### Analysis of Road Traffic Violations on Passengers and Freights Transport in Minna Metroplis

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### Abstract

Traffic violations are major causes of congestion. Unfortunately hundreds of innocent souls are lost due to accidents brought about by traffic violations on mobility. This study analyzes road traffic violations on passenger and freights transport in Minna metropolis. Both primary and secondary data were collected from VIO headquarters where a census sampling techniques was adopted. The data gathered were analysis by the use of descriptive statistics such as tabulation, frequency, charts, and ranking-order. Findings from the study revealed that there are fourteen (14) common traffic violations and the major traffic offences include; road traffic light, expired vehicle papers, driver's license, dangerous loading, and failure to produce vehicle papers on-demand respectively. The main reasons for the violation of traffic in the study area are negative attitude of motorist and reduction of travel time/saving of fuel attested by 45.2% and 27.4% of the respondents respectively. Furthermore, to ascertain the effects of traffic violations on mobility, 38.4% of the respondents attested to the fact that crashes leads to death, 31.5% affirmed crashes leads to injury, and 15% attested to traffic congestion respectively. It is therefore recommended that adequate information dissemination on traffic rules and regulations with emphasis on traffic light, and introduction of traffic safety education into the system is the most potent method to reducing traffic violation.

**Keywords:** Accidents, Road, Traffic violation, Traffic rules, Transportation

### 1. Introduction

In Nigeria, road transport is the most commonly used mode of transport by people due to the easiest means in moving goods and travelers. Despite the vital role played by road transport, the sector has encountered a number of challenges emanating from poor road traffic offences resulting to incessant road accidents (Nneji, et. al. 2021). Cities today face many common transport problems and one of these problems is traffic violation. Many car drivers try to violate traffic on public roads by driving in high speeds or overloading the vehicles with the absence of road monitoring. Rules and regulations are in place to discourage or punish indiscipline and unsafe acts on the road by the road users in Nigeria. Traffic violation is seen as an intentional departure from routines which are to protect persons from danger; these routines include road traffic rules (Forward, 2013).

Traffic violations are perceived to be minor offences by many motorists, with greater potentials of causing traffic crashes leading to loss of lives and damages on property. As

society evolves from rural areas to cities, urbanization sets in, and a shift of economic activities from agricultural to industrial settings. This leads to increase in the number of vehicular movement for both private and commercial purposes. Such trend of rising traffic activities therefore attracts new policies and laws that regulates the conduct of motorists for the safety and security of lives, property, and the environment, especially for road users (Tunde, et. al., 2012). In Nigeria, road violations mostly includes unused of seatbelts, exceeding expected speed limits, driving recklessly, use of vehicles with unauthorized plate number, negligence in the use of fire extinguisher, overtaking wrongly, overloading, use of phone while on wheal and failure to comply with traffic lights and signs (FRSC, 2012; 2016; Anyanwu et al., 2016). Al-Eideh (2016) identified traffic violations as excessive speeding, frequent and unsafe lane changes, failure to signal, lane blocking, tailgating, disregard for traffic control, driving against traffic, aggressive use of horns, use of provocative gestures, non-use of seat belt and verbal abuse, creation of multiple lanes that narrows into a junction and on off road space.

Studies such as Oyeyemi (2003) established that human factors constitute about 80% of road traffic crashes recorded in the country. This includes dangerous overtaking at bends, crest of a hill, over speeding, driving under the influence of alcohol/drugs and the use of mobile phone while driving among others. There are number of policies and regulations governing both private and commercial vehicle use. It is pertinent to note that in Nigeria, a lot of intervention programmes on policies to prevent accident has been implemented over the years. These interventions ranges from putting on seat belts while driving, motorcycle helmets, installation of speed limit device in commercial vehicles, public education targeted at motorists on overloading, and the use of traffic control signs. Despite the existence and enforcement of several traffic laws, traffic violations had continued to increase on our roads globally especially in Nigeria. Driving against the traffic lights has been identified as the major factor resulting to crashes of vehicles in urban centers as well as one of the most frequently violated traffic law in the world today (Peltzer, 2008). Motorists often commit this offence which endangers other road user's life and properties. Uzondu and Ikeogu (2013) asserted that most traffic crashes occurs in Nigeria due to failure of motorist to obey traffic rules and regulations. In most cities in Nigeria, an average motorist has a habit of violating traffic rules and regulations (FRSC, 2012; Sumaila, 2013). Despite the presence of traffic law enforcement officers on major roads and the installation of street lights most drivers still do not obey these apparatus put in place. The vehicle inspection officers (VIO), the police and the federal road safety corps (FRSC) are saddled with the responsibility of ensuring free flow of traffic, safety and enforcing traffic regulations in the Minna.

