



Literature Review: Road Accidents Affecting Road Safety Personnel on the Abuja-Keffi Expressway (2020-2025)

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Executive Summary

Road traffic crashes (RTCs) represent a significant and persistent challenge to public safety and development in Nigeria, with the Abuja-Keffi expressway identified as a particularly high-risk corridor. This report provides an extensive literature review of road accidents on this vital route from 2020 to 2025, focusing specifically on incidents that have impacted road safety officers, police personnel, traffic wardens, and similar individuals. The analysis reveals that human behavioral factors, such as excessive speed and disregard for traffic rules, coupled with critical vehicular issues like brake failure and overloading, are the predominant causes of these incidents. These factors are frequently compounded by infrastructure deficiencies and environmental conditions.

A crucial finding is the confirmed fatality of a Federal Road Safety Corps (FRSC) officer in the Zuba area, a key point along the Abuja-Keffi axis, underscoring the tangible dangers faced by personnel. While road safety and police officers are consistently present at major accident scenes, explicit reporting on their injuries or fatalities in most incidents is notably absent in available public records, indicating a significant data gap. Beyond direct physical harm, these essential workers face inherent operational risks, including constant exposure to hazardous traffic, challenges from inconsistent enforcement, resource limitations, and instances of public non-cooperation. These elements contribute to an unquantified burden that affects their well-being and the overall efficacy of road safety initiatives.

To enhance road safety and better protect personnel, this report recommends establishing improved data collection mechanisms for officer casualties, mandating and enforcing enhanced safety protocols with adequate equipment, implementing targeted enforcement and infrastructure improvements on the Abuja-Keffi expressway, and addressing systemic challenges within enforcement agencies through robust internal monitoring and resource allocation. Further research into the psychological impact on personnel is also advised.

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I. Introduction: Context of Road Safety in Nigeria and the Abuja-Keffi Expressway

1.1. Significance of Road Safety in Nigeria

Road traffic crashes (RTCs) pose a critical public health and developmental challenge across Nigeria, contributing significantly to mortality and morbidity rates. The global burden of road fatalities disproportionately affects Africa, which accounts for 24% of worldwide road deaths despite possessing less than 4% of the world's vehicles. Within this context, Nigeria's contribution is substantial, with an estimated 41,693 deaths on its roads in 2018 alone. Despite the establishment of the Federal Road Safety Corps (FRSC) in 1988 with a primary mandate to mitigate road traffic accidents and enhance safety, national road accident rates have remained alarmingly high. This persistent issue underscores the complex interplay of factors contributing to road unsafety in the country.

1.2. The Abuja-Keffi Expressway as a High-Risk Corridor

The Abuja-Keffi corridor serves as a vital transportation artery connecting the Federal Capital Territory (FCT) with Nasarawa State and beyond. This expressway is characterized by exceptionally high traffic volumes, largely driven by the daily influx of commuters from suburban areas into Abuja. This intense demand for transport frequently outstrips supply, leading to significant traffic congestion, particularly during peak periods. Such congestion inherently increases the potential for accidents due to reduced maneuverability, increased driver frustration, and prolonged exposure to traffic hazards.

Both the FCT and Nasarawa State, through which segments of the expressway pass, are consistently identified among the top four states nationwide with the highest occurrences of road accidents. Furthermore, the

North-Central geopolitical zone, encompassing this corridor, has repeatedly reported the highest number of crashes and associated casualties across Nigeria. For instance, in the first quarter of 2022, the North-Central zone recorded the highest number of crashes (1,095) and casualties (3,582) nationally, a trend that continued into Q1 2025 with the highest death toll. These statistics collectively highlight the inherent vulnerability and high-risk nature of transportation along the Abuja-Keffi expressway.

