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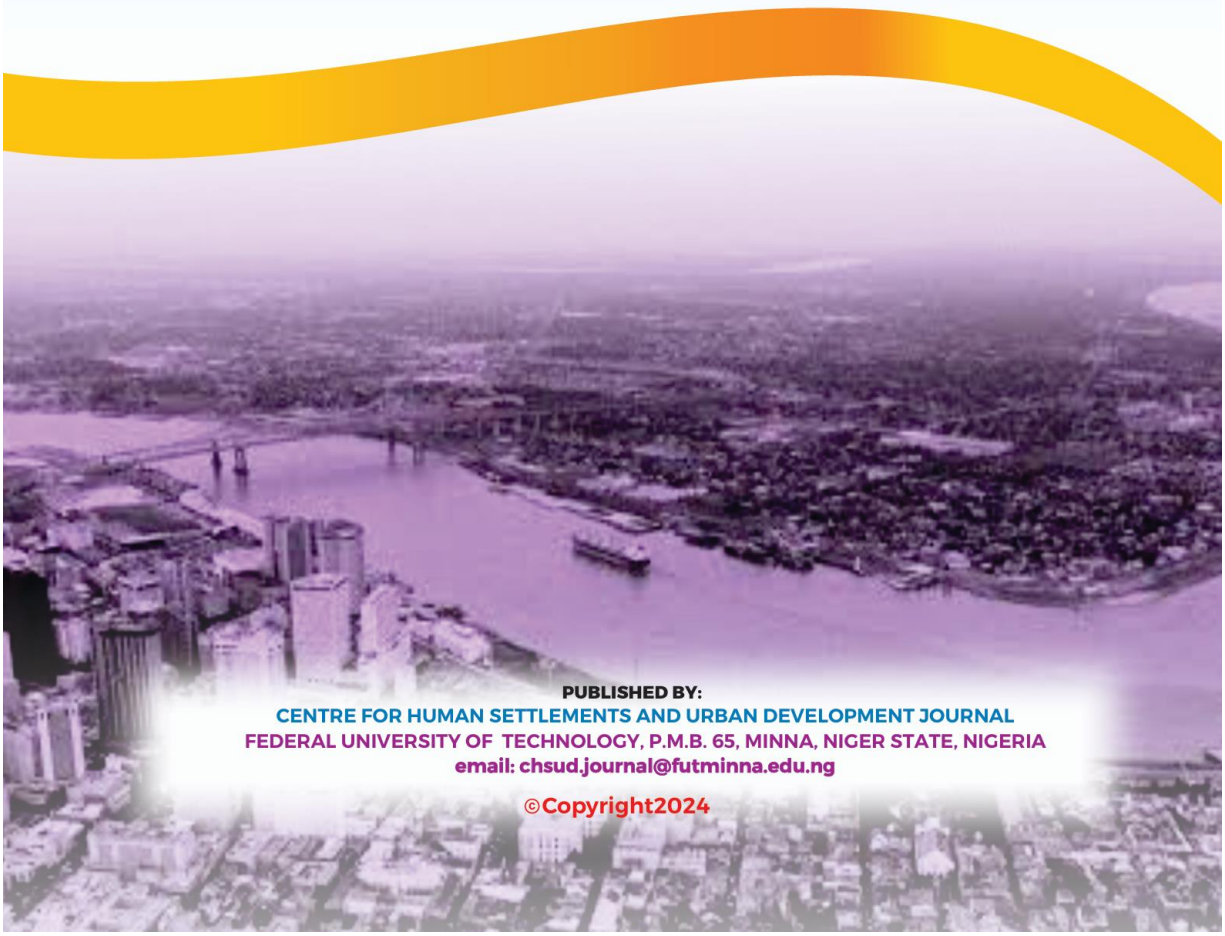

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Foreword

This edition of Journal of Human Settlements Research & Development (JHSR&D) is dedicated to works and case studies on "Living and livelihood in the urban settlements of today" as a follow up to the previous edition on "Managing Human Settlements in the Urban Century". This edition highlights various activities undertaken, particularly in sub-Saharan Africa, to address the obvious challenges of rapid urbanization amidst failing infrastructure and facilities. Hence, the opening chapters – *"Ownership structure and operational safety efficiency of commercial motorcycle and tricycle operations in Minna"* and "*Factors influencing urban sprawl development along Abuja – Keffi highway corridor in north central Nigeria"*, are closely related to transportation and the movement of people in and between fast growing cities. Besides the opening chapters, other subsequent chapters also examined the nature, usage and safety issues in the emerging and main mode of commercial transport in many cities in Nigerian today – The Tricycle.