Little attention has been paid to road traffic violation and prevention in most developing countries. Globally, road traffic law enforcement is established to reduce the increase of road crashes and fatalities as well as making road users comply with traffic laws and regulations as a counter measure, however this remains a great challenge in Nigeria (Gana and Emmanuel, 2014). Minna being a modern urban settlement has a design where the

central business district is at the heart of the capital with a characteristic influx of people, vehicular traffic from the suburbs to the Capital city moving to work, schools or business activities. Thus, the traffic enforcement officers are to ensure free flow of traffic, safety, and enforcement of traffic regulations with concern to reducing travel time, traffic conflicts, and road accidents. However, despite the traffic rules and regulations and the enforcement by responsible agencies such as the FRSC and VIO, there are still incidences of unlicensed drivers, roadworthy vehicles, overloading of both passengers and freights, illegal parking, driving against traffic, unpainted taxis etc. The peculiarity of the violation of traffic regulations in minna has exhibited a serious trend worthy of examination, hence, this study seeks to examine the trend of traffic violations in Minna by motorist, to analyze the major traffic violations and determine the effects of traffic light violations on mobility in the study area.

#### 2. Literature Review

Traffic control and management have remain a great challenge in densely populated cities. According to SWARCO (2012), some of the government's approach to manage urban traffic properly include efficient use of existing roadway capabilities, harmonized traffic flows, emission related control, prioritization of public transport usage and the focus on pedestrian safety. Thousands of motorists are being apprehended and sanctioned for various traffic offences on the road in spite of the existence of adequate traffic laws and regulations to curb the rate of increasing traffic violations on highways. Unfortunately hundreds of innocent souls are lost due to accidents brought about by traffic offences and violations on the highways. According to Dicus (2010), traffic violations are generally divided into major and minor types of violations; the minor sort is stopping infringement, which is not meant something negative for a driving record, however, a man can be captured for unpaid infringement. Next are the minor driving infringements, including speeding and other moving infringements, which normally don't require court appearance. Olagunju (2009), opined that poor road traffic law enforcement has been responsible for several accidents in the country especially among motorcycle operators. Olagunju notes further that the conduct of these commercial motorcyclists is characterized by poor knowledge of traffic rules and regulations which lead to many motorcycle accidents. Similarly, Garba (2009) expatiate more on road traffic crashes which include poor knowledge of road safety education and enforcement of traffic laws and Highway Code, non-compliance and incomprehension of road signs and traffic signals, absence of wellstructured traffic laws and regulations. Kwaga (2006) in his study, socio-economic effects of road traffic accidents in Nigeria, established that road traffic accidents have become a major concern globally to the extent that lives are wasted daily. He further affirmed that the causes of road traffic accidents have been traced to human, environment and vehicular factors. In the submission of Iversen (2004), risky driving behavior is the most prevailing cause of RTCs. Usually, crashes occur in situations where drivers violate the law deliberately. Actions such as ignoring traffic signals, over speeding, wrong overtaking, and driving under influence were noted as factors that aggravate RTCs. A study conducted by Jayatilleke, et al. (2010) revealed that amongst all the different types of vehicles on the

road, commercial Public Service Vehicles (PSVs) were responsible for 53.5% of the traffic violations committed.

Traffic laws enforcement is one of the most important tasks of the traffic police in the area of traffic road safety, which is preventive in nature to ensure compliance of traffic regulations. In the absence of effective and robust traffic enforcement system, motorists violate traffic regulations mainly for economic benefits which could lead to road traffic crashes (RTCs). Ineffective traffic laws enforcement is mainly due to certain barriers that including lack of inter-agencies coordination, capacity issues of enforcement agencies, prevalent corruption and bribery in police, patronage culture in public transport, insufficient use of technology in traffic laws enforcement, procedural injustice and attitudes among drivers and general masses etc (Kayani, 2019, Tahir, 2018 and Batool, 2012). The Federal Road Safety Commission (FRSC), the Vehicle Inspection Officers (VIO), Motorways and Highways Police are all authorities that ensure traffic safety regulations are enforced on all modes of public and private transport within the municipal limits. Each department has their own set of tasks. However, the general perception towards these agencies is that they are corrupt and procedurally unjust (TI, 2019).

