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Impact of Commercial Drivers' Level of Literacy on Road safety Rules, Awareness and Compliance level in Ogbomoso, Oyo State Nigeria

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Abstract

Road traffic accidents remain a major challenge of transportation with causes ranging from mechanical to human errors. However, driver literacy is identified as a potential determinant of drivers' capacity to interpret and apply formal and informal safety rules in order to avert road traffic accident. Thus, this study examined the impact of commercial drivers' literacy level on road safety rules awareness and compliance in Ogbomoso, Oyo State, Nigeria. A quantitative research design was employed, and data were collected from a sample of 300 randomly selected commercial drivers with structured questionnaire. Constructs were measured using a five-point Likert scale, and data were analyzed with Structural Equation Modeling (SEM). Reliability and Validity was confirmed, with Cronbach's alpha values above 0.80, Composite Reliability between 0.87 and 0.89, and Average Variance Extracted (AVE) values above 0.58. The findings show that drivers' literacy level had a strong positive effect on awareness ($\beta = 0.753$, CR = 7.854, $p < 0.001$) and on compliance ($\beta = 0.705$, CR = 7.571, $p < 0.001$). Awareness also significantly influenced compliance ($\beta = 0.630$, $p < 0.001$) and mediated the relationship between literacy and compliance. The finding of the study affirmed confirmed that literacy served as the foundation for awareness and compliance among commercial drivers in Ogbomoso, Oyo State, Nigeria. The study concluded that improved literacy strengthens both awareness and compliance with road safety rules. It is recommended that government should: integrate basic literacy test into drivers licensing issuing, also adopts simplified awareness campaigns, and embedding literacy initiatives into national road safety policies.

Keywords: Literacy, Road Safety Awareness, Compliance, Commercial Drivers, Structural Equation Modeling (SEM)

1. INTRODUCTION

Literacy level of drivers refers to the ability of the driver to read, write and understand basic information such as road signs, traffic symbols and safety instructions (Yusuf & Lawal, 2025). It is the cognitive and educational capacity that enables drivers to interpret rules and make informed decisions while driving. However, knowledge of road safety rules helps drivers to stay away from risky behaviors and minimize accidents on highways. Compliance ensures that these rules are followed consistently, protecting not only the drivers themselves but also passengers, pedestrians, and other road users (Abbas *et al*. 2024). These two terms are very germane due to the fact that road traffic accidents is one of the most serious public health and safety problems in Nigeria, and commercial drivers have been consistently identified as a high-risk group for road traffic crashes, injuries, and fatalities (Hagan *et al*., 2021). Ogbomoso, a fast-growing city in Oyo State, has experienced a tremendous increase in population, urbanization and vehicle use in recent years. This growth has led to an increased demand for commercial transport services, but drivers' behavior and compliance with safety regulations has not kept pace. Observations within the city indicate that many drivers exhibit only partial or non-adherence to road safety codes, despite regular enforcement efforts and sensitization programs organized by the Federal Road Safety Corps (FRSC) and other agencies.

Evidences from other Nigerian states show a persistent gap between safety knowledge and actual driving practices. Studies in Uyo found that while safety education improved the understanding of traffic signs by motorcyclists, it was difficult to translate the understanding into consistent compliance (Johnson & Adebayo, 2011). Research in Ilorin revealed that although 90% of commercial drivers knew the importance of seat belts, only 40% used them, with only 6.6% of them citing safety as their reason for using them (Usman & Adebosin, 2024). Investigations in Delta State showed that FRSC education programs could affect attitudes but not necessarily knowledge retention

(Nwadinigwe *et al*., 2018). Similarly, research on oil-and-gas tanker drivers in North-Central Nigeria attributed low compliance to illiteracy, poor training, and educational challenges (Mustapha *et al*., 2024). Resistance to interpretation of road signs among commercial drivers in Kaduna was also attributed to misunderstanding and low literacy (Abdulkareem *et al.* 2019).

These findings highlight an important research gap: most prior research has examined awareness, literacy, or compliance separately, with little effort to understand how these factors interact in shaping safe driving practices. There is also a paucity of empirical work addressing these relationships in medium-sized cities such as Ogbomoso, where rapid urban expansion, major inter regional road from Northern to Southern part of Nigeria is evident and increasing transport demand pose unique risks. The city has a diverse pool of commercial drivers, many of whom operate with limited formal education or low functional literacy. This raises questions about how well they understand, retain and apply the information conveyed through safety campaigns or licensing procedures.

