



Assessment of motorcycle as a means of transportation system and crime activities in Ore, Ondo State, Nigeria

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ABSTRACT

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Motorcycles have become an alternative to conventional means of transportation such as tricycles, buses, and minibuses in most developing countries of the Saharan Africa sub-region. This study therefore examined the effects of motorcycles as an alternative transportation system and their association with crime activities in Ore, Ondo State. A mixed sampling technique was adopted for this study. Motorcyclists' parks in the area were stratified into eight units that were purposively selected, from which 150 respondents were randomly sampled. Descriptive statistics (charts, tables of percentages, and Mean Weight Value) were used to analyze respondents' bio-data, causes, types, and effects of crime on commuters by the cyclists, while inferential statistics (Chi-square) were used to analyze the stated hypotheses. The research revealed that greed for material things, security lapses, and other factors were causes of crimes. Types of crimes included physical injury infliction, murder, robbery, assault, and rape. The effects of crimes on commuters included physical injuries, loss of valuables, and psychological disorders, among others. The results of the hypothesis test at a 5% level of significance showed that since the calculated X^2 value of 88.08 was greater than the table value of 8.34, the null hypothesis was rejected in favor of the alternative hypothesis, indicating that socio-economic factors of the respondents influence crime activities in Ore. The study concluded that most crimes in the area are committed by commercial motorcyclists. The study recommended that intelligence and surveillance operations should be intensified within the neighborhood to curb these activities.

Contribution/Originality: This study contributes to the existing literature by enhancing safety in motorcycle use for a sustainable transportation system. It employs mixed methods for data collection. The study originates from MWV analysis and is among the studies investigating the activities of commercial motorcyclists related to crime. The paper contributes to crime reduction by motorcyclists. The primary finding is that motorcycles, as a means of mobility, are used in committing crimes. This study documents that cyclist activities should be monitored.

1. INTRODUCTION

Transportation is an organized service industry that handles loading, unloading, and delivery of goods and services from one place to another over the earth's surface. The role of commercial motorcycles among other means of road transport for effective and efficient service delivery cannot be undermined both in the rural environment and in the urban centers of the developed and developing nations of the world. However, the use of motorcycles for public transport has become a common means of intra-city and inter-community transportation system, especially in most rugged areas and in dispersed settlements around the globe (Konings, 2006a). Furthermore, motorcycle as an overland means of transportation is the most flexible and accessible means that provides door-to-door services,

especially since there are no defined bus stops and specific routes for its operation, mostly in the suburban environment. As an alternative to conventional buses and minibuses, the use of motorcycle transport services has provided the impetus for reducing high levels of unemployment and underemployment among school leavers and youths who are jobless, enabling them to earn a living and a steady income. Hence, the socio-economic benefit of the commercial motorcycle industry, as [Cervero \(2000\)](#) applauded, is a considerable source of both direct and indirect income.

Apart from the aforementioned, the usage of motorcycles for commercial purposes in Nigeria provides passenger means of mobility both in urban and rural communities as an efficient transportation system for the movement of goods at the household level. To a large extent, it has allowed small-scale traders to have flexible mobility to enhance their movements through cheap and easy transportation of goods, curbing the loss of economic man-hours, lateness to work, and other challenges associated with traffic jams ([Konings, 2006a](#)).

However, the benefits of motorcycle operation for commercial services have revealed a myriad of negative impacts that pose significant challenges to most users, such as accidents, criminal acts, and other negative aspects of it as a means of mobility in developing countries compared with the rest of the world ([Konings, 2006a](#); [Konings, 2006b](#); [Menzel, 2011](#)). Globally, out of the 1.2 million road deaths occurring each year, nearly half (46%) of the total population of road users, comprising pedestrians and pedal cyclists, are vulnerable to motorcycle riders. In Kampala, for example, motorcycles have been responsible for about 50% of road traffic crashes. In Kenya, too, the proportion of accidents resulting from motorcycles has significantly risen from 1.7% in 2005 to about 4.2% in 2008 and 6.1% in 2009, respectively ([Konings, 2006a](#); [Konings, 2006b](#); [Menzel, 2011](#)).

[Akogun \(2008\)](#) succinctly observed that, the problem with commercial motorcyclists is not only that of recklessness and non-adherence to traffic regulations, the motorcycle transportation sub-system is plagued with crimes. According to [Bassey \(2008\)](#), the use of commercial motorcycles for public transportation is a misnomer. Apart from the lack of regard for other road users, the evils perpetrated by commercial motorcycle riders are enormous. As noted by [Okoye \(2009\)](#), the excesses of commercial motorcycle riders range from disappearing with their passengers or customers' goods given to them for delivery, some act as informants to criminals like kidnappers or ritualists, while others connive with corrupt law enforcement agents to perpetuate crime in society.

In Nigeria today, many criminals and reckless youths have joined the business of commercial motorcycle riding, and the industry has become infested with violence and crime. [Oludele \(2014\)](#) reported the death of a popular musician who was killed by gun men on a motorcycle in Lagos state. For members of the public, commercial motorcycle riders have abandoned their business of carrying people and transporting goods for various criminal activities. They commit all types of crimes such as snatching bags, handsets, vehicle parts, electronic gadgets, money, kidnapping, rape, and stealing other valuables. Sometimes, they inflict physical injuries on unsuspecting pedestrians during the commission of these criminal acts. Furthermore, [Akogun \(2008\)](#) observed that, on a daily basis, in some Nigerian cities, people are dispossessed of their belongings by hoodlums on commercial motorcycles, sometimes at gunpoint, and others are often given indelible marks with the use of cutlasses.

According to [Bassey \(2008\)](#), apart from the psychological trauma associated with such encounters, such as loss of lives and properties, some passengers and pedestrians have sustained injuries that have held them down for several months and years, resulting in a loss of economic man-hours. A careful observation of criminal activities in Nigeria today reveals that property crimes are most prevalent, and a significant number of commercial motorcycle riders are involved in many forms of property crime. These offences generally involve loss of property, harm, or physical injury inflicted against other persons, thus causing them to suffer pain and anguish.