Based on an analysis and comparison of statistical data, some of the most frequent traffic offences are: over speeding, failure to stop at a pedestrian crossing, use of mobile phone while driving, stopping and parking in disregard of road signs and markings, and driving through a prohibited traffic light (Statistics on road traffic offenses, 2021). The numbers of recorded cases of these offences has increased over to the one million (Statistics on road traffic offenses, 2021). According to the study of Ejikeme et. al. (2020), result revealed that "speeding, mechanical faults, loss of control, drug and alcohol abuse and overloading of vehicles are leading causes of road accidents. Nwagwua, at. al. (2020) in a research, the efforts of the government to regulate the unlawful behavior of road users through its agency - FRSC in enforcing the implementation of Highway Code have yielded minimal results. The level of illiteracy among road users and the degree of recklessness on roads by motorist revealed a huge gap in the realization of FRSC's statutory functions". Nwagwua at. al., (2020) further indicates that to accomplish better results at narrowing the numbers of road violations, authorities have to embark more on sensitization of road users through seminars, workshops, and adequate presence in the media, and to have a permanent and proactive presence on highways to circumvent impending road accidents".

Several studies have understudied the aspect of vehicle traffic and traffic violations. Emenike, and Akpu (2017) conducted a study on Assessment of Road Traffic Violations in Port Harcourt Metropolis, Nigeria and discovered that motorists in the city frequently engage in risky driving behaviors, hence violating the traffic rules and regulation. Commercial drivers are mostly involved in traffic violation as they are constantly in a hurry to pick and drop passengers, thus park indiscriminately on the roads. The knowledge of drivers in the metropolis on traffic signs and rules was found to be inadequate. Most drivers" especially commercial drivers only know how to move vehicles but lack the knowledge on traffic signs. They further revealed common traffic violations in the city

which include speed violation, confrontational driving, driving against traffic, wrongful overtaking, tailgating emergency vehicle, unauthorized parking by private drivers, forming multiple lanes, illegal parking and loading of passengers, reckless driving, dangerous overtaking, lack of fire extinguisher, making phone calls while driving, failure to obey traffic light and signs, overloading amongst others. Bener, 2005; Baker, Clarke, and Brandt (2000) in their study revealed that women and older drivers seem to make more errors compared to men and young drivers. A strong correlation between drivers' behavior and their lifestyle and culture suggested that lifestyle of young drivers has proven to be relevant to their crash risk. Similarly AlRukaibi et. al., (2006) in a study revealed that drivers were found to develop deceptive behaviors towards enforcement by changing their behavior (e.g., speed) in the vicinity of Police or cameras and then resuming their normal behavior in order to avoid being caught and fined. Stanojevicet. al., (2013) in their study, discovered that drivers drive against the traffic routes. Driving against traffic lights has been identified as the major factor resulting to crashes of vehicles in the urban centres and also one of the most frequently violated traffic law in the world today.

### 3. Methodology

This study adopted a quantitative research. Both primary and secondary data were obtained. The primary data was obtained from primary source through administration of questionnaires to the whole seventy-three (73) vehicle inspection officers at the headquarters while the data collected from secondary source include registered traffic violation data for five (5) consecutive years taken from the Vehicle Inspection Officers (VIO) traffic department office in Minna. A census sampling technique was adopted to get the representative sample from the total number of vehicle inspection officers at the headquarters. The tabulation, charts and graphs was used to analyze and interpret data obtained during the course of the research.