The continuous fight against the menace of natural and man-induced disasters are featured especially in the submissions *"Spatial assessment of flood vulnerability in resettlement sites in Niger state, Nigeria"* and *"Analysis of air quality health index of artisanal gold mining Sites for sustainable development"*. In many ways, these works examined the ever-increasing demand for stakeholders to redouble effort in addressing human settlements' challenges through all-engaging and particularly beneficiaries' driven solutions globally agreed to be participatory and sustainable for man and for curtailing his varying influence on earth.

Contemporary livelihood opportunities and challenges were first highlighted in the works of Okon *et al.* and Lohoh *et al.* in *"Exploratory study of indigenous security approaches in the Cultural landscape of Yakurr people in southern Nigeria"* and *"Understanding urban fragility through definitions, conceptual Frameworks, and contemporary issues in the 21st century Africa"* respectively. These were followed by Idris *et al.* that showed the use of floral and other vegetal components of the human habitat in enhancing security for man, his households, and livelihood activities. While Edem-Nse and Bala dwelled on the use of traditional knowledge, institutions and architecture in addressing flooding and similar disasters in the unfolding realities of global weather and climate extremes, Akinbami *et al.* and Akinbami *et al.* both demonstrated the growing concerns about insecurity in areas of human activities particularly transit-oriented spaces and institutions of higher learning.

These works have brought to the outside world the increasing intricacies of living and working in many cities of the global south. The levels of individuals and communities' efforts in creating mechanisms to address the numerous and ever-increasing predicaments of a population burdened by dysfunctional infrastructure amidst public response that are too little and infrequent. However, the resolve by many residents of this part of the world to rekindle traditional knowledge and institutions when formal and appointed agencies failed, is a considerable sign that the present state of things will soon be over. All over, sooner than expected.

Dr Aliyu M Kawu MNITP, RTP, MeRSA
Editor-in-Chief
Journal of Human Settlements Research & Development (JHSR&D) (formerly CHSUD Journal)

Journal of Human Settlements Research & Development

Editorial Committee

Papers for Journal

The journal accepts well researched papers, including case studies, from all disciplines in Environmental Sciences and other disciplines or subject areas related to the built environment. However, papers to be considered for a specific volume of the journal should fall within the theme and sub-themes specified. The theme for each volume of the journal will be specified.

Submission of Papers

All manuscripts should be submitted to the editor, JHSR&D. Three hard copies of papers should be forwarded to the editor with a letter of undertaking that the work is not under consideration elsewhere and it will not be sent to another journal until final decision has been made on it.

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ABSTRACT

This study presents appraisal of the adoption of safety helmets among motorcyclists in the Kagini-Kubwa a semi-urban area of Abuja, the Federal Capital Territory (FCT) of Nigeria. With the increasing prevalence of motorcycle-related road accidents and the importance of safety measures in mitigating their impact. This research aims to assess the level of adherence to safety helmet usage among motorcyclists in the area and employed a mixed-method approach, combining surveys and observational studies to gather both quantitative and qualitative data. A structured questionnaire amounting to 288 were administered to a representative sample of motorcyclists, probing into factors influencing helmet use, awareness of safety regulations, and personal experiences with road accidents in Kagini-Kubwa, Abuja. Additionally, direct observations were conducted to assess the actual implementation of safety practices on the roads. Preliminary findings from the study shows that 69% of the respondents expressed that, motorcycle riders do not use safety helmets. The literacy level among motorcycle riders is very low and equally, 88% of motorcycle riders are commercial and by implication, the life and safety of their passengers are at risk, due to non-safety compliance. The study recommends that there should be a safety awareness programme by the FRSC in enlightening motorcycle riders on the significance of using safety helmets while riding a motorcycle. Also, strict enforcement on the use of safety elements by the safety agency must not be compromised. The outcomes of this research are anticipated to contribute valuable insights to policymakers, transportation authorities, and advocacy groups aiming to enhance road safety.

Keywords: Appraisal, FCT Abuja, Helmet, Motorcyclist, Road Accident, Safety

INTRODUCTION

In recent years, Nigeria has witnessed a surge in the use of motorcycles, commonly known as "Okadas," as a popular mode of transportation (Ajiboye & Dosunmu, 2007, Oluwaseyi, *et al.*, 2014, Ale, 2022) while motorcycles offer a cost-effective and efficient means of navigating the often-congested urban landscape, the associated increase in road traffic accidents poses a significant public health concern. Among the myriad factors contributing to the severity of these accidents, the non-compliance with safety measures, particularly the use of safety helmets by motorcyclists, emerges as a critical issue. Motorcycle accidents are a leading cause of traumatic injuries and fatalities globally, with disproportionate impacts in developing countries where regulatory oversight and enforcement are often challenged (Hyder *et al.*, 2006; Nantulya, *et al.*, 2002). Helmets have been proven to be effective in reducing the severity of head injuries and fatalities resulting from motorcycle accidents (Liu *et al.*, 2008; Oluwadiya, *et al.*, 2009). However, the success of helmet implementation depends on factors

