

Assessment of Performance of Motorcycle Operation in Public Mobility in Sabon Gari Local Government Area, Zaria Kaduna State.

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Abstract

This study assesses the performance of motorcycle operation in public mobility in Sabon Gari Local Government Area of Kaduna State. Commercial motorcycle contributes significantly to public transportation in Sabon Gari urban and the peripheral rural areas. The study used a survey design method. Questionnaire was used as instrument for data collection. 141 commercial motorcycle operators and 364 passengers who used motorcycle daily were sampled. The table of random numbers was used as a guide in the selection process to sample locations. In all, 30 locations (points) were identified and 15 were selected in the process. Questionnaire, observation as well as trip count was done with motorcycle association operating in the area. Descriptive statistics such as frequency count and percentage were employed in data analysis. The findings revealed that commercial motorcycle operators saved below ₦1000 daily. Most passengers used commercial motorcycles to market, shop and other businesses. Findings also revealed that the unemployment situation in the state has led many people most especially the youths into commercial motorcycle operation in the area and the ability to provide door to door service have made many passengers to patronize commercial motorcycles in the Local Government Area. The most important challenges faced by motorcycle operators are poor roads. 33.2% of the passengers and 41.8% of commercial motorcycle believed that construction of motorcycle lanes on roads within the area is a better solution to the problem.

Keywords: Commercial Motorcycles, Kaduna State, Passengers, Public Mobility, Sabon Gari

Introduction

Commercial motorcycle transportation is one of the most visible modes of intra-city transport in many Nigerian cities today. Although some state governments permit the operation of commercial motorcycle to fill the existing gap in the public transport system, others do not, on grounds that it is associated with crime, high rate of road accidents, recklessness and refusal to comply with traffic rules. The emergence of commercial motorcycle as a viable means of public transportation in Nigeria today has been attributed to economic depression, inadequate transport facilities, structural adjustment programme in the 1980s, and decrease in the supply of all vehicle types in the 1970s (Ogunsanya, 2003; Oyeseke, 2001).

The regular use of motorcycle for intra-city public transportation in Nigeria is mainly to generate daily income due to the sharp rise in unemployment among the youths particularly the non-literate group. Commercial motorcycle is preferably used by the public because it has the advantages to reach remote areas where commercial buses may not reach due to bad roads; they are faster than

other means of transport. Due to these advantages, some businessmen prefer to invest in its operations for intra-city transport. While the above advantages contributed to the emergence and widespread use of motorcycles for commercial transportation in Nigeria, the same advantages have helped to sustain its operations over the years.

Ajayi (2011) reported that prior to 1981 motorcycles or motor bikes were primarily used for private purposes such as for individual mobility and for domestic errands like fetching water and firewood as well as for conveying farm produce to the market. The major problems associated with motorcycle transport are externalities such as road traffic accidents, robberies, disobedience of traffic rules and none registration of motorbikes among others.

Majority of studies on motorcycle like those of (Oladipo, 2012; Sodipo & Ogunmola, 2011; Adeyomo, 1998; Ojekunde, 1998; Ogunsanya & Galtima, 1993) thoroughly examined the core determinants of earning among commercial motorcycle operators. None of the studies assessed the performance of motorcycle operation as means of public mobility in the study area.

Not much study has been carried out on the assessment of performance of motorcycle operation in Sabon Gari local Government and its peripheral rural areas. This is a gap in the existing literature and this study intends to fill. This study focuses on the assessment of performance of motorcycle operation as a means of public transport within Sabon Gari Local Government Area and the surrounding rural areas.

Literature Review

Due to inadequacies of government control of public transport companies, other modes of public transport have emerged among which are motorcycles. Some studies have noted that motorcycles popularly called “Okada” have become an important means of passengers’ transportation in most urban and semi-urban centres in Nigeria and estimated that 70% of Nigerian cities with over 250,000 inhabitants relied on motorcycles for intra-city public transport services (Basorun & Rotowa, 2012; Odidi, 2012). However, the World Bank (2002) concluded that the increasing use of motorcycles for transportation purpose in developing countries can be ascribed to; socio-economic reasons, convenience in negotiating traffic in congested cities, poorly maintained roads, political reasons and ease of parking in narrow roads. In Nigeria, transportation with motorcycles has evolved over the years, it started from the federal capital in Lagos in 1992 due to a deficiency of other means of public transport and was estimated that over 450,000 motorcycles were used in the metropolis alone in 1995, while registration of motorcycles license plates in 2004 and 2005 in the country represented 52% of all motor vehicles license plates (Olowafemi *et al*, 2014).