As noted by [Nwankwo, Okorie, and Onyekachi \(2008\)](#), some commercial motorcyclists are known to have kidnapped or abducted not only their passengers but also other innocent members of society for either political or economic motives. [Akogun \(2008\)](#) noted that it is common in some parts of the country today to see some of the commercial motorcycle operators armed with dangerous weapons used in harassing, brutalizing, and intimidating

innocent commuters at night, even in broad daylight, on lonely roads or in newly developed areas when conveying them to their various destinations.

Many times, most of the riders of commercial motorcycles are often alleged to be involved in one or the other criminal activities (Usuwah, 2012). Thus, crime continues to impact and become a major scar on the peace and security of the areas where commercial motorcycle operators are present. The increasing and alarming rate of reports on crimes involving motorcycles is apparently and continuously not only posing a major challenge to peace and security in the country but also frustrating both domestic and foreign investments (Bassey, 2009; Okache, 2010; Olubomehin, 2012).

Since, the transport industry especially, the Commercial motorcycle means of transportation, has a significant effect on the economic growth and development of areas where they operate by providing mobility and access to areas of interest to people such as getting access to areas of employment, education, retail, health and recreational facilities, as well as community facilities, it is certain that the Commercial motorcycle transport holds a very critical role to any given society. Hence, the need for the assessment of motorcycles as a means of transportation in relation to the incidence of criminal activities in Ore, Ondo State.

Suzuki, Boxer, and Yamaha dominate the types of motorcycles globally. There are currently an estimated 300 million motorized motorcycles and tricycles on the road, where the majority (85 percent) of them are found in Asian and African countries (Usuwah, 2012). Commercial motorcycles served the riverine areas of the south where roads were sparse, as well as the dispersed settlements of eastern and northern Nigeria; they are exclusive to these locations until they finally emerged in cities. They are therefore, novel when they eventually emerged as intra-urban means of transport.

Commercial motorcycle transport goes by different names such as Okada, Going, and Bike, among other names in Nigeria (Iribhogbe & Odai, 2009). But Arosanyin (2012) describe the use of motorcycles for passenger transport, while Iribhogbe and Odai (2009) described it as transporting passengers and goods from one location to another for a fee.

The emergence of commercial motorcycle transport in Nigeria is largely attributed to the mobility challenges that arose in the late 1980s. The inadequacy and ineffectiveness of conventional means of transportation, such as buses and taxis, due to the deplorable condition of roads in developing countries, including the unpaved nature of most roads and the poor state of the few paved ones made it difficult for commercial motorists to connect various routes and access many activity areas.

The prevalence of economic crises and the unhealthy structural adjustment policies, coupled with loss of jobs resulting from mass retrenchment, among other factors, called for the introduction of motorcycles in Nigeria as a means of transportation for commercial purposes. This not only aggravated the level of poverty but also led the masses to widely adopt the use of motorized two-wheel cycles (motorcycles), which became an alternative to conventional buses and mini-buses. Meanwhile, unemployed graduates and highly retrenched skilled workers turned to commercial motorcycling, thereby taking over the services of dropping passengers at their destinations (Menzel, 2011).

Moreover, the high transport need and the difficult economic terrain of the late eighties in Nigeria naturally made motorcycle owners offer their vehicles for hire on a part-time basis before it eventually became a trade, thereby paving the way for increasing the supply of public transport in urban and rural areas (Ogunbodede, 2008). However, the use of motorcycles has now spread from the big cities to medium and small cities across Nigeria. Thus, currently, there are more than two million motorcycles scattered all over Nigeria (World Health Organization (WHO), 2023).

Though a larger percentage of motorcycles in Nigeria are used for commercial purposes, they are emerging as an important means of public transportation mainly because of their flexibility. However, the major reasons for the introduction of this alternative means of transport are to enhance an efficient transport system and probably serve

as a means of job creation for people in the transport industry sub-sector. The alarming report on crimes involving the use of motorcycles for commercial activities is very high; hence, there is a need for the assessment of motorcycle transportation and crime activities in Ore, Ondo State. To achieve this, the following objectives were considered: examine the socio-economic characteristics of commercial motorcycle transport operators in the area, identify and examine the types of crimes committed by motorcycle operators in the area, and finally assess the effects of crimes committed by cyclists as well as suggest how the crimes committed can be reduced in the area. Therefore, it is hypothesized that the causes of crime by the commercial motorcycle transport operators in the study area are not significant.

2. CONCEPTUAL FRAMEWORK ISSUES

2.1. Concept of Motorcycle

Motorcycle (MC) is a two-wheel motorized vehicle (Kumar, 2011). Thus, it is a sort of two-wheeled motor vehicle whose design varies greatly to suit a range of different purposes: long-distance travel, navigating urban traffic, cruising, sport, racing, and off-road riding. Compared with cars, Motorcycle Transportation (MT) is an especially high-risk vehicle. Prior to 1980, Motorcycle Transportation (MT) was primarily used for private purposes for individuals.

The usage of MT as a commercial vehicle serving as a taxi, with passengers sitting behind the driver, predates the 1970s when this motorized wheel was then known in the Cross River State as Achaba or motorcycle taxis and part of Yola and Gongola States, now Adamawa State, in the late 1970s, which spread to Lagos through a group of individuals in Agege Local Government Area (Ezeibe, Ali, & Ogbodo, 2017).

Ezeibe et al. (2017) noted that following the economic downturn in Nigeria, which was partly a consequence of the adoption of a liberal economic policy by the Babangida administration in the form of a Structural Adjustment Program combined with rapid urbanization, began to spread in the 1980s and became more popular in the late 1980s, due to issues such as unemployment and inadequate intra-city public transportation.

Due to the fact that MT are readily available, easily navigating through narrow roads, rough terrain, and remote areas, and meandering through hectic urban traffic, they meet the unmet transport needs of some urban residents by transporting passengers swiftly to their doorsteps. The commercial MT were nicknamed commercial motorcycles (Ezeibe et al., 2017).

