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Determinants of Road Traffic Accidents in Tanzania: Evidence from Ilala District, Dar es Salaam

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Abstract

Road traffic accidents remain a major public health and socioeconomic concern, particularly in low- and middle-income countries. This study examined the determinants of road traffic accidents in Ilala District, Dar es Salaam, Tanzania, focusing on drivers' behavioral factors, road conditions, and vehicle technical conditions. Guided by the Haddon Matrix Model, the study employed a quantitative approach and a descriptive cross-sectional design. Data were collected from traffic police officers, with 68 usable questionnaires obtained from a target sample of 86 respondents, representing a response rate of 79.1%. Data were analyzed using descriptive statistics, Pearson correlation, and multiple linear regression. The findings revealed significant positive relationships between road traffic accident occurrence and drivers' behavioral factors ($r = 0.568$, $p < 0.001$), road conditions ($r = 0.596$, $p < 0.001$), and vehicle technical conditions ($r = 0.638$, $p < 0.001$). The regression model explained 55.4% of the variation in accident occurrence ($R^2 = 0.554$). Road conditions ($\beta = 0.351$, $p = 0.001$) and vehicle technical conditions ($\beta = 0.418$, $p < 0.001$) had significant positive effects, whereas drivers' behavioral factors showed a positive but statistically insignificant independent effect ($\beta = 0.139$, $p = 0.217$). The study concludes that road traffic accidents are shaped by interacting environmental and vehicle-related factors, with vehicle technical conditions emerging as the strongest predictor. Strengthening vehicle inspection, improving road infrastructure and pedestrian facilities, and promoting safer driving practices are recommended.

Keywords: Road traffic accidents, driver behavior, road conditions, vehicle technical conditions, road safety, Tanzania.

1. Introduction

Road traffic accidents (RTAs) remain a major global public health, social, and economic concern, causing substantial loss of life, injuries, disabilities, and financial costs to individuals and societies. Beyond the immediate consequences for victims and their families, road crashes impose pressure on health systems, reduce labor productivity, damage property, and disrupt economic activities. Global evidence shows that the growing volume of motorized transport, rapid urbanization, unsafe road-user behavior, infrastructure deficiencies, and vehicle-related

problems continue to shape accident occurrence across different transport environments. Importantly, contemporary research increasingly recognizes that RTAs are multidimensional events arising from the interaction of human, environmental, and vehicle-related factors rather than from a single isolated cause (Abegaz et al., 2022; Singh & Kathuria, 2021; Zhang et al., 2023).

In Europe, substantial progress has been achieved in reducing road fatalities through the adoption of integrated road safety systems, stricter traffic regulation, improved road engineering, and enhanced vehicle safety technologies. Investments in safer road designs, lighting systems, traffic control facilities, pedestrian infrastructure, and routine vehicle inspection have contributed to improved safety outcomes in many European settings (Martínez-Ruiz et al., 2022; Papadimitriou et al., 2021). Nevertheless, road safety challenges have not been eliminated. Speeding, distracted driving, fatigue, urban congestion, and complex traffic interactions continue to contribute to crash occurrence, particularly in densely populated urban areas. Thus, the European experience demonstrates that improvements in infrastructure and technology must be complemented by sustained behavioral interventions and effective enforcement (Papadimitriou et al., 2021; Martínez-Ruiz et al., 2022).

Across Africa, the burden of road traffic accidents remains particularly severe, reflecting the interaction between rapid population growth, increasing motorization, urban expansion, inadequate infrastructure, and weaknesses in road safety management. Studies indicate that risky driving practices, including speeding, reckless overtaking, alcohol use, and non-compliance with traffic regulations, are frequently associated with high crash rates. These behavioral risks are often compounded by weak enforcement, inadequate driver training, and limited road safety awareness (Agyemang et al., 2023; Boniface et al., 2021). At the same time, infrastructure deficiencies, such as poor road surfaces, inadequate signage, insufficient lighting, and limited pedestrian facilities, create unsafe operating conditions for different categories of road users (Damsere-Derry et al., 2022; Agyemang et al., 2023).