ranging from awareness and attitudes to the effectiveness of enforcement mechanisms. Abdi *et al* (2022) indicated that in so many low-income and middle-income countries, head injuries are estimated to account for up to 88% of death among motorcycle users and these mortality and disability can be prevented through judicious use of crash helmets by motorcycle users (Ali, *et al,* 2021). Non-adherence to traffic law on the use of helmets is implicated in head injury (Oginni, *et al,* 2007). Statistics quoted in the Nigeria Highway Code (2013) shows that motorcyclist is six (6) times more vulnerable than motorist and 80% of motorcycle crashes are fatal, involving head injury which the use of a crash helmet can reduce by half (Mohan, 2002).

This prompted the Federal Road Safety Corps (FRSC) to launch a campaign for the use of helmets in 2006. Despite the launch of the campaign for the use of helmets, the statistics of the motorcycle-related crash and its attendant effects on motorcycle users continue to rise. The rising occurrence of motorcycle accidents and their repercussions highlight the critical need to examine obstacles to helmet use, an essential safety tool. This research targets several primary goals: evaluating motorcycle users' knowledge of helmets' role in minimizing injuries during collisions, examining how educational levels affect helmet usage, and analyzing differences in helmet usage between private and commercial motorcyclists. Additionally, it explores disparities in helmet usage between riders and passengers, assesses whether both groups share similar perspectives on helmet use, and reviews the effectiveness of enforcement measures to promote compliance.

In the context of the Kagini-Kubwa, a sub urban axis of the FCT, where a burgeoning population relies on motorcycles for daily commuting, understanding the dynamics of safety helmet usage becomes imperative. Despite existing regulations mandating the use of helmets (FRSC, 2006), the efficacy of enforcement and the overall compliance of motorcyclists remain underexplored in this specific context. This study builds upon existing research on motorcycle safety and helmet efficacy, contextualising its findings within the specific socio-demographic and regulatory landscape of the study area. Notable works by authors such as Liu *et al.* (2008) stressed the importance of helmet use, while others like Oluwadiya *et al.* (2009) underscore the need for comprehensive interventions to enhance compliance.

LITERATURE REVIEWS

Safety Helmets and Need for Safety Helment

Safety helmets, also known as hard hats, are crucial personal protective equipment (PPE) designed to protect the head from potential injuries in various occupational settings. These helmets are constructed with a hard outer shell and an inner suspension system that helps absorb and dissipate impact energy. The primary purpose is to safeguard against falling objects, electrical hazards, and other potential risks. References to standards and regulations provide a framework for the design, testing, and usage of safety helmets. The Occupational Safety and Health Administration (OSHA) in the United States, for instance, provides guidelines for head protection in the workplace, emphasizing the importance of wearing appropriate helmets to prevent head injuries (OSHA, 2019).

The use of safety helmets is crucial in various industries to mitigate the risk of head injuries and safeguarding workers from potentially life-threatening accidents. According to OSHA (2021) head injuries account for a significant portion of workplace fatalities, and the consistent use of safety helmets can significantly reduce the severity of such injuries, hence, they are essential in construction, manufacturing, and mining, where the potential for head injuries is high. The American National Standards Institute

(ANSI) and the International Safety Equipment Association (ISEA) have established standards for safety helmets to ensure their effectiveness in diverse work environments (ANSI/ISEA Z89.1). Adherence to these standards ensures that helmets provide adequate protection, emphasizing the importance of proper fit and regular inspections. ~~In conclusion,~~ the use of safety helmets is a fundamental safety measure, supported by industry standards and regulatory bodies, to enhance workplace safety and prevent severe head injuries.

Theoretical Review

The assessment of helmet use adherence among motorcyclists in Abuja's semi-urban areas can be framed using three main theoretical models: the Health Belief Model (HBM), the Theory of Planned Behaviour (TPB), and the Diffusion of Innovations Theory. The HBM (Rosenstock, 1974) emphasizes the role of perceived vulnerability to head injuries and the benefits of helmet use in shaping motorcyclists' actions. This perspective supports the study's aim by clarifying how these perceptions influence adherence. In parallel, the TPB (Ajzen, 1991) focuses on how attitudes, societal norms, and perceived control affect the intention to wear helmets, which helps identify social and psychological obstacles to usage. The Diffusion of Innovations Theory (Rogers, 1962) adds another layer by classifying motorcyclists based on their willingness to adopt safety practices. Applying these theories collectively enables a thorough analysis of individual, social, and systemic factors impacting helmet use. Furthermore, findings derived from these models can guide tailored interventions, including public awareness initiatives, community outreach, and policy enforcement, to boost compliance in the region.