Addressing this gap is important in the development of targeted interventions that reflect the socio-educational profile of drivers in Ogbomoso. This study therefore examines the effect of commercial drivers' literacy level on their awareness of road safety rules and their compliance with road safety rules in Ogbomoso, Nigeria. By clarifying the mechanisms that link literacy, awareness and compliance, the research aims to provide evidence that can strengthen policy and practice for road safety in Nigeria's urban centers.

2. LITERATURE REVIEW

2.1 Literacy and Drivers' Awareness of Road Safety Rules

Literacy is a critical determinant of how drivers understand and internalize road safety information, but in Nigeria, many commercial drivers have limited formal education which affects their capacity to interpret signs, codes, and safety messages. Afelumo *et al*. (2021) reported that motorcycle riders with secondary or higher education were almost twice as likely to exhibit knowledge of accident prevention measures than those with little schooling, highlighting the importance of literacy in enhancing understanding of road safety practices. Similarly, Amah *et al*. (2022) revealed that only 59 percent of commercial bus drivers in Lagos could correctly interpret road traffic signs, while none of them could correctly identify the maximum speed limit, with older and less educated drivers scoring lowest. These findings suggest that literacy is not a peripheral factor but a foundational one in developing road safety awareness. Mustapha *et al*. (2024) reinforced this in their study on tanker drivers, where they found high nominal awareness of road safety but poor understanding and practical knowledge, attributing this to widespread illiteracy and lack of structured training. When drivers cannot interpret even basic signage, enforcement loses its deterrent effect, as safety rules are not embedded in cognitive processing. Therefore, literacy is the gateway to meaningful awareness and without it, awareness initiatives are superficial. It is therefore hypothesized that: Commercial drivers' literacy levels are positively associated with their awareness of road safety rules.

2.2 Awareness and Compliance with Road Safety Rules

Awareness alone does not always result in compliance, and this paradox has been documented in many Nigerian studies. Usman and Adebosin (2024) showed that while 90 percent of inter-urban commercial drivers in Ilorin recognized the importance of wearing seat belts, only 40 percent of them always wore them. Even more striking was the fact that less than 7 percent did so for safety reasons, with most citing fear of fines or penalties. Johnson and Adebayo (2011) studied commercial motorcyclists in Uyo and found that a structured safety education program improved knowledge and compliance rates in the short term, but long-term adherence was uncertain, pointing to the fragility of awareness when not reinforced by deeper comprehension. Amah *et al*. (2022) conducted a post-license road safety education intervention among Lagos drivers, which increased knowledge scores substantially but did not improve compliance with speed limits, further proving that knowledge or awareness alone does not translate directly to behavior. These findings point to a disconnect: drivers may know about safety requirements but don't internalize them enough to practice them consistently. Literacy may be the missing mechanism to enable awareness to translate into compliance, by influencing how drivers interpret and prioritize road safety knowledge in real contexts. It is also hypothesized that: Higher levels of road safety awareness among drivers are associated with higher compliance with road safety rules.

2.3 Literacy as a Foundation for Sustainable Behavioral Change

Nwadinigwe *et al.* (2018) also demonstrated that while FRSC road safety programs influenced drivers' attitudes and behaviors, they had little effect on actual knowledge of traffic codes, exposing the superficiality of change when literacy is not embedded. Salaudeen (2019) found that in Kwara State, 95 percent of drivers had valid licenses, but many drivers still admitted to alcohol use and risky driving practices, indicating that formal credentials without functional literacy are not enough to ensure safe behavior. Similarly, Adekoya (2011) observed high levels of mobile phone use among Lagos commercial drivers despite awareness of its dangers. These studies converge on the idea that literacy is not optional but necessary for transforming awareness into durable behavioral change. Without literacy, road safety campaigns and driver education risk being temporary fixes that fail to achieve long-term reductions in accidents. The third hypothesis to be verified here therefore is that: Commercial drivers' literacy levels are directly and positively associated with their compliance with road safety rules.