Within Sub-Saharan Africa, road safety challenges are further intensified by the rapid growth of urban centers and transport demand without equivalent improvements in road infrastructure,

traffic management, vehicle regulation, and enforcement capacity. Many cities experience mixed traffic environments in which pedestrians, motorcycles, public transport vehicles, freight vehicles, and private cars compete for limited road space. Empirical evidence indicates that deteriorated road infrastructure, inadequate traffic control facilities, unsafe pedestrian environments, and poorly maintained vehicles contribute significantly to accident risks in the region (Damsere-Derry et al., 2022; Boniface et al., 2021). Furthermore, the continued use of unroadworthy vehicles, overloading, and weak implementation of inspection requirements may increase the probability and severity of crashes, particularly within public transport and freight operations (Boniface et al., 2021; Agyemang et al., 2023).

In East Africa, road traffic accidents have become an increasingly important urban mobility and development challenge. Rapidly expanding cities, growing motorcycle use, increasing numbers of public and private vehicles, and the expansion of informal transport services have created complex transport systems that are difficult to regulate effectively. Evidence from the region indicates that risky driver behavior remains a major contributor to crashes, while poor road conditions and vehicle mechanical deficiencies further increase accident risks (Odero et al., 2021; Nakitto & Mutatina, 2022). Congestion, inadequate road signage, limited pedestrian infrastructure, insufficient street lighting, and inconsistent enforcement of vehicle inspection requirements have also been identified as persistent concerns within East African urban transport systems (Nakitto & Mutatina, 2022; Komba et al., 2022).

In Tanzania, road traffic accidents continue to affect public wellbeing, economic productivity, and the efficiency of the transport system. Available empirical evidence identifies drivers' behavioral factors, including speeding, distraction, fatigue, alcohol or substance use, reckless driving, and non-compliance with traffic regulations, as important contributors to accident occurrence (Msigwa et al., 2022; Nyoni & Mwakajinga, 2023). These behavioral risks coexist with infrastructure-related challenges such as deteriorated road surfaces, inadequate traffic signs, insufficient street lighting, limited pedestrian facilities, and increasing congestion. Vehicle-related conditions, including poor maintenance, mechanical failures, overloading, and inadequate

compliance with roadworthiness requirements, further contribute to unsafe transport operations (Mashauri & Senzige, 2021; Komba et al., 2022).

Dar es Salaam provides a particularly important urban context for examining these challenges because of its rapid population growth, concentration of commercial activities, and high levels of passenger and freight movement. The city's transport environment is characterized by diverse and interacting road users, including private vehicles, public transport vehicles, motorcycles, freight vehicles, cyclists, and pedestrians. Ilala District, as a major administrative and commercial area, experiences substantial traffic density and complex mobility patterns. Previous evidence from urban Tanzania suggests that accident occurrence is associated with the combined influence of risky driving practices, infrastructure limitations, congestion, and defective vehicles operating within heavily used road networks (Komba et al., 2022; Msigwa et al., 2022). These conditions make Ilala District an appropriate setting for investigating the multiple factors underlying road traffic accident occurrence.

Despite the growing body of road safety literature, an important empirical gap remains in the Tanzanian context, particularly at the district level. Existing studies have frequently examined accident determinants separately or concentrated on broader national and urban patterns. Consequently, there is limited localized evidence that simultaneously examines drivers' behavioural factors, road conditions, and vehicle technical conditions within a single analytical framework. Yet, the interaction of these factors is central to understanding road traffic accidents as a multidimensional phenomenon (Singh & Kathuria, 2021; Zhang et al., 2023). The limited focus on district-level settings such as Ilala also constrains the development of context-specific interventions capable of addressing the particular road safety challenges associated with high traffic density and complex urban mobility (Msigwa et al., 2022; Nyoni & Mwakajinga, 2023).

Against this background, the present study examined the determinants of road traffic accidents in Ilala District, Dar es Salaam, by integrating three key dimensions: drivers' behavioural factors, road conditions, and vehicle technical conditions. This integrated perspective is consistent with the view that road traffic accidents emerge from interactions between people, vehicles, and the surrounding environment (Singh & Kathuria, 2021; Zhang et al., 2023). By generating localized

empirical evidence, the study contributes to a better understanding of the relative importance of these determinants and provides insights that may support more targeted road safety planning, enforcement, infrastructure improvement, and vehicle safety interventions in Tanzania.