### 4. Result

Table 1: Data on major traffic violations in Minna from 2018-2022

Traffic Violations	2018	2019	2020	2021	2022	Total
Expired Vehicle Papers	1,220	1,390	1,502	1,486	1,276	6,874
No Vehicle Papers	360	274	266	312	292	1,504
Expired Driver's License	273	302	291	198	219	1,283
No Driver's License	920	807	907	811	772	4,217
Overloading	311	274	393	321	311	1,610
Route/One Way	120	224	608	487	317	1,756
Roadworthy Vehicle	63	97	89	192	209	650
Traffic Light	502	709	4,524	3,987	3,476	13,198
Failure To Produce Vehicle Papers On-Demand	371	411	502	607	91	1,982
Receiving Calls While Driving	-	132	359	236	127	854
Dangerous Loading	-	-	652	822	793	2,267
Wrong Parking	-	-	-	755	591	1,346
Riders Card Violation	-	-	-	1,162	811	1,973
Registered Vehicle Violation	-	-	-	690	269	959
Total	4,140	4,620	10,093	12,066	9,554	40,473

Source: VIO 2023

Table 1 revealed from 2018-2022, there are fourteen (14) major traffic violations with different number of occurrence in the study area. These traffic violations ranged from traffic light violation, expired vehicle paper, driver's license violation, dangerous loading, failure to produce vehicle papers on-demand, overloading, to rider's card violation. Furthermore, the result revealed a gradual introduction of new traffic violations due to more traffic rules that were enforced by the enforcement officers.

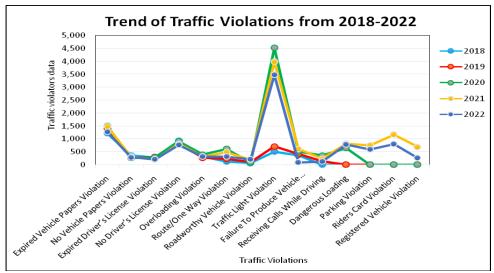


Figure 1 shows the trend of traffic violations from 2018-2022.

Figure 1 showed the trend of traffic violations in the study area. It was revealed that from 2018 to 2019, an expired vehicle paper was the major traffic violation. Furthermore, from 2020 to 2022, there was a drastic change in the trend of traffic violation which shifted from expired vehicle paper to traffic light violation. The change is as a result of the strict enforcement that have made motorist to be conscious of their expiring dates of vehicle papers. The least trend of traffic violations include; roadworthy vehicle, parking, riders' card, and registered vehicle violations.

Table 2 revealed the ranking-order of the traffic violations from 2018-2022. Traffic light violation is the major offence committed by motorist, followed by Expired Vehicle Papers Violation, No Driver's License Violation, Dangerous Loading, and Failure to Produce Vehicle Papers On-Demand respectively. The least traffic violations are Receiving Calls While Driving to Roadworthy Vehicle Violation. This result is similar to the literature of Emenike, and Akpu (2017).

Table 2: Ranking-order of major road traffic violations from 2018-2022

Traffic Violations	2018	2019	2020	2021	2022	Total	Ranking Order
Expired Vehicle Papers Violation	1,220	1,390	1,502	1,486	1,276	6,874	2 <sup>nd</sup>
No Vehicle Papers Violation	360	274	266	312	292	1,504	9 <sup>th</sup>
Expired Driver's License Violation	273	302	291	198	219	1,283	$11^{\rm th}$
No Driver's License Violation	920	807	907	811	772	4,217	$3^{\rm rd}$
Overloading Violation	311	274	393	321	311	1,610	8 <sup>th</sup>
Route/One Way Violation	120	224	608	487	317	1,756	$7^{\rm th}$
Roadworthy Vehicle Violation	63	97	89	192	209	650	$14^{\rm th}$
Traffic Light Violation	502	709	4,524	3,987	3,476	13,198	1 <sup>st</sup>
Failure To Produce Vehicle Papers On-Demand	371	411	502	607	91	1,982	5 <sup>th</sup>
Receiving Calls While Driving		132	359	236	127	854	13 <sup>th</sup>
Dangerous Loading			652	822	793	2,267	$4^{th}$
Parking Violation				755	591	1,346	$10^{th}$
Riders Card Violation				1,162	811	1,973	6 <sup>th</sup>
Registered Vehicle Violation				690	269	959	12 <sup>th</sup>
Total	4,140	4,620	10,093	12,066	9,554	40,473	