Some studies have also reported that motorcycle is a motorized vehicle, and emerged as a means of urban mobility (Sheller, 2011; Akhigbe, 2010; Zakari, 2005; Zhang *et al*, 2004). This has become a common feature in Asian countries (Vietnam, Taiwan, China etc) and African countries. In developed countries like United States of America, motorcycling is undertaken as a form of recreation and leisure and comprised of 2% of registered motor vehicles. The annual production of motorcycle worldwide is put at over 45 million. The growth rate in Africa is between 12% - 30% (Olorunfemi, 2013). For example, the inability of Nigerian government to provide sufficient conventional mode of transport has necessitated the use of motor (two-wheeled automobiles) and tricycles (three-wheeled automobiles) to move people, goods and services from one location to another usually under conditions considered to be unsafe and prone to accidents. Motorcycle use has been described as the most dangerous of all motorized vehicles for transportation. This can be

attributed to its nature and design. For example, there are no airbags to reduce the impact in the event of a collision which propelled riders and passengers alike to be vulnerable victims of road traffic crashes. However, factors responsible for this can be classified as both human and environmental. Human factors include amongst others, ignoring of safety measures like speed limit, not wearing of crash helmets and protective clothing, the attitude and behaviour of motorcycle riders on the roads, alcohol and substance abuse before riding, carrying more than stipulated number of passengers. Environmental factors will include the condition and nature of the roads, traffic flow and poor visibility particularly at night time.

The most important consideration for people especially youths to ride motorcycles is the employment opportunities it offers. The upsurge in unemployment especially among youth coupled with the downturn of the economy in the country has greatly encouraged the rise in the usage of motorcycles for commercial transport (Abiodun, 2013). Christopher, Usman and Eke (2013) reported that the number of commercial motorcycle operators has created business opportunities for millions of Nigerians especially the youths including those who have retired, retrenched as well as the uneducated in our society. Jobs created by commercial motorcycle riding initially got a good proportion of youths quite busy and thus removed their minds from vices generally associated with their age brackets. This implies that the use of motorcycle for commercial purpose is a tool that have diverted youths from criminal tendencies.

Description of Study Area

Sabon Gari Local Government area is located between latitude 11° 05'N to 11° 16'N and longitude 7° 34'E to 7° 48'E (Fig. 1). The local government area shared boundaries to the south with Soba local government area, to the north with Giwa local government area, to the west with Zaria local government area and to the East with Kudan local government area. It is the second largest city after Kaduna and comprises of the following satellite towns, Samaru, Kwangila, Dogarawa, Hanwa, Basawa, Bomo, Sakadadi, Zabi, Government Residential Area (G.R.A), Kabama, Palladan and Graceland. It is also the headquarters of Nigerian Railway Corporation. The local government area houses the Central Business District (CBD) of the entire Zaria region. It also contains two military formations (Depot Nigerian Army Military Barrack and Nigerian Army School of Military Police and Barracks at Basawa). Sabon Gari is a gateway linked by expressway to North-western states of Kano, Zamfara, Sokoto and Katsina. The study area hosts a number of educational institutions such as Ahmadu Bello University, Nigerian College of Aviation Technology (NCAT), Nigerian Institute of Transport Technology (NITT), Nigerian Institute of Leather and Science Technology (NILEST), National Research Institute for Chemical Technology (NARICT) and Ahmadu Bello University Teaching Hospital (ABUTH) Shika. All these institutions have attracted the use of motorcycle for commercial transport which is available even at late hours of the night and negotiable.