2. Literature Reviews

2.1 Theoretical Review

The study was guided by the Haddon Matrix Model, which provides a framework for understanding injury causation through the interaction of human, vehicle, and environmental factors across the pre-crash, crash, and post-crash phases. The model is appropriate for road traffic accident research because it recognizes that crashes are rarely caused by a single factor but may result from interactions between driver behavior and the surrounding road environment (Runyan, 2003; Stanton et al., 2023). In this study, drivers' behavioral factors represent the human dimension, while road conditions represent the environmental dimension. Behaviors such as speeding, fatigue, distraction, reckless driving, and non-compliance with traffic regulations may increase crash risks, while poor road design, inadequate signage, insufficient lighting, damaged surfaces, limited pedestrian facilities, and congestion may further increase such risks. The integrated nature of these factors is supported by Aghayari et al. (2021) and Talbot et al. (2023).

Vehicle technical conditions represent the vehicle or agent dimension of the Haddon Matrix. Mechanical failures, poor maintenance, overloading, defective brakes and tyres, inadequate roadworthiness, and weak vehicle inspection can compromise vehicle safety and increase accident risks. Thus, the model emphasizes that driver competence alone cannot ensure road safety when vehicles are technically unsafe or operate within hazardous road environments (Stanton et al., 2023; Talbot et al., 2023). The Haddon Matrix therefore provides an appropriate theoretical foundation for this study because its human, environmental, and vehicle dimensions correspond directly with the study variables: drivers' behavioral factors, road conditions, and vehicle technical conditions.

2.2 Empirical Review

2.2.1 Drivers' Behavioral Factors and Road Traffic Accident Occurrence

Empirical evidence shows that driver behavior is an important determinant of road traffic accidents. Speeding, fatigue, distracted driving, alcohol or drug use, reckless driving, and violation of traffic regulations can increase the likelihood of crashes. Singh and Kathuria (2021) identified human error and inappropriate driving practices as major contributors to road crashes, while Karl et al. (2023) emphasized distracted driving as an important safety concern. Papadimitriou et al. (2021) also highlighted fatigue, while Zhang et al. (2023) emphasized the role of humanbehavior and decision-making in crash occurrence.

Evidence from Africa and Tanzania supports these observations. Agyemang et al. (2023) associated speeding, reckless driving, and disregard for traffic regulations with road accidents in African settings. Nyoni and Mwakajinga (2023) similarly identified speeding, distraction, fatigue, alcohol use, and traffic-rule violations as important behavioural risks in Tanzania. Msigwa et al. (2022) further highlighted the contribution of alcohol and substance use to unsafe driving. However, limited studies have examined driver behavior together with road and vehicle conditions. This study therefore assesses these factors simultaneously in Ilala District.

2.2.2 Road Conditions and Road Traffic Accident Occurrence

Road infrastructure and environmental conditions also influence road traffic accident occurrence. Poor road design, damaged surfaces, inadequate traffic signs, insufficient lighting, limited pedestrian facilities, and congestion can increase risks by reducing visibility and creating conflicts among road users. Komba et al. (2022) identified infrastructure deficiencies and inadequate traffic signs as important road safety concerns in Tanzania, while Damsere-Derry et al. (2022) emphasized weaknesses in pedestrian and other road infrastructure in African settings.

Other empirical evidence supports the importance of road engineering in accident prevention. Zhang et al. (2023) found that road design and environmental characteristics can affect hazard recognition and vehicle control, while Martínez-Ruiz et al. (2022) emphasized infrastructure improvements as important road safety measures. Nevertheless, many studies examine road conditions separately from driver and vehicle factors. This study therefore examines road conditions together with drivers' behavioral factors and vehicle technical conditions in Ilala District.

2.2.3 Vehicle Technical Conditions and Road Traffic Accident Occurrence

Vehicle technical conditions are another important determinant of road accidents. Poor maintenance, mechanical failures, defective brakes and tyres, overloading, inadequate roadworthiness, and weak inspection systems can compromise vehicle safety. Singh and Kathuria (2021) identified mechanical deficiencies as contributors to crashes, while Mashauri and Senzige (2021) emphasized poor vehicle maintenance and mechanical problems in Tanzania. Boniface et al. (2021) similarly associated overloading and inadequate vehicle safety conditions with road safety challenges in African transport systems.

Effective vehicle inspection and roadworthiness enforcement are therefore important for accident prevention. Papadimitriou et al. (2021) highlighted the contribution of vehicle safety systems and inspection mechanisms to reducing technical risks. However, there is limited context-specific evidence comparing the contribution of vehicle technical conditions with driver and road factors. This study addresses this gap by examining vehicle technical conditions as one of the major determinants of road traffic accidents in Ilala District.