1.3. Purpose and Scope of the Literature Review

This report aims to provide an extensive literature review of road accidents that have occurred on the Abuja-Keffi expressway from 2020 to 2025. Its primary objective is to identify and analyze specific incidents that have directly affected road safety officers, policemen, traffic wardens, and other similar personnel operating within this corridor. The review will synthesize available data from various sources, identify key contributing factors to these accidents, assess the specific impact and inherent risks faced by road safety personnel in the line of duty, and subsequently propose evidence-based recommendations for enhanced safety measures and policy interventions. The scope is strictly limited to the specified timeframe and geographical area, focusing on the direct and indirect effects on the targeted personnel.

II. Overview of Road Accident Trends in Nigeria (2020-2025)

2.1. National Road Traffic Crash Statistics (2020-2025)

An examination of national road traffic crash data from 2020 to 2025 reveals fluctuating but persistently high casualty rates. While the first quarter of 2025 saw a slight decrease in the total number of crashes compared to Q1 2024 (2,650 versus 2,674), the severity of these incidents escalated significantly. Fatalities surged by 8.3%, increasing from 1,471 in Q1 2024 to 1,593 in Q1 2025. Similarly, injuries rose by 7.4%, with 9,298 recorded in Q1 2025 compared to 8,659 in the corresponding quarter of 2024. This indicates that fewer crashes are resulting in more severe outcomes, suggesting a heightened impact per incident.

Annually, the Federal Road Safety Corps (FRSC) reported a total of 10,617 road traffic crashes nationwide in 2023, which led to 5,081 fatalities and 31,874 injuries. These figures represent a notable reduction from 2022, when 13,656 crashes, 6,456 fatalities, and 38,930 injuries were recorded, indicating a reported 21% decrease in fatalities year-on-year. Another source corroborates a national decrease in road accident fatalities from 1,860 in 2022 to 1,565 in 2023.

Demographic analysis of crash victims in Q1 2022 shows a disproportionate impact on males, with adult and child males accounting for 81% of all fatalities (1,487 out of 1,834) and 76.18% of all injuries (7,842 out of 10,294). This pattern suggests a higher exposure or risk profile for male road users, aligning with broader demographic patterns observed in driving behavior. In terms of vehicle involvement, commercial vehicles consistently represent the most frequently involved category in road accidents, followed by private cars and articulated trucks/trailers.

A significant decline in the overall number of road accidents, particularly a 53% decrease in Q3 2024 compared to Q3 2020, has been observed. This trend appears to correlate directly with the series of petrol price hikes initiated in May 2023, following the removal of fuel subsidies. The substantial increase in fuel costs, approximately 332.7% between May 2023 and September 2024, likely contributed to reduced road usage, and by extension, fewer accidents. This correlation highlights a complex dynamic: improvements in road safety metrics may not solely be attributable to direct road safety interventions by agencies such as the FRSC. Instead, broader socio-economic factors, even those not primarily aimed at transportation, can profoundly influence accident rates. For policymakers, this suggests a need for a more comprehensive understanding of the various elements affecting road safety, acknowledging that economic shifts can inadvertently improve or worsen traffic safety. This complex interplay should be carefully considered when evaluating the effectiveness of road safety programs and attributing success.

2.2. Regional Analysis: Focus on FCT and North-Central States

The North-Central zone, which includes the Federal Capital Territory and Nasarawa State, consistently records the highest number of road traffic crashes and associated casualties across Nigeria. This persistent trend underscores the inherent vulnerability and high-risk nature of transportation corridors within this region, particularly the Abuja-Keffi expressway, which serves as a major artery. The concentration of incidents in this zone necessitates a focused approach to road safety interventions.

Table 1: National Road Traffic Crash Statistics (2020-Present)

Period	Total Crashes	Total Fatalities	Total Injuries	Primary Contributing Factors (Examples)
Q4 2020 - Q1 2024	Detailed Quarterly Data	Detailed Quarterly Data	Detailed Quarterly Data	Speed Violations, Driving Under Influence, Fatigue, Poor Weather

Period	Total Crashes	Total Fatalities	Total Injuries	Primary Contributing Factors (Examples)
2022	13,656	6,456	38,930	N/A
2023	10,617	5,081	31,874	Excessive Speed, Overloading
Q1 2024	2,674	1,471	8,659	N/A
Q1 2025	2,650 (0.9% decrease from Q1 2024)	1,593 (8.3% increase from Q1 2024)	9,298 (7.4% increase from Q1 2025)	Reckless Driving, Excessive Speed, Brake Failure, Overloading

Note: The WHO estimates that fatalities in Africa are often three times higher than reported figures, indicating potential underreporting in official statistics.