2.4 The Mediating Role of Awareness in the Literacy-Compliance Relationship

Although the concepts of literacy, awareness and compliance have been studied separately, the interconnections among them have not been well articulated in the Nigerian road safety literature. Mustapha *et al*. (2024) acknowledged that educational limitations affect compliance among tanker drivers, but their framework did not examine whether awareness mediates the relationship. Similarly, studies by Usman and Adebosin (2024) and Johnson and Adebayo (2011) highlight disparities between awareness and compliance but fail to explore literacy as the antecedent variable. This fragmented approach has left a theoretical void where the pathway from literacy to compliance through awareness is rarely examined systematically. Structural equation modelling provides a tool for testing such indirect effects and could help explain whether awareness mediates the relationship, explaining why awareness interventions alone often fail. Integrating literacy as an antecedent and awareness as a mediator would add depth to the field by linking these currently fragmented strands. If literacy leads to awareness, and awareness leads to compliance, interventions can be more focused on strengthening literacy and embedding simplified road safety messages. This approach would prevent the shallow results reported in previous studies and encourage more sustainable behavioral changes among commercial drivers. It is again hypothesized that: Awareness mediates the relationship between drivers' literacy levels and their compliance with road safety rules.

2.5 Gap in the Literature

Despite the extensive research on road safety in Nigeria (Yusuf & Lawal, 2025; Usman & Adebosin, 2024; Amah, et al. 2022; Salaudeen, 2019; Nwadinigwe et al. 2018), studies are fragmented, with literacy, awareness and compliance often treated in isolation. Existing studies focus more on awareness creation and enforcement but overlook literacy as the basis on which awareness is meaningful. Moreover, no Nigerian study has rigorously tested the mediating role of awareness between literacy and compliance using structural equation modelling. This leaves a critical gap in both theory and practice, as interventions are still piecemeal rather than integrative. Addressing this gap will enable policymakers and safety agencies to design literacy-sensitive interventions that link educational capacity with practical compliance, moving beyond surface awareness to lasting road safety outcomes.

2.6 Conceptual Framework

Figure 1 presents the conceptual framework of the study which relates drivers' literacy level, road safety awareness and road safety compliance. The framework assumes that literacy has a direct effect on awareness of road safety rules (H_1) and also has a direct effect on compliance with road safety rules (H_3). Awareness itself is expected to mediate compliance (H_2), and also mediate the relationship between literacy and compliance (H_4). This model emphasizes literacy as the key factor in understanding and complying with road safety regulations.

3. METHODOLOGY

The study was carried out in Ogbomoso, Oyo State Nigeria. This study adopted a quantitative research design that was suitable for analyzing causal relationships between variables using Structural Equation Modelling (SEM). SEM was selected because it allowed for the estimation of measurements and structural models simultaneously, which enabled the testing of direct and mediating effects of literacy on awareness and compliance (Hair *et al*., 2019). The population of the study was registered commercial drivers operating within Ogbomoso, including taxi, bus, and tricycle drivers affiliated with the National Union of Road Transport Workers

(NURTW). A total of 300 respondents were randomly selected across major motor parks to provide sufficient data for robust SEM analysis and to reflect a fair representation of commercial drivers in the area (Pearlson *et al*., 2019)

A structured questionnaire was used as the primary instrument for data collection. These was divided into three sections, focusing on literacy levels, awareness of road safety rules and compliance behaviors, with all items measured on a five-point Likert scale. Literacy indicators included reading proficiency, interpretation of traffic signs, and comprehension of written safety instructions. Awareness items measured knowledge of traffic codes, penalties, and recognition of road safety symbols, while compliance items measured practices such as seat belt usage, observance of traffic lights, and adherence to speed limits. Content validity was established through expert review, and reliability was assessed using Cronbach's alpha and composite reliability, with thresholds of 0.70 and above considered acceptable (Holmbeck & Devine, 2009). Data analysis was carried out in two phases. Confirmatory factor analysis was first performed to establish the validity and reliability of the constructs. This was followed by Structural Equation Modelling (SEM) to examine the hypothesised relationships. Model fitness was assessed using indices such as CFI ≥ 0.90, RMSEA ≤ 0.08, and $\chi^2/df \leq 3$ (Hu & Bentler, 1999).