2.2.4 Combined Determinants of Road Traffic Accidents

The empirical literature indicates that road traffic accidents are multifactorial events involving human, vehicle, and environmental conditions. Singh and Kathuria (2021) and Zhang et al. (2023) emphasized the interaction of these dimensions in explaining crash occurrence. Similar evidence is provided by Agyemang et al. (2023), Damsere-Derry et al. (2022), Mashauri and Senzige (2021), and Komba et al. (2022), who demonstrate the importance of behavioral, infrastructure, and vehicle-related factors.

Despite this evidence, limited research has examined the three categories simultaneously within Ilala District. Previous studies have often focused on individual determinants or specific road-user groups. The present study addresses this gap by examining drivers' behavioral factors, road conditions, and vehicle technical conditions concurrently and assessing their individual and combined relationships with road traffic accident occurrence. This provides a more integrated understanding of road safety challenges and supports interventions targeting drivers, infrastructure, and vehicle safety.

3. Materials and Methods

3.1 Research Approach and Design

The study adopted a quantitative research approach guided by the positivist research philosophy. This approach was appropriate because the study sought to measure respondents' perceptions of identifiable determinants and establish statistical relationships between the independent variables and road traffic accident occurrence. A descriptive cross-sectional design was employed. The design enabled the researcher to collect data from the selected respondents during a specific period and to describe the relationships among the study variables. The design was also appropriate because the study aimed to establish empirical evidence regarding accident determinants within the specific geographical setting of Ilala District.

3.2 Study Area

The study was conducted in Ilala District in Dar es Salaam, Tanzania. The district was selected because of its intensive urban transport activities and the diversity of road users operating within its transport network. The concentration of commercial activities and passenger and freight movement makes the district an important location for examining road safety challenges.

3.3 Study Population and Sample

The study targeted traffic police officers working within Ilala District. These respondents were considered suitable because of their direct involvement in traffic regulation, accident investigation, enforcement of traffic laws, and observation of road safety challenges. A total of 86 respondents constituted the target sample. Out of the administered questionnaires, 68 were successfully completed and considered suitable for analysis, producing a response rate of 79.1%. The response rate was considered sufficient for conducting the planned descriptive and inferential analyses.

3.4 Data Collection Instrument

Primary data were collected using a structured questionnaire. The questionnaire included statements measuring drivers' behavioral factors, road conditions, vehicle technical conditions, and road traffic accident occurrence. Respondents indicated their level of agreement with the statements using an appropriate Likert-scale format. The use of a structured questionnaire was

appropriate because it facilitated standardized data collection and enabled responses to be converted into numerical form for statistical analysis.

3.5 Data Analysis

The collected data were coded, cleaned, and analyzed using the Statistical Package for the Social Sciences. Descriptive statistics, particularly means and standard deviations, were used to summarize respondents' perceptions of the study variables. Pearson correlation analysis was applied to determine the direction and strength of the relationship between each independent variable and road traffic accident occurrence. Multiple linear regression analysis was then used to examine the joint explanatory power of the predictors and determine their respective independent contributions. Statistical significance was evaluated at the conventional 5% level.

4. Results

4.1 Drivers' Behavioral Factors

The findings indicate that respondents generally agreed that drivers' behavioral characteristics contribute to road traffic accident occurrence in Ilala District. The overall mean score for the construct was 4.05. Among the individual indicators, driver fatigue recorded the highest mean score (M = 4.16, SD = 0.765). This was followed by driver distraction (M = 4.10, SD = 0.672) and exceeding speed limits (M = 4.09, SD = 0.592). Other behavioral concerns, including reckless driving and non-compliance with traffic regulations, also received relatively high ratings. These descriptive results indicate that respondents regarded human behavior as an important component of road safety. Fatigue and distraction are particularly important because they may affect concentration, decision-making, and reaction time, while speeding and reckless driving may increase both the likelihood and severity of crashes.

4.2 Road Conditions

Road conditions recorded an overall mean score of 3.88, indicating general agreement that the physical road environment contributes to road traffic accident occurrence. The most highly rated concern was inadequate traffic signage (M = 3.99, SD = 0.702). Limited pedestrian infrastructure recorded a mean of 3.96 (SD = 0.781), while inadequate street lighting recorded a mean of 3.90 (SD = 0.756). Other concerns included poor road design, damaged road surfaces, and traffic

congestion. The results demonstrate that respondents perceived infrastructure conditions as an important source of accident risk.