Source: VIO 2023

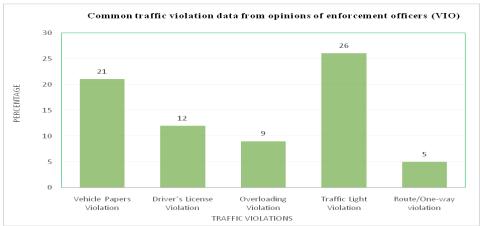


Figure: 2: Shows common traffic violation data from opinions of enforcement officers (VIO)

Figure 2 revealed the opinion of the vehicle inspection officers on the most common traffic violation. 36% of the respondents affirmed that traffic light violation is the most common offence committed by motorist, followed by vehicle papers violation (28.8%), driver's license violation (16.4%), overloading violation (12%) and route/one-way violation (6.8) respectively. The study therefore revealed that traffic light violation is the most common traffic offence while route/one-way violation is the least traffic offence in the study area.

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Table 3: Reasons for road traffic violations by vehicle inspection officers.

Variables	No. of responses	Percentage	Ranking-order		
Inadequate traffic signs	4	5.5	5 <sup>th</sup>		
Inadequate enforcement of laws	10	13.7	$3^{\rm rd}$		
Poor knowledge of traffic rules by motorists	6	8.2	$4^{\mathrm{th}}$		
Negative attitude of motorist	33	45.2	1 <sup>st</sup>		
Reduction of travel time/Saving of fuel	20	27.4	$2^{\text{nd}}$		
Total	73	100			

Source: Field Survey 2023

Table 3 revealed the reasons for traffic violation by the vehicle inspection officers. 45.2% of the respondents attested that negative attitude of motorist is the major reasons for traffic violations. 27.4% affirmed to the reduction of travel time/saving of fuel as the caused, followed by inadequate enforcement of law (13.7%), Poor knowledge of traffic rules by motorists (8.2%) and Inadequate traffic signs (5.5%). Hence, it is deduced that the main reasons for the violation of traffic in the study area are negative attitude of motorist and reduction of travel time/saving of fuel.

Table 4: Effects of traffic violations on mobility

Variables	No. of responses	Percentage (%)
Crashes leads to death	28	38.4
Crashes leads to injury	23	31.5
Arrest/payment of fine	7	9.6
Traffic congestion	11	15
Loss of time	4	5.5
TOTAL	73	100

Source: Field Survey 2023

Analyzing the data derived from vehicle inspection officers' perception on the effects of traffic violations on mobility, Table 4 revealed that 38.4% attested to the fact that crashes leads to death, 31.5% affirmed crashes leads to injury, 15% attested to traffic congestion, 9.6% affirmed arrest/payment of fine while 5.5% affirmed to loss of time. According to the respondents traffic violators on mobility are endangered to a lot of effects like road crashes leading to death, injury, traffic congestion, arrest/payment of fine, and loss of time. It is deduced that crashes leading to deaths and injuries are the major effects of traffic violation. Hence, traffic violators on mobility are endangered to a lot of effects like road crashes leading to deaths and injuries.

### 5. Conclusion and Recommendations

There are fourteen (14) major traffic violations with different number of occurrence in the study area. These traffic violations ranged from traffic light violation, expired vehicle paper, driver's license violation, dangerous loading, failure to produce vehicle papers ondemand, overloading, to rider's card violation. Furthermore, the result revealed a gradual introduction of new traffic violations due to more traffic rules that were enforced by the enforcement officers. The trend of traffic violations in the study area revealed a shift from an expired vehicle paper to traffic light violation as the major traffic violation. The change

is as a result of the strict enforcement that have made motorist to be conscious of their expiring dates of vehicle papers. The reasons for the major traffic violation include negative attitude of motorist, reduction of travel time/saving of fuel and inadequate enforcement of law. Traffic violators on mobility are endangered to a lot of effects like road crashes leading to death, injury, traffic congestion, arrest/payment of fine, and loss of time.

Base on conclusions, it is recommended that there should be adequate information dissemination on traffic rules and regulations with emphasis on traffic light, safe driving, and penalties for violations through the media, seminars, and during enforcement activities. Also, there is the need to review traffic offence penalty document to ensuring stiffer punishments for perpetual offenders. In addition, the introduction of traffic safety education into the system as the most potent method to reducing traffic violation.

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