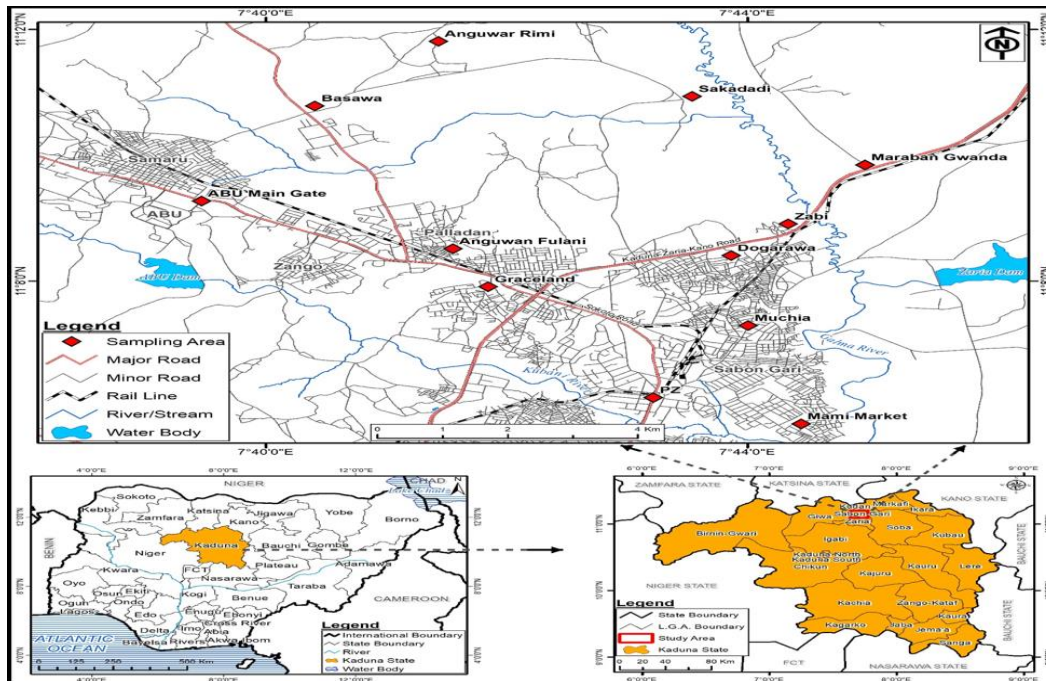


Figure 1: Location of Sampling Areas in Sabon Gari L.G.A.

Source: Map Gallery, Geography Department, ABU Zaria

Methodology

The study adopted survey design. The study used both primary and secondary data. Primary data was sourced through structured questionnaire while secondary data was obtained from internet and journals on commercial motorcycle. The questionnaire focused on road accidents registration, among others. The questionnaire was well-structured into two sections, one for the passengers and the other for motorcycle operators. The study administered the questionnaire to respondents (motorcycle operators and passengers) at designated points where these operators operate during working hours for four weeks in January 10th – February 14th 2021. The route commercial motorcycle operators ply and terminal locations were identified during a reconnaissance survey. In all, 30 terminal locations were identified, half (15) of the major terminal locations were randomly selected with reference to the table of random numbers including those located at the peripheral urban-rural areas. These terminals include: Ahmadu Bello University Main Gate, Samaru, Angwa Fulani, Dogarawa, PZ, Basawa, Sakadadi, Angwa Rimi, Maraba Gwanda, Muchia, Zabi, Graceland entrance and Mami Market (near army barrack Sabon Gari). To determine the sample size for the study, the weekly records of movement of motorcycles was sourced from Okada Riders Association in Sabon gari motorcycle commercial operators. Descriptive statistics such as frequency count and percentage were used for data analysis.

Results of the Findings

Demographic characteristic Respondents

Table 1 indicated that 63.5% of the motorcycle passengers are males and 36.5% were females. The marital status of motorcycle operators and passengers showed that majority of the operators

(72.3%) and (62.3%) of the passengers are married. The educational status of respondents shows that majority of motorcycle operators (58.9%) and passengers (42.1%) possessed Quranic/primary school certificates and ordinary Diplomas respectively. The age structure of the respondents revealed that majority of commercial motorcycles operators (60.2%) and 27.7% of the passengers fall between the ages of 21-30 years respectively. Further analysis revealed that by occupational status, majority of motorcycle passengers (52.4%) are traders and businessmen, while 82.3% of the motorcycle operators claimed to be unemployed.

