	51	60	6	153.8
8	Waiting for traffic signal is a waste of time	25	53	59	44	30	
		125	212	177	88	30	126.4
							145.6
							26%

Correlation between Road Safety Awareness and enforcement

Table 2 revealed that the Pearson correlation coefficient between awareness and enforcement is 0.457, which is both positive and statistically significant ($p < 0.01$). This indicates a moderate positive relationship exist between awareness and enforcement. The analysis revealed that as enforcement increases, awareness also improves.

Table 2 Correlation between Road Safety Awareness and enforcement

A (Awareness)	Pearson Correlation	1	.457
	Sig. (2-tailed)		.000
	N	211	211
B (Enforcement)	Pearson Correlation	.457	
	Sig. (2-tailed)	.000	
	N	211	211
Note: Correlation is significant at the 0.01 level (2-tailed).			

Source: SPSS Output, 2025

Regression Analysis Model

Table 3 revealed that the correlation (R) is 0.457, indicating a moderate relationship. The

coefficient of determination (R^2) = 0.209, meaning 20.9% of the variation in awareness is explained by enforcement, while 79.1% is due to other factors.

Table 3: Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.457 ^a	.209	.205		.47977
a. Predictors: (Constant), A					

Source: SPSS Output, 2025

ANOVA of the Regression Model

Table 4 revealed that the regression model is statistically significant ($F = 55.083$, $p < 0.05$). This means that enforcement of traffic rules and regulations significantly predicts awareness.

Table 4.27: ANOVA of the Regression Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.679	1	12.679	55.083	.000 ^b
	Residual	48.107	209	.230		
	Total	60.786	210			
Dependent Variable: B Predictors: (Constant), A						

Source: SPSS Output, 2025

Regression Coefficients

Table 4.28 reveals that awareness has a positive and significant effect on compliance ($B = 0.445$, $p < 0.05$). This means that for every one-unit increase in awareness, compliance increases by 0.445 units, holding other variables constant.

Table 4.28: Regression Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.630	.179		9.130	.000
	A (Awareness)	.445	.060	.457	7.422	.000

a. Dependent Variable: B

Source: SPSS Output, 2025

Discussion of Results

Respondents generally exhibited a high level of awareness regarding road safety measures, with many expressing agreement or strong agreement with statements about safe driving practices.

These results are consistent with studies by Okaka and Rwothumio (2018) and Kaur (2023), which highlight the effectiveness of public awareness campaigns in enhancing road safety knowledge. However, responses to certain indicators, such as Q6, showed lower levels of awareness, indicating the need for targeted education and training, as also suggested by Uzundu, Jamson, and Marsden (2023).

The analysis of road safety behavior and compliance revealed generally positive practices, with most respondents following safety guidelines. Nonetheless, mixed responses on some items point to inconsistencies between knowledge and practice, echoing previous findings by Odutuwa et al. (2019) and Okafor et al. (2014) that awareness alone does not always result in full compliance with safe driving behaviors.

Correlation and regression analyses revealed a moderate positive association between awareness and compliance, indicating that increased awareness is linked to improved adherence to road safety rules. This aligns with the findings of Adams and Onuka (2012) and Ojekunle, Oluwole, and Ohida (2017), which demonstrate that driver education and awareness programs significantly influence compliance with traffic regulations. Overall, these results underscore the importance of strengthening awareness campaigns, enhancing formal driver training, and improving enforcement measures to promote consistent road safety compliance among commercial drivers within the research area.

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