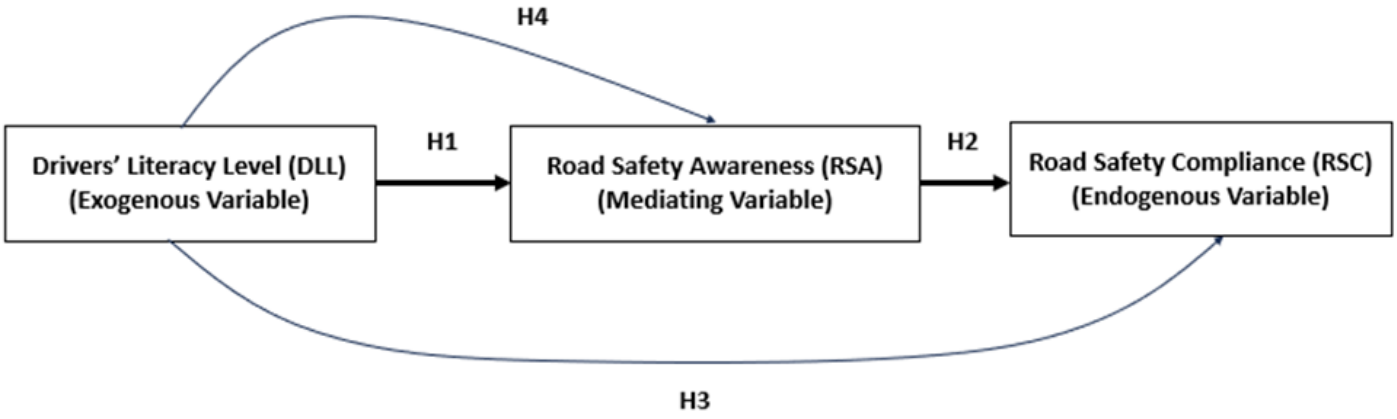

Figure 1: Conceptual Framework
Source: Authors' Conceptualization

4. RESULTS

4.1 Socio-economic Characteristics of the Respondents

The socio-economic characteristics of the respondents is presented in Table 1. In this finding, the age distribution revealed that most drivers were between 31-40 years (35.0%), followed by 41-50 years (27.0%), while 24.0% were younger (18-30 years). Only 14.0% were above 50 years. This indicated that respondents were concentrated in middle age, where road exposure and activity were highest. The small number of older drivers reflected a narrower contribution from this category in this study. Marital status results show that 63.0% of the drivers were married, and 23.0% were single and 14.0% were divorced or widowed.

This suggests that family responsibility was dominant in the sample, with smaller segments representing single and separated drivers. Educational attainment shows that 36.0% had secondary education and 31.0% had only primary school education. About 18.0% had no formal education and only 15.0% reached tertiary level. This pattern suggests that a significant proportion of the respondents had low literacy level, which may have affected how well they understood and followed safety rules. Driving experience reveal that 61.0% of the

Table 1: Socio-economic characteristics of the respondents

Characteristics	Categories	Frequency	Percentage (%)
Age	18–30 years	72	24.0
	31–40 years	105	35.0
	41–50 years	81	27.0
	Above 50 years	42	14.0
	Total	**300**	**100.0**
Marital Status	Single	69	23.0
	Married	189	63.0
	Divorced/Widowed	42	14.0
	Total	**300**	**100.0**
Education Level	No Formal Education	54	18.0
	Primary	93	31.0
	Secondary	108	36.0
	Tertiary	45	15.0
	Total	**300**	**100.0**
Driving Experience	Less than 5 years	48	16.0
	6–10 years	96	32.0
	11–15 years	87	29.0
	Above 15 years	69	23.0
	Total	**300**	**100.0**
Monthly Income	Below ₦30,000	51	17.0
	₦30,000–₦50,000	108	36.0
	₦51,000–₦70,000	87	29.0
	Above ₦70,000	54	18.0
	Total	**300**	**100.0**

Source: Filed Survey (2025)

drivers had more than 10 years of practice, and only 16.0% had less than 5 years. This meant that the sample was mostly experienced drivers. Finally, monthly income distribution reveal that 36.0% earned between $19.50 to $32.50, while 29.0% earned between $33.15 to $45.50. The smallest group of respondents (17.0%) are earning up to about $19.50. This income pattern implied modest earnings, which may influence drivers' motivation for compliance, especially when safety measures entail costs.