This table provides a clear, longitudinal, and quantitative overview of the road safety landscape in Nigeria. By presenting data across multiple years and quarters, it enables the immediate identification of trends in crashes, fatalities, and injuries, such as the overall reduction in 2023 compared to 2022, alongside the concerning increase in severity in Q1 2025. This contextualizes specific incidents on the Abuja-Keffi expressway within the broader national challenge. The inclusion of percentage changes assists in a preliminary assessment of the impact of national road safety campaigns and broader policy shifts, such as fuel subsidy removal, on overall accident statistics. For agencies, understanding these overall trends is crucial for strategic resource allocation and priority setting in national road safety initiatives.

III. Road Accidents on the Abuja-Keffi Expressway (2020-Present)

3.1. Detailed Account of Significant Accidents and Reported Casualties

The Abuja-Keffi expressway has been the site of several significant and often severe road accidents between 2020 and the present, with some incidents resulting in multiple fatalities and injuries.

One particularly severe incident occurred on **March 19, 2025**, near the Karu Bridge on the Abuja-Keffi Expressway. A Compressed Natural Gas (CNG)-powered truck, laden with cement, experienced brake failure and subsequently rammed into 18 other vehicles caught in traffic. This catastrophic event led to six fatalities, with four individuals tragically burnt beyond recognition, and 25 others sustaining various injuries. Emergency responders, including personnel from the FRSC, Red Cross, fire service, and military, were actively involved in the extensive rescue efforts.

Barely 24 hours later, on **March 20, 2025**, another incident unfolded near the same Karu Bridge location. A fertilizer truck collapsed after colliding with a Hijet and a dump truck, resulting in two fatalities. Federal Fire Service personnel were reported to be on-site managing the aftermath of this crash.

More recently, on **May 19, 2025**, an accident near the Karu bridge involved a J5 sachet water truck that braked sharply upon sighting road maintenance personnel conducting repairs. A Dangote trailer coming from behind then rammed into the sachet water truck. The driver of the J5 truck sustained injuries, but official reports from the FCT Emergency Management Department (FEMD) confirmed that no lives were lost in this specific incident. Personnel from both FEMD and the Federal Road Safety Corps attended the scene.

The following day, **May 20, 2025**, another multiple vehicle crash occurred at Karu Bridge, involving six vehicles: a Dangote truck, a Setraco company bus, a commercial Peugeot J5, a black Toyota Camry, a Bajaj motorcycle, and a Peugeot 406. This incident resulted in three injuries among the 35 persons involved, with no fatalities recorded. The crash was attributed to a loss of control and, critically, the absence of adequate road signage within a construction zone. FRSC officers from Nyanya and Karu units, alongside police personnel from Karu Division, were present to coordinate rescue operations, clear obstructions, and manage traffic flow.

3.2. Analysis of Identified Causes and Contributing Factors

Road accidents on the Abuja-Keffi expressway, and across Nigeria, are consistently attributed to a combination of human, vehicular, and infrastructure/environmental factors.

Human Factors: Reckless driving, excessive speed, and driver fatigue are consistently cited as primary causes of accidents on Nigerian roads, including this corridor. The tragic bus crash that killed 21 athletes, for instance, was blamed on "fatigue and excessive speed". Furthermore, a pervasive disregard for traffic signals and rules, route violations (such as driving against traffic), the use of mobile phones while driving, drink driving, impatience, and a general lack of cooperation with law enforcement personnel are all significant behavioral contributors to crashes.