The daily incomes of the motorcycle operators indicate that more than half generate between ₦1000 to ₦2000 daily and 41 of them had a daily income of less than ₦1000. Over half of the motorcycle passengers generate ₦3000 and above daily. The number of dependents is a reflection of family responsibility. Majority of motorcycle operators (63.8%) maintained between 4 and 10 children. 12.8% maintain 14 children and above. More than half of the operators save less than ₦1000 per day. 24.1% accounted for those who said they save between ₦1000 and ₦2000 daily. Only 12.8% claimed they save between ₦2000 and ₦3000 daily.

Table 1: Socio-economic Characteristics of Respondents

S/N	Socio-Economic of Respondents	Operator of commercial motorcycle		Motorcycle Passengers	
		Frequency	Percentage	Frequency	Percentage
1	Sex				
	Males	141	100	231	63.5
	Females	-----	-----	133	36.5
	Total	141	100	364	100
2	Marital Status				
	Married	102	72.3	223	62.3
	Single	30	21.3	123	33.7
	Divorced	8	4.3	12	3.2
	Widowed	3	2.1	6	0.8
	Total	141	100	364	100
3	Level of Education				
	Quranic/Primary	83	58.9	38	10.4
	Secondary	31	2.9	59	16.2
	OND	16	11.6	153	42.1
	HND	8	5.7	70	19.2
	Degree	3	2.1	44	12.1
	Total	141	100	364	100
4	Age Distribution				
	1 – 10	00	00	71	19.2
	11 – 20	4	2.8	101	27.7
	21 – 30	85	60.2	96	26.2
	31 – 40	37	26.3	96	26.2
	41 – 50	10	7.1	74	20.2
	50+	5	3.6	22	6.4
	Total	100	141	364	100
5	Occupational Status				
	Unemployed/Farmers	116	82.3	33	9.1

	Students	7	4.7	102	28.1
	Traders/Business	5	3.7	191	52.4
	Casual worker	8	5.6	17	4.7
	Others	5	3.7	21	5.7
	Total	141	100	364	100
6	Estimated Daily Income of Motorcycle Operators and Passengers				
	Below 1000	41	36.2	4	1.1
	1001 – 2000	13	9.2	41	11.3
	2001 – 3000	73	51.8	69	18.1
	3001 and above	4	2.8	217	59.6
	Total	141	100	331	90.1
7	Family Size of Motorcycle Operators				
	1 – 3	19	13.5		
	4 – 6	39	27.6		
	7 – 10	51	36.2		
	11 – 13	14	9.9		
	14+	18	12.8		
	Total	141	100		
8	Daily Savings				
	Below 1000	89	63.1		
	#1001 – 2000	34	24.1		
	#2001 – 3000	18	12.8		
	#4001 and above	00	00		
	Total	141	100		

Source: Field Survey 2021

Information on trip purpose and choice of motorcycle use by motorcycle passengers are indicated in fig. 2a and 2b.

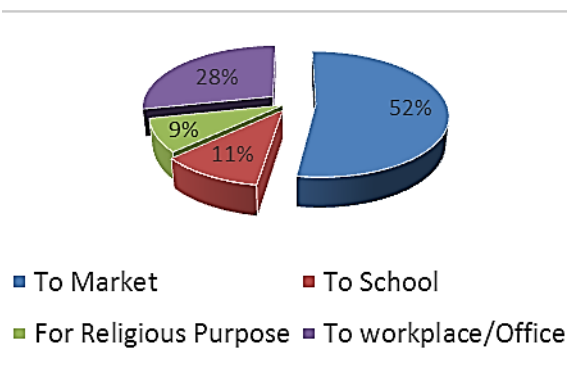


Figure a: Purpose of Trip

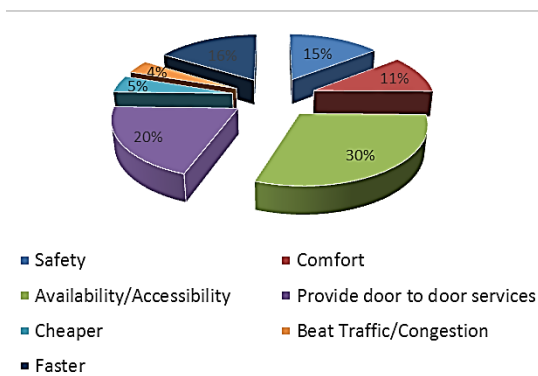


Figure b: Choice of Passengers

Fig. 2a and b: Trip purpose by passengers and Choice of Motorcycle

Source: Field Survey 2021

Based on fig 2a, most of the passengers (52.5%) embarked on daily trips to market, shops and other businesses. 28.3% of the respondents go to workplaces or offices, 10.7% go to school while 8.5% go to religious places. Fig 2b reveals that 30.2% of the passengers felt that