Thus, the use of motorcycles for intra-city commercial transport, aside from being commonly used as commercial motorcycles (also known as achaba, going, inaga) in Nigeria and other African countries, is also prevalent in some other West African countries. In Togo, it is called “Oleya”; in Benin Republic, “Zemidians”; in Burkina Faso and Liberia, “Phenphen”; and it is also used in Ghana and Sierra Leone (Kumar, 2011).

Solagberu (2006) succinctly noted that the main driving force of MT growth is socio-economic considerations, including the low initial purchase costs, low operating costs that are typically linked to the superior fuel economy or reliability of MTs relative to cars, their relatively low maintenance costs, and perhaps the main employment opportunities for unemployed youth.

2.2. Concept of Motorcycle Transportation

Transport (in British English), or transportation (in American English), is the movement of humans and goods from one location to another through various modes. In other words, the action of transport is defined as mobility over space, that is, movement from one point to another (origin to destination) (Olobomehin, 2002). Oyesiku and Oduduwa (2002) defined transportation as the movement of goods and persons from place to place and the various modes and means by which such movement is accomplished. This definition connotes that transportation is the means of conveyance or travel from one place to another. In the word of Oyesiku and Oduduwa (2002), transportation is the conveyance of passengers or goods, especially from origin to destination. Transportation is the

world's largest invisible industry. Modern society is completely dependent on transportation to sustain its way of life, and it is all around us constantly. Transport enables trade between people, which is essential for development and civilization.

The foregoing signifies that transport is a key component of growth, globalization, and a key necessity for specialization. Transportation allows the production and consumption of products to occur at different locations. Due to the way modern cities and communities are planned and operated, a physical distinction between home and work is usually created, forcing people to transport themselves to places of work, study, or leisure, as well as to temporarily relocate for other daily activities.

As noted by Arosanyin (2011), transportation is a field that makes use of a particular type of vehicle, infrastructure, and operation to solve man's problems. Transport infrastructure consists of fixed installations such as passages and terminals. The modes of transport or transportation include air, land (rail, road, and pipeline), water, and cable. Terminals include bus stops, airports, railway stations, warehouses, trucking terminals, refueling depots, fueling docks, fuel stations, as well as seaports. Terminals may be used both for the interchange of passengers and cargo, and for maintenance.

Vehicles or means of transport are any of the different kinds of transport facilities used to carry people or cargo from one place to another. They may include vehicles, riding animals, and pack animals. Vehicles may include wagons, automobiles, bicycles, buses, trains, trucks, helicopters, watercraft, spacecraft, and aircraft. The transport of a person or cargo may involve one mode or several modes, with the latter case being called intermodal or multimodal transport. Each mode has its own advantages and disadvantages and will be chosen based on cost, capability, and route (Fasakin, 2001).

2.3. Concept of Crime

A number of scholars have defined crime in various ways. Fasakin (2001) defines crime as an act committed or omitted that is harmful to the state, an individual, or both. He adds that the act so committed or omitted must be specifically prohibited by an existing criminal law. On his part, Igwe (2008) provides an integrated definition of crime by stating that crime is a violation of the societal rules of behavior as interpreted and expressed by a criminal legal code created by people holding social and political powers. Some of the crimes and offences committed by commercial motorcycle operators include, but are not limited to, offences against the person, offences against property, offences against lawful authority, and offences against local authority. Offences against the person are non-materialist crimes. They involve physical injuries to the human victim and constitute a threat against persons. These offences generally involve harm or physical injury inflicted against other persons, thus causing them to suffer pain and anguish. They include kidnapping, rape, murder, armed robbery, unlawful possession of dangerous weapons, manslaughter, aggravated assault, trafficking, kidnapping, and assassination offences. Others include violations of traffic laws and regulations by vehicular operators.

All these are offences against lawful authority, which are offences that breach or contravene the laws passed by the state and local government authorities concerning public order (Igwe, 2008).

3. MATERIALS AND METHODS

3.1. The Study Area

The study area was chosen because it is a nodal town where the East-West and North-South routes meet and serves as a nexus town or gateway to Lagos, the former capital of Nigeria. Hence, this town always witnesses mass movement of travelers in transit. It is the largest settlement in Odigbo Local Government Area. Ore lies between latitude $6^{\circ}.55'$ and $6^{\circ}.56'$ North of the equator and between longitudes $5^{\circ}.30'$ and $6^{\circ}.35'$ east of the Greenwich meridian, with a total area covering about 116 km². The study area is bounded in the eastern part by Edo State, in the northern part by Ondo West LGA. In the south and western parts, it is bordered respectively by Ijebu

Waterside and Sagamu LGAs. According to the Digest of Demographic Statistics of Ondo State (2000), the population of Ore was estimated at 46,831. With an annual increase rate of 3.03%, the population of Ore as of 2022 was projected to be approximately 53,511 (Map Data, 2017). The predominant occupations of the people of Ore include large-scale farming, trading, and services. The increase in land mass and population is evident in economic activities, including daily trade in commodities carried out in a network of traditional and modern markets, hotels, and guest houses dotting the landscape of both the inner and outskirts of the city.

The annual rainfall total of Ore ranges from 1,800 mm in the southern part and diminishes northward to about 1,720 mm. The annual mean temperature of Ore is between 27°C. The vegetation of Ore is tropical forest. Because the soil of this region developed from basement complex with sandstone and ferruginous rocks, the soils are mainly oxisols and ultisols (tropical ferruginous) and ferruginous lateritic soils that vary over space with respect to texture, drainage, and gravel content among others (Food and Agriculture Organization of the United Nations (FAO), 1982). However, all these activities have equally increased the number of traffic volume and trip patterns in the area as people travel between their homes and workplaces, markets, religious centers, recreation centers, shopping areas, visits to relatives and family, as well as trips to healthcare facilities, among others.

