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Does Reckless Driving Predict Road Traffic Accidents Among Commercial Drivers?

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Abstract

Road traffic accidents have remained a major global concern due to their devastating social and economic effects on the individuals, families, society and the nation. While studies have addressed the non-human factors as the cause of road traffic accidents, studies addressing the human factors seem sketchy. Therefore, this study examines the predictive role of reckless driving on road traffic accidents among commercial drivers in Obio/Akpor in Rivers State, Nigeria. Cross-sectional survey design was adopted while purposive sampling technique was used to select the study population. Two validated questionnaires were used to collect data from 238 participants and analyzed using simple linear regression to test a hypothesis which was accepted at p<.001 level of significance. The result demonstrated that reckless driving significantly correlated with road traffic accidents among study participants, R^2 =.570, F (1,236) = 270.614, p <.001. Furthermore, reckless driving significantly predicted road traffic accidents among commercial drivers (β = .755, p<.001). The study concludes that reckless driving significantly contributed to road traffic accidents among study participants. The study recommends all stakeholders should take proactive measures to checkmate reckless driving among commercial drivers to reduce road traffic accidents.

Keywords: Reckless driving, road traffic accidents, commercial drivers

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INTRODUCTION

Road traffic accident (RTA) is any unexpected event involving one or more vehicles, pedestrians, or obstacles that results in injury, death, or property damage (World Health Organization [WHO], 2023). Also, WHO (2023) estimates that about 1.3 million people die annually from road traffic accidents with millions more suffering from non-fatal injuries, many of which lead to long-term disabilities. In developing countries such as Nigeria, the economic and human cost of road traffic accidents is significantly high, as road transport remains the dominant means of movement for people and goods (Metu et al., 2022). The financial burden of road crashes extends beyond individuals and families to affect the national economy, healthcare systems, and overall productivity (Ayodeji et al., 2020; Oluwaseyi & Gbadamosi, 2017; Nalchadzian, 2024).

Several factors have been identified to predict road traffic accidents including poor road infrastructure, poor traffic management, corruption and human factors. The human factor considered in this study as a predictor of road traffic accidents is reckless driving by commercial drivers. Reckless driving is any action by the driver that leads to loss of control of the vehicle thereby causing accidents to the drivers and other road users. Such behaviors include over speeding, poor traffic management, running red lights, tailgating, non-use of seat belts, and improper overtaking (Aderibigbe et al., 2022; Olapegba et al., 2023; Roberts et al., 2022a; Roberts et al., 2022b).

Studies on reckless driving as the causes of road traffic accidents have been documented. For instance, **Taiwo et al.** (2025) found that reckless driving behaviors especially that of over speeding and disregard for traffic rules are strong predictors of fatal crashes among commercial drivers in Abuja, Kano, Kogi, Lagos, and Rivers in Nigeria. Earlier, the World Health Organization (WHO, 2018) revealed that nearly half of road crashes in Sub-Saharan Africa were attributable to risky and reckless driving behaviors. Moreover, Oluwadiya et al. (2020) found in Enugu State that commercial drivers who admitted to aggressive overtaking and ignoring road signs were significantly more likely to be involved in road traffic accidents compared to their more cautious counterparts. Finally, Samuel and Amini (2021) reported that reckless practices such as overloading and speeding increased both the frequency and severity of accidents among commercial tricycle operators in Rivers State.

Commercial drivers play a crucial role in the transportation sector, providing transportation services for passengers and goods. However, their involvements in reckless driving behavior have raised concerns about road safety for a long time. Therefore, given the high prevalence of reckless driving in Rivers State, it is imperative to examine the extent to which reckless driving predicts road traffic accidents among commercial drivers in

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Obio/Akpor. The study sought to provide an answer to the question: Will reckless driving predict road traffic accidents among commercial drivers in Obio/Akpor LGA, Rivers State, Nigeria?

The result of this study would provide valuable insights on the role of reckless driving on road traffic accidents among commercial drivers. In addition, the study would provide valuable data to policymakers, road safety agencies, and transportation stakeholders on how to develop effective strategies aimed at reducing reckless driving behaviors among commercial drivers.

THEORETICAL REVIEW

Merton's Strain Theory provides a sociological perspective on deviant behavior by explaining how individuals resort to unconventional or illegal means when they experience a disconnect between societal expectations and the available opportunities to achieve them. Merton argued that societies establish culturally approved goals, such as financial success, but not all individuals have equal access to the legitimate means of achieving these goals. When people, particularly those from lower socio-economic backgrounds, are unable to attain success through conventional pathways, they would turn to alternative strategies, including crime and deviant behavior, to bridge this gap.