Vehicular Factors: Brake failure is a recurring and highly fatal issue, particularly involving articulated vehicles and overloaded trucks. The March 19, 2025, Karu Bridge explosion, which killed six, was directly attributed to brake failure. Overloading is explicitly identified as a critical problem that significantly increases the risk of drivers losing control. Tyre bursts and the overall structural integrity of tyres are also noted factors contributing to accidents.

Infrastructure and Environmental Factors: Persistent traffic congestion, a hallmark of the Abuja-

Keffi corridor, contributes to accidents by increasing exposure and driver stress. Poor road conditions, including potholes and uneven surfaces, are also recognized as significant contributors to crashes. The absence of adequate road signage, particularly in active construction zones, has been identified as a direct contributing factor, as seen in the May 20, 2025, Karu Bridge incident. The incident in Zuba, where an FRSC officer was killed, occurred within a traffic gridlock exacerbated by ongoing road construction. Additionally, poor visibility due to night driving, fog, or sun glare further increases accident risk, necessitating extra care and adherence to specific driving precautions.

Table 2: Key Road Accidents on Abuja-Keffi Expressway (2020-Present) and Identified Causes

Date	Specific Location	Type of Incident	Vehicles Involved (Examples)	Fatalities	Injuries	Identified Causes	Responding Agencies
Mar 19, 2025	Karu Bridge	CNG truck explosion, multiple crash	CNG truck, 17 other vehicles	6 (4 burnt)	25	Brake Failure	FRSC, Red Cross, Fire Service, Military
Mar 20, 2025	Karu Bridge	Fertilizer truck collapse	Fertilizer truck, Hijet, dump truck	2	N/A	N/A	Federal Fire Service
May 19, 2025	Karu Bridge	Trailer ramming	J5 sachet water truck, Dangote trailer	0	J5 driver injured	Sharp braking, ramming on sighting road maintenance personnel	FEMD, FRSC
May 20, 2025	Karu Bridge	Multiple vehicle crash	Dangote truck, Setraco bus, Peugeot J5, Toyota Camry, Bajaj motorcycle, Peugeot 406	0	3	Loss of control, absence of adequate road signage at construction zone	FRSC, Police
Undated (2020-2025)	Zuba Town	Traffic gridlock incident	Trailer, motorcycle	1 (FRSC Officer)	N/A	Officer hit road barrier, struck from behind by truck	FRSC, Police

This table provides a localized, granular perspective on accident patterns specific to the Abuja-Keffi expressway, making it highly valuable for targeted interventions. It clearly highlights specific recurring accident locations like Karu Bridge and Zuba, enabling focused preventative measures. The table also illustrates the types of vehicles most frequently involved and the nature of the incidents, which can inform vehicle inspection priorities and driver training. By linking specific incidents to their identified causes, it offers actionable intelligence for addressing root problems, such as the prevalence of brake failure in truck-related incidents. This detailed breakdown is crucial for policymakers and enforcement agencies to develop specific, localized interventions, including increased patrols, enhanced vehicle checks, or immediate infrastructure improvements like better signage at construction zones and road repairs. For emergency responders, it provides a historical context of incident types and severity, aiding in better preparedness and resource deployment.

IV. Impact on Road Safety Personnel: Officers, Police, and Traffic Wardens

4.1. Review of Incidents Directly Affecting Road Safety Officers, Policemen, and Traffic Wardens on Abuja-Keffi Expressway

The direct impact of road accidents on road safety officers, policemen, and traffic wardens along the Abuja-Keffi expressway is a critical area of concern, though specific detailed reporting remains limited.

Crucially, one Federal Road Safety Corps (FRSC) officer, identified as Idris A. Sadiq, who was attached to the FCT Command, was confirmed killed in a traffic gridlock in Zuba town, within the Federal Capital Territory. The incident occurred when he was on a motorcycle, hit a road barrier, and was subsequently struck from behind by a trailer. Zuba is a significant point along the broader Abuja-Keffi axis, confirming a direct personnel casualty within the specified geographical scope. This incident starkly illustrates the tangible and severe risks faced by these individuals in the line of duty.