4.2 Reliability and Validity Statistics for Measurement Model

Table 2 show the reliability and validity statistics of the measurement model of drivers' literacy level, road safety awareness, and road safety compliance. The Cronbach's alpha values for all constructs were greater than 0.80, which indicate strong internal consistency among the items and was greater than the minimum threshold of 0.70 recommended for social science research (Holmbeck & Devine, 2009). Composite Reliability (CR) values ranged between 0.87 and 0.89, all well above the acceptable benchmark of 0.70, indicating that the constructs were measured reliably without error variance dominating the scale (Hair *et al*., 2019).

Furthermore, the Average Variance Extracted (AVE) values for all constructs ranged from 0.58 to 0.62, which were higher than the 0.50 standard, thus establishing convergent validity. This shows that the indicators were sufficient in capturing the variance of their respective constructs. The standardized loadings for all items were also greater than 0.70, indicating that each indicator made a meaningful contribution to its latent variable. Collectively, the evidence in Table 2 confirmed that the measurement model for this study was both reliable and valid, making it suitable for further structural analysis of the relationships between drivers' literacy, awareness of road safety rules, and compliance behavior.

Table 2: Reliability and Validity Statistics for Measurement Model

Construct	Item Code	Standardized Loading	Cronbach's Alpha	Composite Reliability (CR)	AVE
Drivers' Literacy Level (LL)	LL1	0.74	0.84	0.87	0.58
	LL2	0.76			
	LL3	0.72			
	LL4	0.78			
Road Safety Awareness (RSA)	RSA1	0.73	0.85	0.88	0.60
	RSA2	0.77			
	RSA3	0.75			
	RSA4	0.79			
Road Safety Compliance (RSC)	RSC1	0.80	0.86	0.89	0.62
	RSC2	0.78			
	RSC3	0.76			
	RSC4	0.81			

Source: Field Survey (2025)

4.3 Model Fit Indices

Table 3 shows that the structural equation model had good overall fit. The kh2/df ratio of 1.888 was below the upper limit of 3.0, indicating that the model was an adequate representation of the observed data (Kline, 2016). Goodness-of-fit indices such as GFI (0.949) and AGFI (0.923) were above the recommended cut-off of 0.90, indicating that the hypothesized model explained the variance and covariance among the indicators (Byrne, 2016). Similarly, incremental fit indices such as CFI (0.972), TLI (0.964), NFI (0.942), and IFI (0.972) were all greater than 0.90, indicating strong evidence that the model was a better fit than the null model (Hu & Bentler, 1999). The RMSEA value of 0.054 was within the acceptable range of 0.08, confirming reasonable approximation of the model to the population matrix (Browne & Cudeck, 1993). However, SRMR was slightly higher than the conventional 0.08 threshold at 0.120, which indicate some residual discrepancies, though not large enough to compromise the overall fit. Importantly, the Hoelter's critical N value of 213 was greater than the minimum 200, confirming adequate sample size and model stability (Hoelter, 1983). Taken together, the results in Table 3 confirm that the measurement model for literacy, road safety awareness, and compliance show satisfactory goodness-of-fit, validating its suitability for subsequent structural path analysis.

Table 3: Model Fit Indices for the Measurement Model

Fit Index	Obtained Value	Acceptable Threshold	Decision	Citation
χ^2/df	1.888	≤ 3.0	Acceptable	Kline (2016)
GFI	0.949	≥ 0.90	Acceptable	Hair *et al*. (2019)
AGFI	0.923	≥ 0.90	Acceptable	Byrne (2016)
CFI	0.972	≥ 0.90	Acceptable	Hu & Bentler (1999)
TLI	0.964	≥ 0.90	Acceptable	Bentler & Bonett (1980)
NFI	0.942	≥ 0.90	Acceptable	Bentler & Bonett (1980)
IFI	0.972	≥ 0.90	Acceptable	Hair *et al*. (2019)
RMSEA	0.054	≤ 0.08	Acceptable	Browne & Cudeck (1993)
SRMR	0.120	≤ 0.08	Acceptable	Hu & Bentler (1999)
Hoelter (.05)	213	≥ 200	Acceptable	Hoelter (1983)

Source: SEM Output (Author's Survey, 2025)

4.4 Test of Hypotheses

Figure 2 and Table 4 together presented the results of hypothesis testing for this study. Hypothesis 1 (H_1), which states that the literacy level of drivers would have a significant effect on their awareness of road safety rules, is supported, with an unstandardised estimate of 0.753 (C.R. = 7.854, $p < 0.001$). This suggests that the higher the literacy of drivers, the more aware they were of road safety rules. Hypothesis 2 (H_2), which stated that literacy would directly affect compliance with road safety rules, was also supported. The path DLL - RSC had a significant estimate of 0.705 (C.R. = 7.571, $p < 0.001$), indicating that drivers literacy contributed directly to their level of compliance. Thus, Hypothesis 3 (H_3), which predicted that awareness have a positive effect on compliance, was confirmed..