Factors Influencing Helmet Use

Despite the compelling evidence of their effectiveness, helmet use rates vary widely among motorcyclists. Research has identified several factors that influence helmet use behaviour, including (Evans, 2004):

Individual factors: Age, gender, riding experience, and personal beliefs about safety and risk.

Social factors: Social norms, peer influence, and family expectations.

Environmental factors: Helmet laws, enforcement practices, and availability of affordable and comfortable helmets.

Strategies to Promote Helmet Use

Various strategies have been implemented to encourage motorcyclists to use helmets, grounded in both theoretical and empirical insights. One highly effective method is the creation and enforcement of helmet laws, which have been shown to significantly boost helmet usage rates (Insurance Institute for Highway Safety, 2016). Public education campaigns also play a critical role in spreading awareness about the advantages of helmet use and debunking prevalent misconceptions, fostering behavior change (The Community Guide, 2017). Additionally, community-based initiatives that involve collaboration with community leaders, healthcare providers, and motorcycle clubs have demonstrated success by utilizing social norms and peer influence to promote helmet use (The Community Guide, 2017). Lastly, improvements in helmet design, comfort, aesthetics, and affordability can make helmets more appealing and accessible, encouraging broader compliance (Insurance Institute for Highway Safety, 2016). Together, these approaches effectively target legislative, educational, social, and practical dimensions of promoting helmet use.

Empirical Review

It is estimated that, worldwide each year, 1.24 million deaths and 20 to 50 million injuries are

caused by Road Traffic Crashes (RTCs) (World Health Organization (WHO), 2013). The burden of Road Traffic Injuries (RTIs) is increasing and, unless addressed, is projected to become the fifth-leading cause of death by the year 2030 (WHO, 2013). Low- and middle-income countries account for 92% of global RTI deaths, although their share of global vehicles is only 53% (WHO, 2013). Motorcyclists are a group of vulnerable road users, representing 23% of the global RTI burden (WHO, 2013). Motorcycle crashes are a leading cause of RTI and fatalities in Nigeria as motorcyclists accounted for 28% of all road traffic fatalities in 2021 (FRSC, 2021). Helmet use is recognized as the most effective single measure to reduce motorcycle-related head injuries and fatalities. However, helmet use rates in Nigeria remain low, with estimates ranging from 12% to 30%. This empirical review aims to examine the factors influencing helmet use among motorcyclists in Nigeria and assess the effectiveness of interventions to promote wider helmet use in the country. Wadhwaniya, *et al. (*2015) expressed that observational studies, which involve collecting data by observing or extracting information from video recordings in different locations, are limited in capturing only a few variables related to helmet use behaviour. Nevertheless, they provide accurate estimates of helmet usage statistics compared to self-reported questionnaire-based surveys (Wadhwaniya, *et al.,*2015). Ackaah and Afukaar (2010), Akaateba, *et al.* (2014), and Zephaniah, *et al.* (2016) observed a lower helmet usage in Nairobi among passengers (pillion riders) compared to drivers in African cities. They also noted that helmet use was less prevalent among young riders and in areas outside the city, potentially due to lower surveillance. In contrast, questionnaire-based interview studies, primarily conducted at the roadside, offer a more comprehensive set of variables for correlating with helmet-use behaviour. However, the reliance on self-reported responses introduces potential bias in the results. Sreedharan, *et al.* (2010) conducted a study in Kerala, India, concluding that helmet use is influenced by gender (males more likely to wear helmets), marital status (married persons more likely to wear helmets), alcohol use (drunk drivers less likely to wear helmets), and individuals' positive opinions towards laws.

Khan, *et al.* (2008), Oginni, *et al.* (2007), and Roehler, *et al.* (2013) found no significant differences in age, marital status, knowledge of helmet laws, education, and alcohol use between helmet users and non-users. However, non-users cited physical discomfort and limited vision as major barriers. Female pillion riders in developing countries also mentioned physical discomfort as a reason for not wearing a helmet (Roehler, 2017: Saeed, 2013). Faryabi, *et al.* (2014) reported that Iranian motorcyclists faced barriers such as the heavy weight of the helmet, heat, neck pain, suffocation, and restricted head and neck movements.