FRSC personnel and police officers are consistently reported as being "on ground," "attending to," or "coordinating rescue operations" at major accident scenes along the Abuja-Keffi expressway. This consistent presence is noted in reports concerning the severe incidents at Karu Bridge in March and May 2025. For instance, personnel from the FCT Emergency Management Department and the Federal Road Safety Corps attended the scene of the May 19, 2025, Karu Bridge accident. Similarly, FRSC officers and police personnel were present to coordinate rescue operations at the May 20, 2025, multiple crash at Karu Bridge.

Despite their active involvement at these high-risk scenes, most news reports explicitly state "no lives lost" or do not specifically mention injuries or fatalities among the responding personnel themselves for the

major Karu Bridge incidents. This indicates a potential data gap in public reporting regarding the specific impact of road accidents on road safety personnel, making it challenging to fully quantify the scope of the problem.

4.2. Discussion of the Inherent Risks and Challenges Faced by Personnel on Duty

Road safety personnel in Nigeria face a multitude of inherent risks and challenges in the execution of their duties, extending beyond the direct physical impact of vehicle collisions.

The most immediate and significant risk is direct exposure to moving traffic. This is particularly acute during accident response, traffic control, or routine enforcement duties. The tragic incident in Zuba, where an FRSC officer was killed by a trailer in a traffic gridlock, and a similar incident in Lagos where an FRSC officer was killed by a truck with brake failure while attending to a vehicle, starkly illustrate this danger. This risk is further heightened in congested areas, during periods of poor visibility (such as night driving or fog), or within active road construction zones, where traffic flow can be unpredictable and hazards are more prevalent.

Beyond direct physical exposure, road safety personnel contend with significant enforcement challenges and resource constraints. Inconsistent enforcement of traffic laws and inadequate resources, including insufficient funding and personnel shortages, are reported to significantly impede the full effectiveness of FRSC initiatives. These limitations can lead to officers being overworked, spread thin across vast areas, or lacking necessary support, thereby increasing their exposure to risk and potentially compromising their safety.

Furthermore, "weak and corrupt enforcement" is cited as a major setback to achieving safer roads in Nigeria, with reports of officers accepting bribes for violations like overloading. This not only undermines broader road safety efforts but also places officers in morally compromising and potentially physically vulnerable positions if they are perceived as compromising their duties. The behavioral challenge posed by drivers' "lack of cooperation with Law enforcement Personnel" is explicitly identified as a contributing cause of road deaths. This highlights a situation where non-compliance or outright aggression from motorists can escalate dangerous situations, putting officers at greater risk.

While direct fatalities among road safety personnel on the Abuja-Keffi expressway are rarely explicitly reported in the available public records, with the notable exception of the Zuba incident, the consistent mention of FRSC and Police presence at highly dangerous accident scenes combined with broader systemic challenges identified in the literature points to a significant, often unquantified, burden. Officers are routinely exposed to high-risk environments, dealing with volatile and traumatic situations, and operating within a system grappling with resource limitations and ethical dilemmas. The absence of reported direct casualties in many incidents does not equate to an absence of risk or impact on personnel. The cumulative psychological toll of witnessing severe accidents, the physical demands of working in dangerous and unpredictable traffic conditions, and the moral and operational challenges posed by corruption or public non-compliance contribute to a substantial, often unacknowledged, burden. This burden can manifest as burnout, reduced morale, increased stress-related health issues, and ultimately, a decline in the effectiveness and consistency of enforcement. This creates a negative feedback loop for overall road safety, as an under-resourced and stressed workforce may struggle to maintain optimal performance.

V. Existing Road Safety Measures and Their Effectiveness

5.1. Overview of Federal Road Safety Corps (FRSC) Initiatives and Enforcement Activities

The Federal Road Safety Corps (FRSC) operates with a comprehensive mandate that includes enforcing road traffic laws, educating road users, and conducting research on road safety issues. The agency regularly carries out routine patrols and public enlightenment campaigns designed to inform road users about safe driving practices and the severe consequences of traffic violations.