3.2. Methods

A mixed-method approach was adopted in this study. The first stage involved the identification and delineation of the study area into the eight Parks of the Association of Commercial Motor Cyclist Riders of Nigeria (ACOMORON) in Ore. Second, purposive sampling was used to select these eight ACOMORON Parks in the study area, with the Parks stratified based on their population. Finally, a simple random sampling technique was employed to select the required number of respondents from each of the eight Parks. In total, two hundred and fifty (250) respondents were sampled for the study. Descriptive statistical analysis was used to analyze the bio-data of the respondents, including line graphs, bar graphs, and bar charts. Ground Mean Weight Value analysis summarized the types of crimes committed and the factors responsible for such crimes in the area. Similarly, Chi-square statistical analysis was used to test the hypothesis that socio-economic characteristics of the motorcycle operators have no effect on the causes of crime committed in the area at a 5% level of significance and 9 degrees of freedom. Since the calculated X^2 value of 88.08 was greater than the table value of 8.34, the null hypothesis was rejected, leading to the conclusion that socio-economic factors of the respondents influence the crimes committed in the area.

4. ANALYSIS AND DISCUSSION

This chapter presents results and discussion of the analyses carried out on the primary data collected from the field on the assessment of motorcycle transportation and crime activities in Ore, Ondo State, with a view to explore the nature of the bio-data of commercial motorcycle transport operators, the causes, types, and effects of crimes committed, and how to curb crime activities perpetrated by commercial motorcycle transport operators in the study area.

4.1. Socio-Economic Characteristics of Respondents

Analyses of the socio-economic characteristics of the respondents were carried out, such as age, sex, marital status, and monthly income, among others.

4.1.1. Age of Respondents

Table 1 presents the age structure of the respondents. From the table, 26 respondents (18.67%) were between the ages of 15 and 20 years old, while 28.00% (42) of the respondents were between ages 21 and 25 years old. Additionally, 32% (48) and 15.33% (23) of the respondents fall within the ages of 26-30 years and 31-35 years,

respectively. Only 6% (9) of the respondents were between the ages of 36 and 49 years and above. Following the United Nations definitions of youth, which include individuals aged 15–25 years, approximately 46.67% of the commercial motorcycle transport operators in the study area can be considered youths. However, according to the Federal Republic of Nigeria (2001), the assumption is that youth comprises all persons below age 35 years.

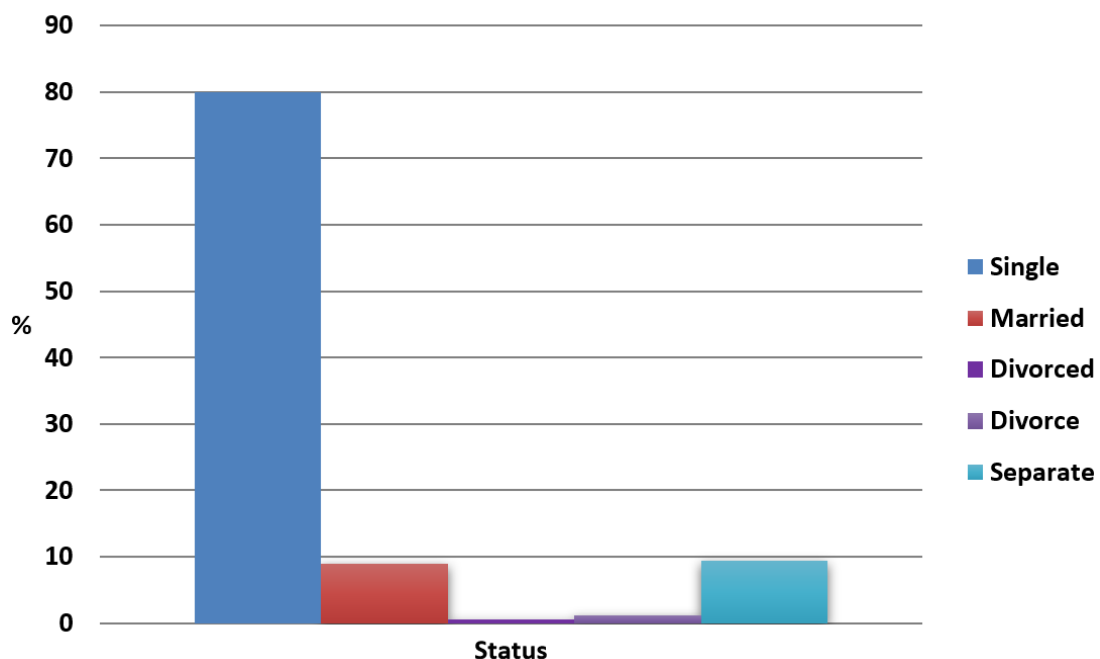
Table 1. Age of the respondents.

Age	Frequency	%
15–20	28	18.67
21–25	42	28.00
26–30	48	32.00
31–35	23	15.33
36–49	9	6.00
Total	150	100.00

Source: Fieldwork, 2023.

4.1.2. Marital Status

The marital status of respondents in Figure 1 illustrates that 80.00% of the commercial motorcycle transport operators are still single and have not yet married, while 8.89% of the respondents are already married. However, 0.56% and 1.11% of the respondents identify as widowed and divorced, respectively. A small proportion (9.44%) of the respondents are separated. The main reasons for separation could be attributed to unemployment, which leads to an inability to sustain the marriage, making it difficult to stay together.



Source: Fieldwork, 2023.

Figure 1. Marital statuses of respondents.

4.1.3. Educational Qualification

As illustrated in Table 2, 18.67% of the respondents have no formal education, 28.00% have primary school certificates, and 32.00% have secondary school education or its equivalent. In addition, another 15.33% have NCE/OND certificates, while 6.00% have HND or first-degree certificates. This indicates that 78.67% of the respondents have educational statuses below tertiary education; hence, there is a high tendency for the respondents to get involved in crime because of their low level of education.