availability/accessibility of motorcycles made them patronize it. 20.0% of the passengers prefer motorcycle because it offers door to door services. 16.2% opined that motorcycle is faster while 4.7% noted that motorcycle is cheaper and others which accounted to 3.7% felt that the need to beat traffic congestion when traffic built up is there preference for motorcycle use.

Table 2 shows the reasons why the operators embarked on commercial motorcycles ridding and years of operation. Several reasons were attributed to why the operators are engaged in commercial motorcycle operation. The study findings revealed that 53.3% of commercial motorcycle operators engaged in the operation as a result of unemployment. 19.9% reported that harsh and hard economic condition made them go into commercial motorcycle riding.

Table 2. Reasons Motorcycle Operators are Engaged in Commercial Motorcycle Riding and Years of Operation

Reason for Operation	Frequency	Percentage	Years of Operation	Frequency	Percentage
Unemployment	78	55.3	1 – 3	38	26.9
Improve Standard of Living	11	7.8	4 – 6	69	48.9
Improve Daily Saving/Income	15	10.6	7 – 9	20	14.2
Harsh Economic Condition	28	19.9	10 – 12	10	7.2
Raise Money for Business	7	6.4	13 & above	4	2.8
Total	141	100	Total	141	100

Source: Field Survey 2021

Challenges of Motorcycle Operators

Figure 3 presents the challenges facing motorcycle operators in Sabon Gari Local Government. 34.8% of the respondents identified poor roads as the most important challenge facing them. Lack of designated parking space and high cost of spare parts accounted for 26.9% and 20.6% respectively. 17.7% reported extortion from law enforcement agents as the most important constraint facing them.