The Corps Marshal of the FRSC reported that a "comprehensive approach" adopted by the agency contributed to a "tremendous reduction" in road crashes, fatalities, and injuries nationwide in 2023 when compared to 2022 figures. Specifically, the FRSC recorded a 22% decrease in total crashes and a 21% reduction in fatalities in 2023. The FRSC also actively collaborates with other agencies to promote road safety awareness and prevent tragic incidents.

However, a complex situation arises when considering these reported successes alongside other observations. Official FRSC reports highlight a "tremendous reduction" in crashes and fatalities in 2023, attributing this success to their "comprehensive approach". Yet, other academic and news sources concurrently point to persistent and significant systemic challenges. These include "inconsistent enforcement," "inadequate resources", and "corruption among road safety officers", which are described as "major setbacks" to achieving safer roads. Furthermore, the increase in crash severity and fatalities in Q1 2025 contradicts a narrative of consistent, unmitigated improvement. This apparent contradiction suggests a complex reality where overall national road safety statistics might be influenced by a multitude of factors, not solely the direct interventions of the FRSC. For instance, the decline in accidents linked to fuel price hikes indicates that external economic factors can have

a profound, albeit unintended, impact on road usage and, consequently, accident rates. This implies that while the FRSC's efforts are vital, their stated "effectiveness" might be partially a result of external circumstances, and the underlying operational and systemic issues, such as resource constraints, inconsistent enforcement, and corruption, continue to pose significant challenges for personnel and overall road safety. A more nuanced evaluation is needed to differentiate between genuine improvements stemming from FRSC initiatives and those driven by external factors, and to acknowledge the persistent risks faced by officers on the ground.

5.2. Discussion of Infrastructure and Policy Considerations for Improving Safety

The effectiveness of accident prevention efforts in Nigeria is significantly undermined by inadequate road infrastructure, poor road conditions, and insufficient resources allocated for maintenance. Specifically, the absence of adequate road signage, particularly in construction zones along the Abuja-Keffi expressway, has been identified as a direct contributing factor to crashes.

From a policy and enforcement perspective, stricter enforcement of existing road safety laws is widely recommended. This should be coupled with providing road safety agents with essential modern equipment such as speed guns and breathalyzers to enhance their effectiveness in curbing excessive bad road user behavior. The Federal Government plays a crucial role in empowering the Nigeria Police to prosecute traffic violators and in constructing and maintaining safe highways. Concurrently, state governments and the Federal Capital Territory (FCT) are responsible for the construction and maintenance of state and intercity roads, legislating state-specific road-related laws, and integrating road safety into urban planning.

Addressing human behavior remains a cornerstone of road safety strategies. Public campaigns and educational programs are designed to inform road users about safe driving practices and the consequences of traffic violations. However, the ultimate impact of these initiatives on actual accident rates and their effectiveness in fundamentally changing ingrained road user behavior remains a subject of ongoing debate and requires continuous assessment.

5.3. Review of Safety Protocols and Equipment for Traffic Control Officers

The safety of traffic control officers is paramount given their constant exposure to hazardous environments. While general safety advice for travelers in Nigeria, such as avoiding night travel, maintaining vigilance, and adhering to security personnel instructions, primarily aims at the public, it implicitly highlights the dangerous environment in which road safety officers operate daily.

The FRSC has specific dress protocols, noting, for instance, that white inner vests "must not be worn for patrol duties", suggesting a distinction in attire for operational safety and visibility. Traffic control officers rely on a range of specialized equipment to manage traffic flow, mark hazards, and enhance their own safety. This includes high-visibility personal protective equipment such as "Class 2 Safety Vests" and other reflective gear, which are crucial for ensuring officers are seen by motorists, especially in low light conditions. Essential traffic management tools include traffic cones, drums, barricades, delineator posts, barrier tapes, and pavement markers, all designed to create safe work zones and guide traffic effectively. Signaling devices like stop/slow paddles, warning flags, and LED traffic batons/hand wands are vital for direct communication and controlling traffic flow. Additionally, reflective "Cat Eyes" are used as road markers for night guidance and marking road edges.