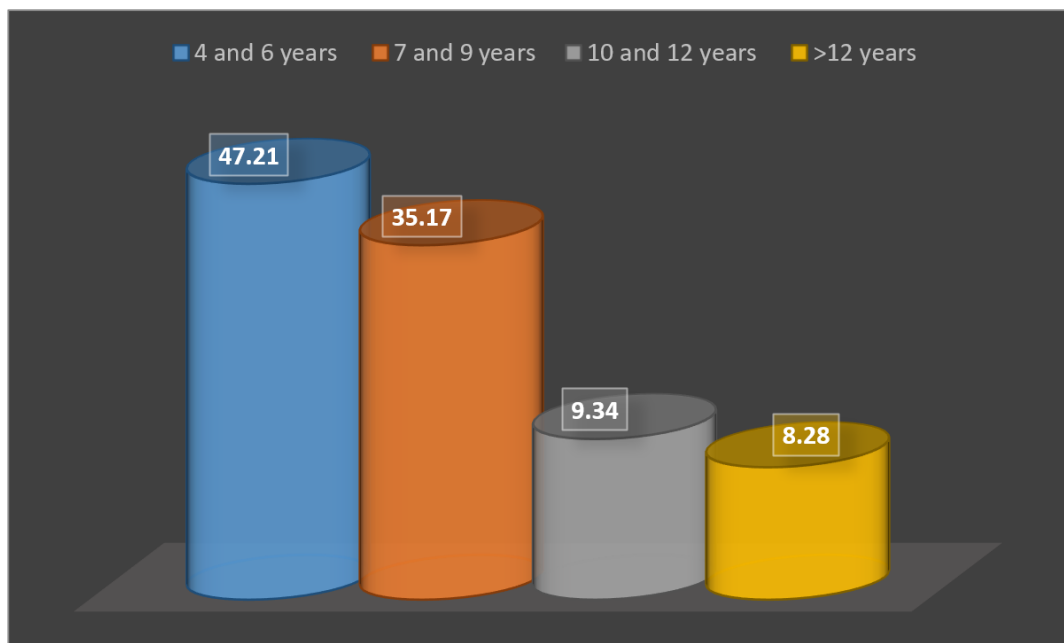
Table 2. Educational qualification.

Qualification	Responses	%
No formal education/out of school	28	18.67
Primary six	42	28.00
S.S.C.E./NABTEB/GCE	48	32.00
O ND/NCE	23	15.33
HND/ First degree	9	6.00
Total	150	100.00

Source: Fieldwork, 2023.

4.1.4. Years of Riding Commercial Motorcycle

Figure 2 vividly shows that 47.21% of the respondents claimed that they have been riding commercial motorcycles for 4–6 years or thereabouts. Thus, 35.17% of the respondents also claimed that they have been operating as commercial motorcycle operators for between 7 to 9 years, while the remaining 9.34% and 8.28% of the respondents claimed that their years of experience in commercial motorcycle riding were between 10 and 12 years and over 12 years, respectively.

**Figure 2.** Years of experience in operating motorcycle.

4.2. Causes of Crimes Committed by Motorcycle Transport Operators in the Study Area

The subjective responses of the 150 respondents on the causes of crime committed by Commercial motorcycle riders in the study area were summarized and thereafter converted to objective responses using Likert Conversion in conjunction with Mean Weight Value Analysis (Sunmola, 2017). From Table 3, the cut-off point or General Mean Weight Value (GMWV) for this analysis is 3.18. According to Sunmola (2017), as a rule, factors with a Mean Weight Value (MWV) less than the GMWV are rejected, and vice versa. The accepted causes of crimes by commercial motorcycle motorcyclists in the study area are greed for material things (MWV = 3.49), predisposition to crime (MWV = 3.48), security lapses (MWV = 3.37), peer pressure (MWV = 3.26), and failed political leadership (MWV = 3.18). These causes were accepted because their MWVs are greater than the GMWV of 3.18.

The rejected causes of crimes by commercial motorcycle motorcyclists in the study area are: the unfavorable economic situation (MWV = 3.15), family pressure (MWV = 3.08), financial problems (MWV = 3.05), spouse pressure (MWV = 3.05), and unemployment (MWV = 2.73). These causes were rejected because their MWVs are less than the GMWV of 3.18. Thus, it can be categorically inferred that greed for material things, as a result of peer

pressure, aided by predisposition to crime, security lapses, and failed political leadership, are the main causes of crimes by commercial motorcycle motorcyclists in the study area, and not unfavorable economic situation nor financial problems, because they are already engaged in one type of employment as commercial motorcycle motorcyclists.

Table 3. Causes of crimes committed by commercial motorcycle transport operators in the study area.

Statement Items	Responses						Likert conversion						Mean weight value	Decision
	SA	A	U	DS	SD	Total	5	4	3	2	1	Total		
Unemployment	34	23	17	21	55	150	170	92	51	42	55	410	2.73	R
Peer pressure	31	34	25	32	28	150	155	136	75	64	28	458	3.05	R
Financial problems	48	36	29	16	21	150	240	144	87	32	21	524	3.49	A
Security lapses	43	22	45	28	12	150	215	88	135	56	12	506	3.37	A
Unfavourable economic situation	25	37	44	23	21	150	125	148	132	46	21	472	3.15	R
The failed political leadership	38	24	35	33	20	150	190	96	105	66	20	477	3.18	A
Predisposition to crime	45	34	34	22	15	150	225	136	102	44	15	522	3.48	A
Greed for material things.	45	32	22	19	32	150	225	128	66	38	32	489	3.26	A
Spouse pressure	24	33	44	25	24	150	120	132	132	50	24	458	3.05	R
Family pressure	34	23	40	27	26	150	170	92	120	54	26	462	3.08	R
												GMWV	3.18	

Note: R = Reject; A = Accepted

Source: Fieldwork, 2023.

4.3. Types of Crimes Committed by Motorcycle Transport Operators in the Area

The types of crimes committed by commercial motorcycle transport operators in the study area, according to Igwe (2008), can be grouped into three categories: harm or physical injury inflicted on other persons, offences against property, and offences against lawful authority. Table 4 shows the summary of the converted subjective responses of the 150 respondents to objective responses on the subtypes of the three major types of crime that are committed by Commercial motorcycle riders in the study area. This conversion was done using Likert Conversion in conjunction with Mean Weight Value Analysis (Sunmola, 2017). From Table 4, the cut-off point or General Mean Weight Values (GMWVs) for harm or physical injury inflicted against other persons, offences against property, and offences against lawful authority are 3.14, 3.17, and 3.02 respectively. According to Sunmola (2017), in accepting the decision of mean weight value analysis, the value of the Mean Weight Value (MWV) will be higher than the GMWV and vice versa.