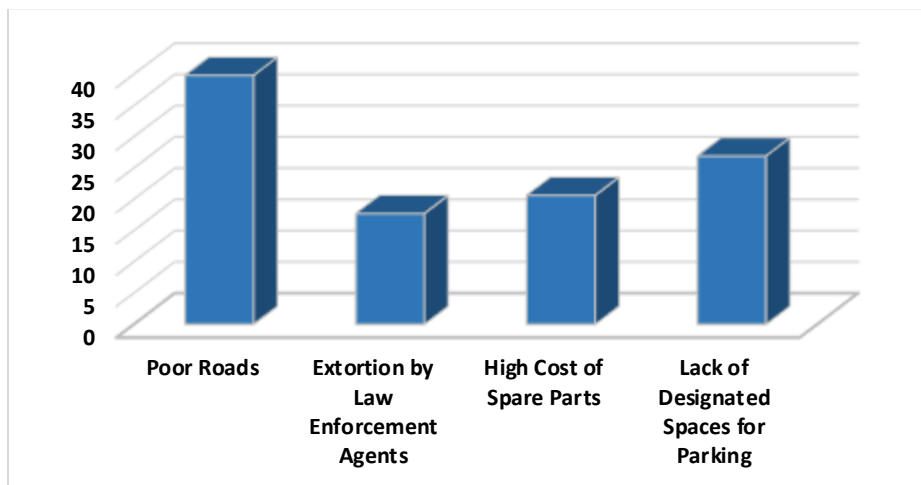


Figure 3: Challenges faced by motorcycle operators
Source: Field Survey 2021

Causes of Road Accidents

Figure 4 reveals that most of the commercial motorcycle operators (36.2%) and 35.95% of passengers attribute the causes of motorcycle accidents to over speeding of motorcycle riders. 15.5% of riders attributed the causes of motorcycle accident to rough overtaking of their members, 18.9% of the passengers opined that dangerous riding is another cause of accident. 14.8% of motorcycle riders attribute bad roads as causes of accidents while 17.4% of passengers believe that rough overtaking is a major cause of accidents. Interviews with the sector commander of Federal Road Safety Corps in Sabon Gari Local Government Area and Kaduna State Traffic Law Enforcement Authority (KASTELEA) attributed causes of motorcycle accidents in the area to dangerous ridding, over-speeding, rough overtaking of riders, loss of control and non-compliance with traffic rules and some even take hard drugs and alcohol. The respondent’s opinion on the way to reduce accidents in the area differs. 7.2% of the passengers/respondents are of the opinion that commercial motorcycle riding should be banned in local government area. However, 33.2% of the passengers and 41.8% of motorcycle operators believe that construction of motorcycle lane on our roads within the town is a better solution. The study findings further showed that 20.6% of motorcycle operators and 21.7% of passengers are of the view that sensitization of the public through media will be a better solution. Only 14.2% and 16.8% of motorcycle operators and motorcycle passenger respectively noted that strict compliance on the use of helmet will be a solution.