4.3 Vehicle Technical Conditions

Vehicle technical conditions recorded the highest overall mean among the independent variables at 4.07. Mechanical failures and vehicle overloading each recorded a mean score of 4.15, while poor vehicle maintenance recorded a mean of 4.13. Other relevant issues included weak enforcement of vehicle inspection requirements, defects involving brakes or tyres, and inadequate roadworthiness. These results suggest that respondents considered vehicle safety a particularly important determinant of road traffic accidents.

4.4 Correlation Analysis

Pearson product-moment correlation analysis was conducted to examine the direction and strength of the relationships between the three independent variables and road traffic accident occurrence in Ilala District. The results are presented in Table 1.

Table 1: Pearson Correlation between Study Variables and Road Traffic Accident Occurrence

Independent Variable	Pearson Correlation (r)	p-value	Relationship	Interpretation
Drivers' behavioral factors	0.568**	<0.001	Positive and significant	Moderate positive relationship
Road conditions	0.596**	<0.001	Positive and significant	Moderate positive relationship
Vehicle technical conditions	0.638**	<0.001	Positive and significant	Strong positive relationship

Note: ** Correlation is significant at the 0.01 level (2-tailed).
Source: Field Data (2026)

The results in Table 4.9 indicate that drivers' behavioral factors had a positive and statistically significant relationship with road traffic accident occurrence (r = 0.568, p < 0.001). The correlation is moderate, suggesting that higher levels of unfavorable driver behaviors were associated with higher reported occurrence of road traffic accidents. Similarly, road conditions demonstrated a positive and statistically significant relationship with road traffic accident occurrence (r = 0.596, p < 0.001). The moderate correlation indicates that unfavorable road

conditions were associated with increased accident occurrence in Ilala District. Vehicle technical conditions recorded the strongest relationship with road traffic accident occurrence (r = 0.638, p < 0.001). The result represents a strong positive correlation, indicating that adverse vehicle technical conditions were more strongly associated with accident occurrence than drivers' behavioral factors and road conditions.

Generally, correlation findings demonstrate that all three determinants were positively and significantly associated with road traffic accident occurrence. Among them, vehicle technical conditions showed the strongest bivariate relationship, followed by road conditions and drivers' behavioral factors. These results provide preliminary evidence supporting further examination of the independent contribution of each determinant through multiple regression analysis.

5. Discussion of Findings

The findings demonstrate that drivers' behavioral factors constitute an important contributor to road traffic accident occurrence in Ilala District. The relatively high overall mean of 4.05, particularly the ratings for driver fatigue (M = 4.16), distraction (M = 4.10), and exceeding speed limits (M = 4.09), indicate that respondents frequently associated unsafe driving practices with accident occurrence. This finding is consistent with Singh and Kathuria (2021), who emphasized the importance of human error and inappropriate driver decisions in road traffic accidents. It also corresponds with Zhang et al. (2023), who highlighted human behavior as an important component of crash causation. The prominence of fatigue and distraction is particularly relevant because these factors can affect concentration, judgement, and reaction time, while speeding and reckless driving may increase both crash likelihood and severity. The finding is further supported by the Haddon Matrix perspective, which recognizes human behavior as an important component of the pre-crash phase (Runyan, 2003; Stanton et al., 2023).

Road conditions were also found to be an important determinant of road traffic accident occurrence. The overall mean of 3.88 indicates that respondents generally agreed that deficiencies in the physical road environment contribute to accidents. In particular, inadequate traffic signage (M = 3.99), limited pedestrian infrastructure (M = 3.96), and inadequate street

lighting (M = 3.90) were highly rated. These findings suggest that weaknesses in traffic control, pedestrian protection, visibility, road design, and pavement conditions may increase exposure to road hazards. The findings are consistent with Komba et al. (2022), who identified infrastructure-related deficiencies as important road safety concerns in Tanzania, and Damsere-Derry et al. (2022), who emphasized the contribution of inadequate pedestrian facilities and urban road infrastructure to road safety risks. The result also supports the Haddon Matrix Model, which recognizes the physical environment as an important component influencing crash occurrence (Runyan, 2003; Stanton et al., 2023).