Thus, with a GMWV of 3.14, the accepted types of harm or physical injuries inflicted by commuters and other crimes committed by commercial motorcyclists in the study area are murder and armed robbery (MWV= 3.33), unlawful possession of dangerous weapons (MWV= 3.24), aggravated assault, and rape (MWV= 3.21). The rejected types of harm or physical injuries inflicted against other persons, crimes not committed by commercial motorcycle motorcyclists in the study area, are kidnapping and trafficking (MWV= 3.04) and manslaughter and assassination (MWV= 2.88) because their MWVs are lesser than the GMWV of 3.14.

Moreover, with a GMWV of 3.17, the accepted types of offences against property committed by commercial motorcycle riders in the study area are: pickpocketing (MWV= 3.33), theft, and stealing (MWV= 3.23), and snatching of phones, handbags, and wallets (MWV= 3.23). These types of offences against property are considered prevalent in the study area because their MWVs are higher than the GMWV of 3.17. The rejected types of offences against property, which are not committed by commercial motorcycle riders in the study area, include: receiving

stolen property (MWV= 3.08) and cheating cum advance fraud (419) (MWV= 2.96), as their MWVs are lower than the GMWV of 3.17.

In addition, with a GMWV of 3.02, the accepted types of offences against lawful authority committed by commercial motorcycle motorcyclists in the study area are: violation of traffic laws and regulations (MWV= 3.17), bribery and corruption (MWV= 3.12), and stealing and snatching of ballot boxes and other materials to aid rigging of elections (MWV= 3.03). These types of offences against lawful authority as committed by commercial motorcycle motorcyclists in the study area are accepted because their MWV values are more than the GMWV of 3.02.

But, aiding escape or rescue of culprits from lawful custody (MWV= 2.93) and perjury, or false testimony, on oath (MWV= 2.87) are rejected offences against lawful authority that are not committed by commercial motorcycle motorcyclists in the study area. These types of offences against lawful authority are rejected because their MWVs are less than the GMWV of 3.02.

Table 4. Types of crimes committed by commercial motorcycle transport operators in the study area.

Statement items	Responses						Likert conversion						Mean weight value	Decision
	SA	A	U	DS	SD	Total	5	4	3	2	1	Total		
Harm or physical injury inflicted against other persons														
Kidnapping and trafficking,	32	23	29	51	15	150	160	92	87	102	15	456	3.04	R
Aggravated assault, and rape,	44	23	32	22	29	150	220	92	96	44	29	481	3.21	A
Murder and armed robbery,	55	12	32	30	21	150	275	48	96	60	21	500	3.33	A
unlawful possession of dangerous weapons,	34	40	26	28	22	150	170	160	78	56	22	486	3.24	A
Manslaughter and assassination,	29	28	23	36	34	150	145	112	69	72	34	432	2.88	R
											GMWV		3.14	
Prevalent. Offences against property														
Theft, and stealing,	45	33	22	12	38	150	225	132	66	24	38	485	3.23	A
Snatching of phones, handbags, and wallets.	25	39	22	33	31	150	125	156	66	66	31	444	2.96	R
Receiving stolen property,	32	28	34	32	24	150	160	112	102	64	24	462	3.08	R
Pick pocketing,	37	29	44	27	13	150	185	116	132	54	13	500	3.33	A
Cheating and advance fraud (419),	48	26	24	16	36	150	240	104	72	32	36	484	3.23	A
											GMWV		3.17	
Offences against lawful authority														
Perjury, or false testimony, on oath.	20	36	33	27	34	150	100	144	99	54	34	431	2.87	R
Aiding escape or rescue of culprits from lawful custody,	24	33	34	27	32	150	120	132	102	54	32	440	2.93	R
Bribery and corruption	25	44	26	34	21	150	125	176	78	68	21	468	3.12	A
Violation of traffic laws and regulations	33	26	46	23	22	150	165	104	138	46	22	475	3.17	A
Stealing and snatching of ballot boxes and other materials to aid rigging of election.	27	32	44	12	35	150	135	128	132	24	35	454	3.03	A
											GMWV		3.02	

Note: R = Reject; A = Accepted

Source: Fieldwork, 2023.

Thus, it can be said that the types of crimes committed by commercial motorcycle riders in the study area are not limited to harm or physical injury inflicted against other persons, including crimes such as murder and armed robbery, unlawful possession of dangerous weapons, aggravated assault, and rape. The types of offenses against property committed by these riders include pickpocketing, theft, and snatching of phones, handbags, and wallets.

Additionally, offenses against lawful authority committed by them encompass violations of traffic laws and regulations, bribery and corruption, and stealing and snatching of ballot boxes and other materials to aid election rigging.

4.4. The Effects of Crimes Committed by Commercial Motorcycle Transport Operators on Commutes in the Study Area

The subjective responses of the 150 respondents regarding the effects of crimes committed by commercial motorcycle riders on passengers in the study area were summarized and subsequently converted into objective responses using Likert Conversion in conjunction with Mean Weight Value Analysis (Sunmola, 2017). From Table 5, the cut-off point or General Mean Weight Value (GMWV) for this analysis is 3.11. According to Sunmola, (2017), as a rule, factors with a Mean Weight Value (MWV) less than the GMWV are rejected, and those with MWV greater than or equal to the GMWV are retained.

Thus, the accepted effects of crimes committed by commercial motorcycle riders on the passengers in the study area are: pain suffering (MWV = 3.39), anguish suffering (MWV = 3.33), loss of valuables (MWV = 3.30), physiological disorder (MWV = 3.30), and physical injuries to victims (MWV = 3.28). These effects were accepted because their MWVs are greater than the GMWV of 3.11.

However, the effects of crimes committed by commercial motorcycle riders, such as loss of property (MWV = 3.07), disappointment (MWV = 3.05), loss of life (MWV = 2.95), state of confusion or loss of senses (MWV = 2.90), and threats against victims (MWV = 2.67), are not perceived by passengers in the study area.