Finally, Hypothesis 4 (H_4), which stated that awareness mediated the relationship between literacy and compliance, was supported. The significant indirect pathway confirmed that literacy improved compliance in part through its impact on awareness. Collectively, the results supported the conceptual framework, confirming direct and indirect effects of literacy on compliance behavior.

Table 4: Test of Hypotheses

Hypothesis	Path	Estimate	S.E.	C.R.	P-value	Decision
H1	RSA ← DLL	0.753	0.096	7.854	***	Supported
H2	RSC ← DLL	0.705	0.093	7.571	***	Supported
H3	RSA → RSC	0.630*	—	—	***	Supported
H4	DLL → RSA → RSC (Mediation)	Indirect effect via RSA	—	—	***	Supported

*Note: Standardised regression weight for RSA → RSC = 0.630 (from standardized output).
***Significant at $p < 0.001$

Source: SEM Output (Author's Survey, 2025)

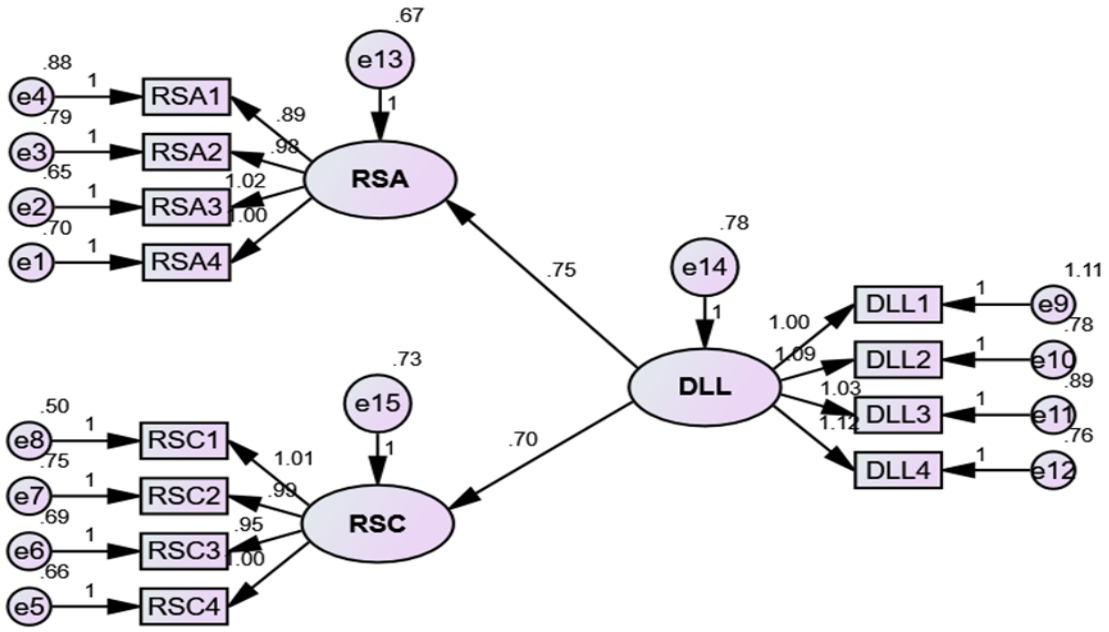

Figure 2: Output Path Diagram

Source: Authors' computation with AMOS

4.5 Discussion of Findings

The results of this study show strong evidence that the literacy level of commercial drivers had a significant effect on their awareness of road safety rules and their compliance behavior. The path coefficient between literacy and awareness was positive and significant, confirming Hypothesis 1. This finding is consistent with Afelumo (2021), who found that riders with higher levels of education were more likely to have accurate knowledge of accident prevention measures. Similarly, Amah *et al*. (2022) found that commercial bus drivers with low education in Lagos showed weaker knowledge of road signs and traffic codes. These comparisons indicated that literacy is a critical determinant of awareness, as higher literacy allowed drivers to better understand written and symbolic safety information. The results also confirmed that literacy had a direct and significant influence on compliance with road safety rules (Hypothesis 2). This supported the findings of Mustapha *et al*. (2024), who found illiteracy and poor educational background to be barriers to compliance among tanker drivers in North-Central Nigeria. Salaudeen (2019) also noted that drivers in Kwara State frequently had valid licenses but still ignored safety measures, indicating the insufficiency of licensing without functional literacy. Thus, literacy extends beyond formal certification by embedding comprehension that translates into safer practices.