In the context of reckless driving among commercial drivers, Strain Theory offers a useful framework for understanding why many drivers engage in traffic violations despite the known risks. Many commercial drivers operate under extreme financial pressure, and the nature of their job demands that they maximize their daily earnings. When the formal economic structure does not provide sufficient opportunities for financial stability, drivers would feel compelled to engage in risky behaviors such as over-speeding, overloading passengers, running red lights, and ignoring road regulations to complete more trips and increase their incomes. The constant struggle to meet financial obligations, such as vehicle maintenance costs, daily remittances to transport unions, and family responsibilities, places them in a position where reckless driving becomes an attractive alternative to simply adhering to traffic laws and risking low earnings, thus leading to frequent road traffic accidents.

Some studies have supported the validity of strain theory when applied to reckless driving and road traffic accidents. For instance, Agbiboa (2020) found that commercial drivers who experienced economic strain were significantly more likely to engage in reckless driving. Similarly, Onyema and Uche (2021) found in a study in Port Harcourt that financial stress was a major factor predicting drivers' disregard for road safety regulations. Finally, Adams and Mbah (2022) reported how transport union levies and competitions

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among drivers created an environment where reckless driving became a necessity rather than a choice. These studies supported the idea that reckless driving is often not an individual moral failing, but rather a structural issue rooted in economic strain and social pressures.

The study tested the hypothesis that reckless driving will significantly predict road traffic accidents among commercial drivers in Obio/Akpor in Rivers State, Nigeria.

METHOD

Research Design

The study was a cross-sectional survey design using validated questionnaires to collect data from study participants. The independent variable was reckless driving while the dependent variable was road traffic accidents.

Setting and Study Population

The study population comprises all commercial drivers operating within Obio/Akpor Local Government Area of Rivers State. These include drivers of buses, taxis, tricycles (Keke), and other forms of commercial transport who are registered with the local transport unions or associations. The estimated population was obtained from official records of transport unions and relevant government agencies overseeing transportation in the area. The population served as the focus of the study since they are directly involved in daily road usage and are more likely to exhibit or be affected by reckless driving behaviors.

Sampling Technique Procedure

Purposive sampling technique was used to select commercial drivers from the total population in Obio/Akpor LGA. Convenience sampling method was used for the distribution of the research questionnaires to the potential participants.

Instruments

Two validated questionnaires were used for data collection:

Driving Style Questionnaire (French et al., 1993) was used to measure various aspects of drivers' behavior such as aggression, risk-taking, and adherence to traffic rules. It is a 15-item scale rated on a 5-point Likert's response format of Never, Rarely, Sometimes, Often, and Always. Sample items include: "Do you drive under the influence of drug, medicine, or other inhibitory substances", and "Do you drive without seat belt or ensuring that other occupants of the vehicle wear their seat belt". The authors' Cronbach's α ranges from 0.76 to 0.85, and in the current study Cronbach's α = 0.82.

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Road Accident History and Consequence Questionnaire (Clapp et al., 2011) was used to assess whether the participants have experienced road accidents and the extent of consequences associated with such incidents. It is a 14-item scale rated on a 5-point Likert's format of Never, Rarely, Sometimes, Often, Always. Sample items include: "I have personally been involved in a road accident in the past 5 years", and "Reckless driving is one of themain causes of road accidentsin my area". Authors obtained Cronbach' α ranging from 0.78 to 0.82, and in the current study, Cronbach's α = 0.85 was obtained.

Data Collection

Potential participants were met in their respective motor parks, transport union offices and commercial taxi-cab parks. They were approached by the researchers with a letter of identification. They were briefly informed of the purpose of the study and asked for their consent to participate in the study. Those who agreed to participate were assured of confidentiality of their responses and were given the questionnaires to fill and collected on the spot with a total of 238 questionnaires that were used for the analysis.

Data Analysis

IBM SPSS version 26 was used to analyze data collected. Both descriptive and inferential statistics were collected. The hypothesis was tested using simple linear regression analysis and accepted at p <.001 level of significance.

RESULTS

Table 1: Participants' Demographic Information

Variable	Categories	Frequency	%
Age	18–24 yrs	62	26
	25–34 yrs	69	29
	35–44 yrs	54	23
	45–54 yrs	33	14
	55+ yrs	20	8
Gender	Male	171	72
	Female	67	28
Marital Status	Single	41	17
	Married	158	66
	Divorced	23	10

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	Widowed	16	7
Years of Driving Experience	0–2	48	20
	3–5	69	29
	6–10	61	26
	11+	60	25
Type of Vehicle	Taxi	72	30
	Bus	81	34
	Truck	47	20
	Tricycle	38	16
Driving Hours Daily	<4 hrs	44	19
	4–8 hrs	103	43
	>8 hrs	91	38
Monthly Income	< ₦50,000	64	27
	₦50,000–₦100,000	102	43
	> ₦100,000	72	30
History of Road Accident	Yes	143	60
	No	95	40
Total		238	100.0

Table 1 presents demographic variables of the study participants. Descriptive statistics revealed the majority (29%) of the participants were between the 25 – 34 years age bracket, with disproportionate participants (72%) being males and were married (66%). In terms of years of experience in driving, 29% of the participants have been driving for between 3 and 5 years, 43% drive between 4 and 8 hours per day. Finally, when asked whether they have had accidents before, 60% of the participants gave affirmative yes-answers.