However, it can be succinctly said that the effects of crimes committed by commercial motorcycle riders on the passengers in the study area are not majorly felt in terms of physical injuries to victims that often result in pain and suffering, and loss of valuables that often lead to anguish and suffering, but all often result in physiological disorders of commercial motorcycle passengers in the study area.

Table 5. The effects of crimes committed by commercial motorcycle transport operators on commuters in the study area.

Statement items	Responses						Likert conversion						Mean weight value	Decision
	SA	A	U	DS	SD	Total	5	4	3	2	1	Total		
State of coma or loss of senses	28	28	33	23	38	150	140	112	99	46	38	435	2.9	A
Threat against victim	25	19	33	28	45	150	125	76	99	56	45	401	2.67	R
Suffer pain	24	58	32	24	12	150	120	232	96	48	12	508	3.39	A
Loss of properties	29	40	16	43	22	150	145	160	48	86	22	461	3.07	R
Suffer anguish	43	26	38	24	19	150	215	104	114	48	19	500	3.33	A
Loss of valuables	43	29	26	34	18	150	215	116	78	68	18	495	3.3	A
Physical injuries to the victim	39	29	21	32	29	150	215	116	78	68	18	495	3.28	A
Loss of life	26	29	39	24	32	150	130	116	117	48	32	443	2.95	R
Disappointment	33	27	33	29	28	150	165	108	99	58	28	458	3.05	R
Physiological disorder	38	36	28	29	19	150	190	144	84	58	19	495	3.3	A
GMWV													3.11	

Note: R = Reject; A = Accepted

Source: Fieldwork, 2023.

4.5. Ways to Curb Crimes Committed by Commercial Motorcycle Transport Operators in the Study Area

The subjective responses of the 150 respondents regarding ways to curb crimes committed by commercial motorcycle riders in the study area were summarized and subsequently converted into objective responses using Likert Conversion in conjunction with Mean Weight Value Analysis (Sunmola, 2017). From Table 6, the cut-off

point or General Mean Weight Value (GMWV) for this analysis is 3.09. According to Sunmola (2017), as a rule, factors with a Mean Weight Value (MWV) less than the GMWV are rejected, and those with MWV greater than or equal to the GMWV are accepted.

The accepted means of curbing crimes committed by commercial motorcycle riders in the study area are, but not limited to: introduction of informal means of social control (local police/vigilante and Amotekun to complement the efforts of the police (MWV = 0.3.51), the NPF should increase intelligence and surveillance operations around neighborhoods and major areas of operation of commercial motorcycles (MWV = 3.44), proper documentation of all commercial motorcycle riders in the study area (MWV = 3.28), and the establishment of a Public Transportation Security Agency to monitor the use of various means of public transportation (MWV = 3.25). Additionally, the government should implement programs and modalities to address poverty (MWV = 3.24). All the aforementioned methods of curbing crimes committed by commercial motorcycle riders were accepted because their MWVs are greater than the GMWV of 3.09.

Among the rejected methods of curbing crimes committed by commercial motorcycle riders in the study area include; law enforcement agencies such as the NPF and other security agencies must uphold integrity (MWV = 3.07). The issue of issuing licenses to intending commercial motorcycle riders should be based on their level of educational attainment and psychological fitness (MWV = 2.98). All commercial motorcyclists operating within an area should always wear reflective jackets as uniforms (MWV = 2.98). Additionally, commercial motorcycle plate numbers should be made distinct from non-commercial ones (MWV = 2.97), and the registration of all owners of commercial motorcycles should be enforced (MWV = 2.79). These methods of curbing crimes committed by commercial motorcycle riders in the study area were rejected because their MWVs are less than the GMWV of 3.0. From the analysis, it can be inferred that the use of informal social control measures, such as local police, vigilantes, and Amotekun, to complement police efforts aimed at increasing intelligence and surveillance operations around neighborhoods and major areas of operation of commercial motorcycles coupled with proper documentation of all commercial motorcycle riders, will likely decrease crime or at least prevent the occurrence of crimes committed by commercial motorcycle riders in the study area. Moreover, establishing a Public Transportation Security Agency to monitor the use of various means of public transportation and implementing programs and strategies to address poverty by the government will also significantly reduce crimes committed by commercial motorcycle riders in the study area.

4.6. Testing of the Stated Hypotheses

Hypothesis testing: H_{01} , the causes of crimes committed by commercial motorcycle transport operators in the study area are not significant.

The summary of data collected on the causes of crimes committed by Commercial motorcycle transport operators in the study area (Table 3) was subjected to Chi-Square Statistical analysis. The summary of the result of this analysis is as shown in Table 6. From the table, at $p = 0.05$ and $df = 9$, the calculated X^2 value of 88.08 is higher than the tabulated X^2 value of 8.34. Hence, H_0 is rejected. This signifies that the causes of crimes committed by commercial motorcycle transport operators in the study area are significant.

Table 6. Summary of Chi-Square (X^2) analysis on causes of crimes committed by commercial motorcycle transport operators in the study area.

Variables	A	df	Cal X^2 value	Table X^2 value	Decision
Causes of crimes involving motorcycle transport operators in the study area.	0.05	$(n-1) (10-1) = 9$	88.08	8.34	Reject H_0

Source: Fieldwork, 2023.

5. CONCLUSION AND RECOMMENDATION

It was noted that greed for material things, as a result of peer pressure aided by predisposition to crime, security lapses, and failed political leadership, are the main causes of crimes by motorcycle operators in the study area. Moreover, the types of crimes committed by motorcyclists are not limited to harm or physical injury inflicted against commuters; these include murder, armed robbery, unlawful possession of dangerous weapons, and aggravated assault and rape. Other offenses committed by motorcycle operators in the study area include stealing and snatching of phones, handbags, and wallets, violation of traffic laws and regulations, as well as snatching of ballot boxes and other sensitive election materials to aid rigging of elections. These crimes are prevalent in the study area with the use of motorcycles. Thus, the study concluded that stringent laws and regulations guiding the use of motorcycles should be implemented, including proper documentation of all commercial motorcycles. Based on the conclusion, the study recommended that intelligence and surveillance operations around neighborhoods and major areas of operation of commercial motorcycles should be intensified. Additionally, social control measures such as the use of local police, vigilantes, and Amotekun should be adopted to complement the efforts of the police.