Furthermore, in support of Hypothesis 3, awareness was found to significantly predict compliance, with a strong path coefficient. This was consistent with Johnson and Adebayo (2011), who observed that safety education improved both knowledge and compliance among commercial motorcyclists in Uyo. However, the finding went beyond previous work by demonstrating that awareness is not only enhanced through formal training but also influenced by literacy. When drivers understood safety codes, they were more likely to incorporate this knowledge into behavior, supporting the assertion of Olumide (2016) that education-based interventions require deeper comprehension to maintain compliance over time. Finally, Hypothesis 4 showed that awareness mediated the relationship between literacy and compliance. This suggested that literacy affected compliance directly and indirectly through increased awareness. The result of the mediation added new insight to the literature by empirically validating the pathway that previous studies had implied but not statistically tested. For example, Nwadinigwe *et al.* (2018) found that safety education changed attitudes but did not significantly affect knowledge of traffic codes, while Usman and Adebosin (2024) found that awareness of the importance of seat belts did not necessarily translate into compliance. The present study bridged these gaps by showing that literacy serves as the foundation through which awareness becomes meaningful and compliance is achieved. Overall, the results supported existing scholarship while expanding it by incorporating literacy, awareness, and compliance into a single explanatory model. The findings indicated that interventions targeting road safety must not only increase awareness through campaigns but also address literacy limitations among drivers to ensure lasting behavioral change.

5. Conclusion and recommendations

The study concluded that the literacy levels of commercial drivers significantly influenced both their awareness of road safety rules and their compliance behavior. The results indicated that literacy had a strong direct impact on awareness and compliance, and awareness positively influenced compliance. Moreover, awareness mediated the relationship between literacy and compliance, confirming that literacy improved compliance not only directly but also indirectly through improved awareness. These results highlighted that literacy was the basic factor that drove understanding and adherence to road safety rules among commercial drivers in Ogbomoso.

Based on these findings, the following recommendations are made:

1. **Targeted Literacy Support for Drivers:** Stakeholders such as the Federal Road Safety Corps and Transport unions should integrate basic literacy and comprehension training into licensing and retraining programmes, ensuring drivers are equipped to interpret traffic codes and signs accurately.

1. **Awareness Campaigns Tailored to Literacy Levels:** Safety campaigns should use simplified and pictorial messages that align with drivers' varying literacy levels, so that awareness materials are more accessible and impactful.

2. **Mandatory Continuous Education Programmes:** Regular refresher courses should be institutionalised to sustain awareness and reinforce compliance, as knowledge gains risk fading without structured follow-up.

3. **Policy Integration of Literacy in Road Safety Strategy:** Road safety interventions should explicitly account for literacy as a critical driver of compliance, embedding adult education initiatives into broader transportation safety policies.

Union-Based Monitoring and Enforcement: Commercial driver unions should be empowered to monitor literacy-driven compliance improvements within their membership, complementing government enforcement efforts.

5.1 Policy Implication

The findings of this study have important policy implications for road safety management in Nigeria. Since literacy was found to be a significant determinant of both awareness and compliance, transport policies need to go beyond enforcement to include educational interventions. This implies that driver licensing systems should incorporate basic literacy tests in addition to vision and medical examinations, so that only drivers with the ability to understand traffic codes are licensed. Furthermore, the evidence that awareness mediated the link between literacy and compliance highlights the need for policies that prioritise literacy-sensitive safety campaigns, using visual symbols, multilingual road signs, and simplified communication tools. Such measures would make road safety regulations more inclusive for drivers with limited education. In addition, the substantial direct impact of literacy on compliance makes the integration of adult education programmes into the National Road Safety Strategy a viable option, making literacy a long-term investment in road safety. By incorporating literacy training and awareness reinforcement into transport policies, regulators such as the FRSC can improve compliance levels, reduce the number of crashes caused by human error, and align with the SDGs on health and education.

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