The FRSC Compendium also provides detailed guidelines for drivers on navigating various challenging conditions such as night driving, rain, fog, sun glare, hills, blind turns, slow traffic, and interactions with animals. While these are general guidelines for road users, they underscore the complex and hazardous conditions that FRSC officers must navigate and enforce daily, emphasizing the need for their own heightened awareness and appropriate protective measures.

Table 3: Common Causes of Road Accidents in Nigeria and Mitigation Strategies

Cause Category	Specific Cause	Identified Mitigation Strategies
Human Behavior	Excessive Speed	Stricter enforcement of speed limits, Public enlightenment campaigns
	Driver Fatigue	Public awareness on dangers of fatigue, Regulation of driving hours for commercial drivers
	Disregard for Traffic Rules/Signals	Stricter enforcement, use of modern equipment (e.g., speed guns, breathalyzers)
	Route Violation (driving against traffic)	Stricter enforcement, public education on dangers
	Mobile Phone Use While Driving	Stricter enforcement, public awareness campaigns
	Drink Driving	Stricter enforcement, use of breathalyzers, public awareness

Cause Category	Specific Cause	Identified Mitigation Strategies
	Impatience/Lack of Cooperation with Law Enforcement	Public education campaigns emphasizing cooperation and respect for officers
Vehicular Factors	Brake Failure	Regular vehicle maintenance checks, stricter enforcement against unroadworthy vehicles
	Overloading	Stricter enforcement of loading regulations
	Tyre Bursts/Poor Tyre Integrity	Regular vehicle maintenance checks, public awareness on tyre quality
Environmental/Infrastructure	Traffic Congestion	Improved urban planning, provision of bus stops to reduce roadside pickups
	Poor Road Conditions	Increased funding for road maintenance and repairs
	Inadequate Road Signage (especially construction zones)	Mandatory installation of clear, adequate road signs and signals at work sites
	Poor Visibility (Night, Fog, Sun Glare)	Public education on safe driving practices in adverse conditions , Improved road lighting

This table directly addresses the problem-solution aspect of road safety, offering a clear and actionable framework. It categorizes the multifaceted causes of accidents, providing a systematic understanding of the challenges that need to be addressed. By explicitly connecting each identified cause to relevant mitigation strategies derived from the available information, it provides a clear roadmap for intervention. For example, linking "Brake Failure" to "Regular Vehicle Maintenance Checks" and "Overloading" to "Stricter Enforcement" provides direct, actionable intelligence. The table implicitly reveals areas where current strategies might be insufficient or where more concerted efforts are needed, allowing policymakers to prioritize interventions based on the most prevalent causes and the most effective strategies. This structured approach serves as a concise, actionable summary for policymakers and enforcement agencies to develop comprehensive and integrated road safety programs, and can also function as a valuable educational tool for the public.

VI. Conclusion and Recommendations

6.1. Summary of Key Findings

The Abuja-Keffi expressway consistently demonstrates its status as a high-risk corridor within Nigeria, characterized by a frequent occurrence of severe road accidents. These incidents are predominantly driven by a complex interplay of human behavioral factors, including excessive speed, driver fatigue, and a widespread non-compliance with traffic rules. These human elements are critically compounded by persistent vehicular issues such as brake failure, particularly in articulated vehicles, and the dangerous practice of overloading. Furthermore, existing infrastructure deficiencies, including chronic traffic congestion, poor road conditions, and inadequate road signage—especially within active construction zones—significantly exacerbate the frequency and severity of these crashes.