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Institutional Review Board Statement: The study involved minimal risk and adhered to ethical guidelines for social science fieldwork. Formal approval from an Institutional Review Board was not required under the policies of Adekunle Ajasin University, Nigeria. Informed verbal consent was obtained from all participants, and all data were anonymized to ensure participant confidentiality.

Transparency: The author states that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES

- Akogun, K. (2008). *Furore over helmet law, This day (Nigeria)*. Lagos, Nigeria: Leaders & Company Ltd.
- Arosanyin, G. T., Olowosulu, A. T. & Oyeyemi, G. M. (2011). Employment generation and earnings in the informal transport sector in Nigeria. *International Business and Management*, 2(2), 139-148. <https://doi.org/10.3968/j.ibm.1923842820110202.015>
- Arosanyin, G. T. (2012). Compliance with road safety regulations among commercial motorcyclists in Nigeria. *Canadian Social Science*, 8(1), 92-100.
- Bassey, A. (2008). *Beware of commercial motorcycle at night*. Nigeria: Daily Sun.
- Bassey, A. (2009). *Curtailing criminal acts by Okada riders*. Nigeria: Compass FreePaper Limited.
- Cervero, R. (2000). *Informal transport in the developing world*. Nairobi: United Nations Centre for Human Settlements (Habitat).
- Ezeibe, C. C., Nzeadibe, T. C., Ali, A. N., Ogbodo, C. U., Nwankwo, C. F., Ogbodo, C. (2017). Work on wheels: Collective organising of motorcycle taxis in Nigerian cities. *International Development Planning Review*, 39(3), 249-273. <https://doi.org/10.3828/idpr.2017.10>
- Fasakin, J. O. (2001). Some factors affecting daily profits of commercial motorcycles in Akure, Nigeria. *Transport Policy*, 8(1), 63-69. [https://doi.org/10.1016/S0967-070X\(00\)00036-6](https://doi.org/10.1016/S0967-070X(00)00036-6)
- Federal Republic of Nigeria. (2001). *National youth policy*. Abuja, Nigeria: National Youth Development Policy.
- Food and Agriculture Organization of the United Nations (FAO). (1982). *Soil map of the world: Revised legend*. Paris: FAO/UNESCO.
- Igwe, C. (2008). *Blame politicians for upsurge in crime*. Nigeria: The Punch.
- Iribhogbe, P. E., & Odai, E. D. (2009). Driver-Related Risk Factors in Commercial Motorcycle (Okada) Crashes in Benin City, Nigeria. *Prehospital and Disaster Medicine*, 24(4), 356-359. <https://doi.org/10.1017/S1049023X00007093>
- Konings, P. (2006a). Solving transportation problems in African cities: Innovative responses by the Youth in Douala, Cameroon. *Africa Today*, 53(1), 35-50. <https://doi.org/10.1353/at.2006.0056>

- Konings, P. J. J. (2006b). "Bendskin" drivers in Douala's New Bell neighbourhood: Masters of the road and the city. In *Crisis and Creativity: Exploring the Wealth of the African Neighbourhood* (Eds., P. J. J. Konings & D. W. J. Foeken). In (pp. 46–65). Leiden: Brill
- Kumar, A. (2011). *Understanding the emerging role of motorcycle in African cities: A political economy perspective*. SSATP Discussion Paper, No. 13.
- Menzel, A. (2011). Between ex-combatization and opportunities for peace: The double-edged qualities of motorcycle-taxi driving in Urban Postwar Sierra Leone. In (pp. 96-127). Bloomington, Indiana, USA: Africa Today, Indiana University Press
- Nwankwo, P., Okorie, C., & Onyekachi, O. (2008). Kidnapping: Political and economic motive. *Christian Bulletin*, 18(4), 56–72.
- Ogunbodede, E. (2008). Urban road transportation in Nigeria from 1960 to 2006: Problems, prospects and challenges. *Ethiopian Journal of Environmental Studies and Management*, 1(1), 7-18. <https://doi.org/10.4314/ejesm.v1i1.41565>
- Okache, B. (2010). *Commercial motorcycle ban: Two months after*. Nigeria Nigeria Chronicle.
- Okoye, D. (2009). *KekeNapep is better than motorcycles*. Nigeria: Nigeria Chronicle.
- Olobomehin, O. (2002). *Transport and mobility: Principles and applications*. Lagos, Nigeria: Macmillan Nigeria.
- Olobomehin, O. O. (2012). The development and impact of motorcycles as means of commercial transportation in Nigeria. *Research on Humanities and Social Sciences*, 2(6), 231-239.
- Oludele, M. S. (2014). The challenges facing informal occupation in Nigeria: A study of some selected commercial motorcycles in Edo State. University of Ibadan, M.Sc. Thesis in Department of Sociology.
- Oyesiku, O. K., & Odufuwa, B. O. (2002). *Gender perspective in travel behaviour of motorcycle passengers in Nigerian intermediate cities*. In: *Godard and Fatonzoun, Eds. Urban Mobility for All, CODATU X, The Netherlands*. Lisse: Swets and Zeitlinger B.V.
- Solagberu, E. A. (2006). Motorcycle injuries in a developing country and the vulnerability of riders, passengers, and pedestrians. *Journal of Injury Prevention*, 12(4), 266-268.
- Sunmola, A. M. (2017). *Educational leadership and management as catalyst for academic excellence in South-West Nigeria's Colleges of education*. Nigeria: Global Academic Publishing.
- Uswah, I. J. (2012). Factors leading to commercial motorcycle (commercial motorcycle) transport business: Implications for adult education in Ikwuano LGA of Abia State. Unpublished B.Ed Project; University of Port Harcourt.
- World Health Organization (WHO). (2023). *Global status report on road safety 2023 – Nigeria*. Nigeria: World Health Organization.