Testing the hypothesis…

Reckless driving will significantly predict road traffic accidents among commercial drivers in Obio/Akpor LGA. The hypothesis was tested using simple linear regression and the results are presented in Tables 2a-c.

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Table 2a: Model of Reckless Driving on Road Traffic Accidents among Commercial Drivers

Model	R	R Square	Adjusted R^2	Std. Error of the Estimate
1	.755	.570	.568	8.210

Table 2b: ANOVA of Reckless Driving on Road Traffic Accidents among Commercial Drivers

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17752.314	1	17752.314	270.614	.001b
Residual	15500.126	236	65.678		
Total	33252.440	237			

Table 2c: Coefficients Predicting Road Accidents from of Reckless Driving

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	14.892	3.014		4.940	.001
Reckless Driving	1.157	.071	.755	16.448	.001

Table 2a-c shows the result of the regression analysis carried out to determine if reckless driving will predict road traffic accidents among commercial drivers in Obio/Akpor. The result revealed that reckless driving significantly predicted road traffic accidents among study participants, R^2 =.570, F (1,236) = 270.614, p<.001. The standardized beta coefficient (β = .755, p<.001) indicates a high and statistically significant predictive relationship. The unstandardized coefficient (B=1.157) suggests that for every one-point increase in reckless driving, road accidents increase by approximately .071 points. Furthermore, the model explains that reckless driving accounted for 57% of variance in road traffic accidents, a proportion considered high and meaningful in behavioral research. This supported the hypothesis.

DISCUSSION

The hypothesis that reckless driving will independently predict road traffic accidents among commercial drivers in Obio/Akpor LGA was supported. Reckless driving including

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speeding, tailgating, dangerous overtaking, ignoring traffic lights, and driving under risky conditions accounted for 57% of the variation in traffic accidents among drivers in the study area. This finding is consistent with previous results identified reckless driving behavior as a major predictor of road crashes. For example, this finding corroborates that of Adebayo and Olubiyi (2019) who found reckless driving behaviors, especially over speeding and disregard for traffic rules as the strong predictors of fatal crashes among commercial drivers in Lagos State. Collaboratively, Onyemaechi et al. (2020), and Samuel and Amini (2021) reinforced the present findings that reckless driving behaviors play a critical role in increasing road traffic accidents.

These findings collectively support the evidence from Obio/Akpor, reinforcing the conclusion that reckless driving behaviors play a critical role in shaping road accident rates. However, some studies such as that of Oluwatosin (2017) who argued that reckless driving alone does not fully explain accident causation unless combined with poor road infrastructure. This perspective suggests that while reckless driving is a major factor, infrastructural weaknesses may also compound accident risks in the study area.

CONCLUSION

The study investigates reckless driving as a predictor of road traffic accidents among commercial drivers in Obio/Akpor Local Government Area in Rivers State, Nigeria. The results confirmed that reckless driving is a robust predictor of road traffic accidents in the study area.

Recommendations

The study put forth the following recommendations:

First, relevant authorities such as the Federal Road Safety Corps (FRSC) and the Vehicle Inspection Officers (VIO) should intensify enforcement against reckless driving practices such as speeding, dangerous overtaking, and disregard for traffic signals. Penalties for violations should be consistently applied to serve as deterrents. In addition, continuous public enlightenment programs should be organized by government agencies, transport unions, and NGOs to sensitize commercial drivers on the dangers of reckless driving. Awareness campaigns using road safety jingles, community workshops, and transport terminals should be intensified. Moreover, commercial drivers should undergo periodic retraining on defensive driving, proper road conduct, and safe driving techniques. Such training should be made mandatory for the renewal of drivers' licenses.

Furthermore, transport unions should play a central role in monitoring and regulating their members. They should establish disciplinary measures against members

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who consistently engage in reckless or distracted driving. Next, beyond punishment, safe driving behaviors should be rewarded. Transport companies and unions could introduce recognition programs (e.g., "Safety Driver of the Month") to encourage compliance with safe practices. Finally, while driver behavior is critical, road safety is influenced by the driving environment. Government authorities should ensure that road networks are well maintained, traffic signs are clear and visible, and speed-calming devices are installed at accident-prone locations.

Limitations and suggestions for further study

The study has some limitations worth addressing in further study. To begin with, the study use of self-reported questionnaires for data collection introduced social desirability bias, therefore, multiple methods of data collection including focus group discussion, observation method, and the use of CCTV cameras would generate multiple data to triangulate self-reported data. In addition, the use of only one LGA hindered generalization of results, therefore, more LGAs with increased sample size would enhance generalization of findings. Finally, the study focused on reckless driving and did not account for other potential predictors such as alcohol consumption, mechanical faults, weather conditions, and road infrastructure, therefore, further study would benefit in the inclusion of substance use, self-esteem and personality traits.

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