Vehicle technical conditions emerged as the most prominent determinant in the descriptive results, recording the highest overall mean of 4.07. Mechanical failures and vehicle overloading recorded the highest individual means, both at 4.15, followed by poor vehicle maintenance (M = 4.13). These findings indicate that respondents considered vehicle defects, inadequate maintenance, overloading, and weaknesses in roadworthiness control to be substantial road safety concerns. The finding is consistent with Mashauri and Senzige (2021), who emphasized the relevance of vehicle maintenance and mechanical conditions to road safety in Tanzania. It also agrees with Boniface et al. (2021), who identified vehicle overloading and poor vehicle conditions as important road safety concerns in African transport systems. From the theoretical perspective, the result corresponds with the vehicle or agent dimension of the Haddon Matrix, which recognizes vehicle condition as an important component of crash prevention (Stanton et al., 2023).

The correlation analysis provides further evidence of the importance of the three determinants. Drivers' behavioral factors had a moderate positive and statistically significant relationship with road traffic accident occurrence (r = 0.568, p < 0.001), while road conditions also demonstrated a moderate positive and significant relationship (r = 0.596, p < 0.001). Vehicle technical conditions recorded the strongest positive relationship with accident occurrence (r = 0.638, p < 0.001). These results indicate that higher levels of unfavorable driver behavior, unsafe road conditions, and adverse vehicle technical conditions were associated with higher reported accident occurrence. The findings are broadly consistent with Singh and Kathuria (2021) and

Zhang et al. (2023), who conceptualized road traffic accidents as outcomes of multiple interacting factors. The stronger correlation for vehicle technical conditions suggests that vehicle-related risks may have particular importance within the Ilala District context.

In general, the findings provide empirical support for the multidimensional explanation of road traffic accidents adopted in this study. All three determinants demonstrated statistically significant positive relationships with accident occurrence, although their strength differed. Vehicle technical conditions showed the strongest association, followed by road conditions and drivers' behavioral factors. This pattern supports the Haddon Matrix Model because it demonstrates that road traffic accidents cannot adequately be explained by human behavior alone; rather, they emerge from interactions among human, vehicle, and environmental conditions (Runyan, 2003; Aghayari et al., 2021; Talbot et al., 2023). The findings therefore provide a strong empirical basis for examining the independent and combined contribution of the three determinants through multiple regression analysis.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study concludes that road traffic accident occurrence in Ilala District is influenced by a combination of driver, road, and vehicle-related factors. Drivers' behavioral factors, road conditions, and vehicle technical conditions were all found to be positively associated with accident occurrence. These findings demonstrate that road traffic accidents should not be attributed to a single cause but should instead be understood as outcomes of interacting factors within the road transport system. Vehicle technical conditions emerged as the most prominent concern, particularly mechanical failures, vehicle overloading, poor maintenance, brake and tyre defects, and inadequate roadworthiness. Road conditions were also important, especially inadequate traffic signs, limited pedestrian infrastructure, insufficient street lighting, poor road design, and damaged road surfaces. Although driver behaviors such as fatigue, distraction, speeding, and reckless driving remain important road safety concerns, the findings indicate that such behaviors operate within a wider system involving vehicle and environmental conditions.

The study therefore concludes that effective accident prevention requires an integrated approach addressing human, vehicle, and road-environment factors.

6.2 Recommendations

Road safety authorities should strengthen vehicle inspection, roadworthiness enforcement, and control of vehicle overloading in Ilala District. Particular attention should be given to safety-critical components such as brakes, tyres, steering systems, lighting, and other mechanical systems. At the same time, road authorities should prioritize infrastructure improvements, including maintenance of damaged road surfaces, improvement of road design and intersections, installation and maintenance of traffic signs and road markings, adequate street lighting, and development of appropriate pedestrian facilities. Regular road safety audits should also be conducted to identify and correct infrastructure-related hazards.

Traffic enforcement agencies should continue strengthening interventions targeting speeding, fatigue, distraction, reckless driving, substance use, and non-compliance with traffic regulations. However, driver-focused interventions should be implemented together with vehicle safety and infrastructure measures rather than in isolation. Greater collaboration among traffic police, road authorities, vehicle inspection agencies, local government institutions, and transport operators is recommended to support coordinated road safety planning. Accident data should also be systematically used to identify high-risk locations, behaviors, vehicle conditions, and periods, thereby enabling more targeted and evidence-based interventions in Ilala District.

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