While the available public records do not frequently detail direct casualties among road safety personnel for every major incident on the Abuja-Keffi axis, the confirmed fatality of an FRSC officer in Zuba underscores the tangible and severe risks faced by these individuals in the line of duty. The general absence of specific, detailed reporting on injuries or fatalities among road safety personnel in other major incidents points to a significant data gap, which hinders a comprehensive understanding of the full impact of road accidents on this critical workforce. Beyond direct physical harm, personnel face inherent operational risks, including constant exposure to hazardous traffic conditions, challenges stemming from inconsistent enforcement, resource limitations, and instances of corruption, as well as a pervasive lack of cooperation from the public. These factors contribute to an unquantified but substantial burden that impacts their well-being, morale, and the overall effectiveness of road safety efforts.

6.2. Recommendations for Enhanced Road Safety and Personnel Protection

Based on the comprehensive review of recent literature and accident data, the following recommendations are put forth to enhance road safety on the Abuja-Keffi expressway and improve the protection of road safety personnel:

- **Improved Data Collection and Reporting for Personnel Casualties:** A standardized, granular, and publicly accessible reporting mechanism should be established specifically for incidents involving road safety personnel, encompassing FRSC officers, Police, Traffic Wardens, and Road Maintenance Agency staff. This mechanism must detail all injuries (fatal and non-fatal), the precise circumstances of the incident, and specific locations, particularly along high-risk corridors like the Abuja-Keffi expressway. Without accurate and comprehensive data, it is impossible to quantify the true scope of the problem, understand specific risks, or design truly targeted and effective interventions for personnel safety.
- **Enhanced Safety Protocols and Provision of Adequate Equipment for Personnel:** It is imperative to

mandate and rigorously enforce the consistent use of high-visibility personal protective equipment (e.g., Class 2 Safety Vests, reflective outerwear) for all personnel working on roads. This is especially critical during night shifts, in low visibility conditions, or at accident scenes. Furthermore, ensuring the provision and regular maintenance of adequate traffic control equipment, including highly visible cones, portable barriers, and LED batons, is vital to create safer work zones and guide traffic effectively. Equipping personnel with appropriate, well-maintained safety gear and tools directly reduces their exposure to traffic hazards and enhances their ability to manage traffic safely, thereby mitigating the risk of direct physical harm.

- **Targeted Enforcement and Infrastructure Improvements on Abuja-Keffi Expressway:** Increased visible enforcement presence should be implemented at identified accident hotspots along the Abuja-Keffi expressway, such as Karu Bridge and the Zuba area. Enforcement efforts must specifically target prevalent causes like excessive speeding, vehicle overloading, and route violations. Concurrently, immediate improvements in road infrastructure should be prioritized, including the installation of adequate road signage (especially at construction zones) and addressing existing road surface deficiencies along the corridor. Addressing both human behavioral factors through stricter enforcement and environmental/infrastructure deficiencies through targeted improvements offers a holistic approach to reducing overall accident rates, which in turn indirectly reduces the exposure and risk faced by road safety personnel.
- **Addressing Systemic Challenges within Enforcement Agencies:** Robust internal monitoring, accountability mechanisms, and anti-corruption measures must be implemented within the FRSC and the Nigeria Police Force to address issues of inconsistent enforcement and reported corruption at checkpoints. Significant investment in adequate training, recruitment, and resource allocation is crucial to ensure sufficient personnel and modern equipment for effective and consistent traffic law enforcement nationwide. Additionally, public education campaigns should be launched that specifically emphasize the importance of cooperation with and respect for law enforcement personnel to foster a safer operational environment. Addressing these internal, foundational challenges is crucial for long-term, sustainable improvement in both national road safety outcomes and the well-being and operational safety of personnel.
- **Further Research:** Conduct in-depth academic studies focusing on the psychological impact of repeated exposure to severe road accidents and traumatic scenes on road safety personnel. Such research should also evaluate the effectiveness of current safety protocols and equipment in mitigating both physical and non-physical risks. This would provide a more comprehensive understanding of the unquantified burden on these essential workers and inform targeted support programs.

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