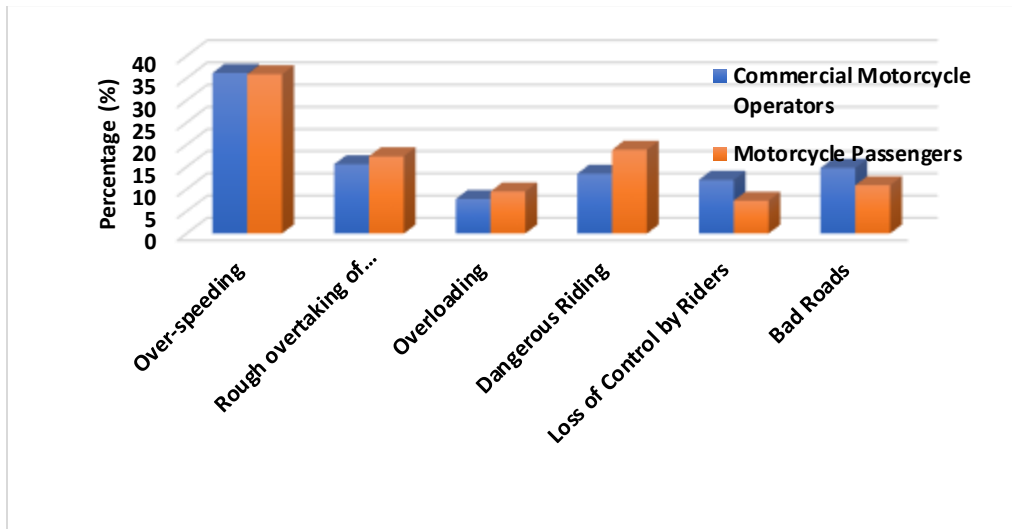


Figure 4: Causes of road accidents

Source: Field Survey 2021

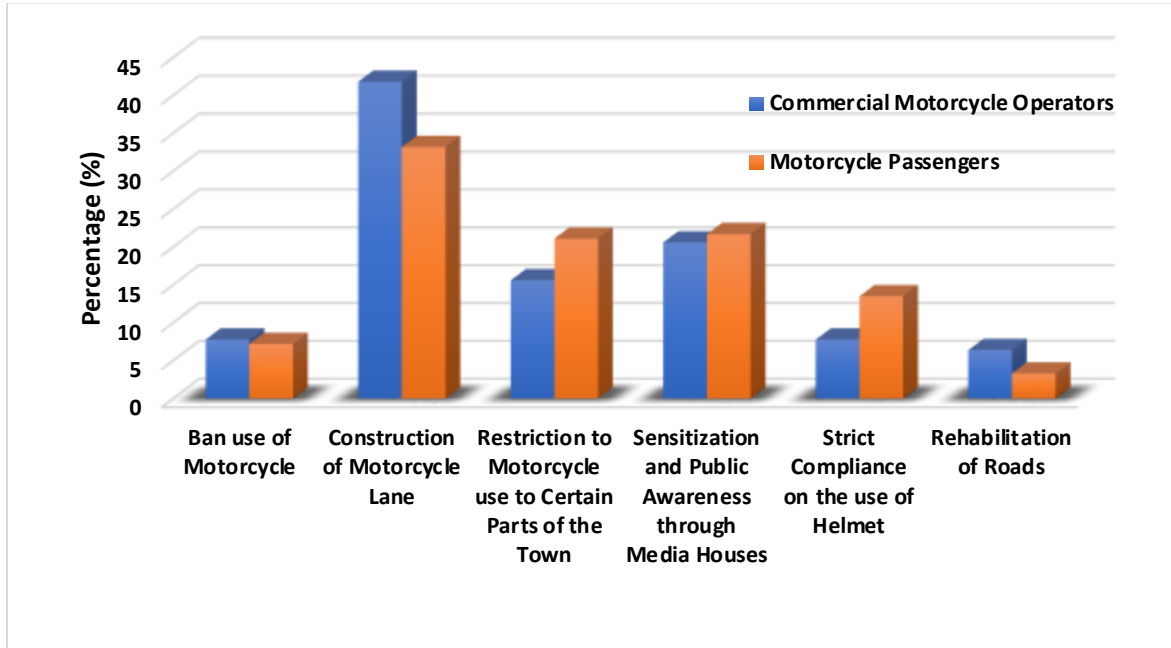


Figure 5: Solutions to the Causes of Road Accidents

Source: Field Survey 2021

Discussion of Findings

The study indicated that males are the dominant users of motorcycle in the area. This finding is in line with the study of Oni, Fashina and Olagunju (2011). The study noted that males patronize commercial motorcycle riders than their female counterpart. This may be due to the fact that activities of women vary differently in term of mobility or movement along gender lines. The motorcycle operators identified various reasons for operating motorcycle. Over 55.3% of the motorcycle operators affirmed that unemployment was the reasons that propel them to engage in motorcycle operation in Sabon Gari Local Government Area. To say the least, in connection to the above findings, underemployment and unemployment has provided not only impulse in this local government area but in most parts of the country for secondary school and University graduates to earn a living and steady income daily. The high rate of unemployment prevalent in Nigeria today has accentuated increases in commercial motorcycle operation both in urban, semi-urban and rural areas. This finding agrees with Abiodun (2013) that the upsurge in unemployment rate among youths coupled with the poor economic situation in Nigeria has greatly influenced the rise in the use of motorcycle as means of commercial transportation. Jobs created by commercial motorcycle riding initially got a good proportion of the youths quite busy and this has removed their minds from vices that are generally associated with their age groups. However, the same tool of employment (commercial motorcycle operators) was being increasingly diverted for criminal tendencies. This is seriously puzzling. The study revealed that most passengers use motorcycles to market, shop and various businesses.

However, this finding is contrary to Chukwemeka, Oke and Olorunfemi (2014) whose study reported that most motorcycle passengers in Lokoja embark on daily trips to school. Their study also noted that trips made daily are usually affected by factors such as age, income, sex, occupation, amongst others. The choice of any transport mode is highly dependent on safety,

availability of seats, and comfort among others. However, the choice to use motorcycle for transport varies among users depending on order of preference. Most passengers in this study used motorcycle because it is easily available and accessible.

Conclusion

The study has assessed the performance of motorcycle operation in public mobility in Sabon Gari Local Government Area, Zaria-Kaduna state. The commercial nature of the Sabon Gari as the centre of the entire Zaria region and political capital of the local government has attracted a lot of motorcycle operators. Most of those who patronize these operators are business men and traders. Educational institutions in the area and other government functions have also attracted this mode of transport to offer employment opportunities in this sector, which have resulted in motorcycle crashes, claiming lives and also render some people impotent.

It is hoped that findings of the study will provide an opportunity for government and stakeholders in the informal sector to re-appraise the activities of the commercial motorcycle operators with economic and social relevance to the riders and public. Findings are also expected to contribute to the debate on the commercial motorcycle transport sub-sector in particular and informal sector in general, towards poverty reduction and engagement of youths in income generation.

Recommendations

Based on the findings, the study recommended the following;

- i. Government should intensify efforts by rehabilitating bad roads and even construct more roads. This will reduce motorcycle crashes and create more employment opportunities for the youths in particular.
- ii. To ascertain level of experience in ridding, motorcyclists should be made to undertake tests, and licenses issued before they can be permitted to ride on the roads. Regulations on compulsory use of safety materials such as protective head helmet, goggles, and hand gloves should be enforced and users (passengers) of commercial motorcycles should be sensitized and educated on the benefit of usage of protective head helmets.

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