Some studies adopted a mixed-method approach, combining multiple methods. Siviroj *et al.* (2012) and Hung *et al.* (2008) found that young individuals and teenagers in Thailand and Vietnam were less likely to wear helmets, with lack of enforcement during nighttime and on local streets being major reasons for non-compliance. Aghamolaei, *et al.* (2011) and Ghasemzadeh, *et al.* (2017) collected data from male riders in Iran, applying the Theory of Planned Behaviour (TPB) to correlate individual perceptions, attitudes, and values with helmet use behaviour. Their findings indicated that perceived behaviour control and motivational factors were significant in explaining helmet use intentions, suggesting that social, health, and education campaigns could enhance helmet use.

Numerous research studies have explored the obstacles, enablers, and elements linked to motorcyclists choosing not to wear helmets,

leading to various debates in the literature. There has been no previous review assessing the adoption of safety helmets by motorcyclists specifically in the Kagini-Kubwa axis of the Federal Capital Territory, Abuja, Nigeria. Hence, the need for a scoping review to thoroughly examine diverse categories of barriers and factors associated with the utilization of helmets in this specific region.

METHODOLOGY

Research design and Data

The study uses the quantitative techniques that adopts the use of descriptive and inferential statistics method of data analysis. The use of frequency table, simple percentile and chi square were used in the data analyses. The study uses descriptive frequency table/simple percentile and Chi square for the data analysis. Primary data were majorly used and 288 questionnaires (instruments for data collection) were administered for the collection of data that concerns the use of safety helmets by the motorcyclist. Information on awareness of use of safety helmets, educational attainments and influenced, and attitudes towards the usage of helmet were used for the different data analyses.

Random sampling techniques was used in distribution of the questionnaires to the sampled motorcyclists, passengers and the concerned stakeholders (respondents), were interviewed on the use of safety helmets in Kagini-Kubwa, Abuja.

Sampling Size

The study adopted the Topman formula to determine the sampling size

$N=Z^2pq / e^2$ ……. Equation 1

The motorcyclists in the study area are not organized into a union, hence a pilot test with 20 questionnaires was sampled on the motorcyclist and users in both Kagini-Kubwa junction. A total of 75% were returned, and 25% were not returned. The result was used to estimate the sample size. The sampling was done using the Topman formula thus;

$N= \frac{Z^2pq}{e^2} = \frac{1.96^2 (0.75 \times 0.25)}{(0.05)^2} = 288$ samples

Where; N=sample size

Z =SD at 95%=1.96

p = probability of positive response

q = probability of negative response

e =5%, the limit of tolerable error

RESULTS AND DISCUSSION

Socioeconomic characteristics

The gender of the respondents' shown in Table 1 indicate that the majority of the respondents 52% are males and dominate the operation (riding/driving) and usage of motorcycles in the study as a means of transportation in the study area.

Table 1: Respondents' gender

Gender	Frequency	%
Male	150	52
Female	138	48
Total	288	100

Source: Field survey, (2023).

Table 2 revealed that primary and Secondary Certificate holders constitute the highest level of qualification with 28% and 26% of the respondents while 17% and 15% of the respondents are OND and HND/BSc holders respectively. Furthermore, 8% of the respondents have Post graduate certificates which vary from a Postgraduate Diploma to a PhD and only 7% have no formal education. These statistics simply reflect the level of literacy among the respondents in the study area has high compared to other areas within the metropolis. However, this does not reflect in their responses to the use of safety helmets whenever they ride bikes.

Table 2: Respondents' level of education

Level of Education	Frequency	%
No formal education	20	7
Primary Certificate	80	28
Secondary Certificate	75	26
OND/NCE	48	17
HND/ BSc	43	15
Post Graduate	22	8
Total	288	100

Source: Field survey, (2023).

The motorcycle user category shown in Table 3 reveals that 57% are riders/drivers and 43% are passengers. This enhances the study in meeting the demands of knowing the reality of helmet usage among the various categories of people in the study area.

Table 3: Motorcycle users' category

Users' category	Frequency	%
Riders	165	57
Passengers	123	43
Total	288	100

Source: Field survey, (2023).

Table 4: Years of experience in riding a motorcycle

Years of experience	Frequency	%
<1 year	85	52
1-3years	43	26
>3years	28	17
Void	9	5
Total	165	100

Source: Field survey, (2023)

About 52% majority of the respondents (motorcycle drivers) account for less than one (<1) year experience of riding a motorcycle and 26% are between one to three years of riding experience while only 17% of them have spent above three (>3) years in riding motorcycles. Most of the riders lack adequate riding experience as shown in Table 4.

From Table 5, 83% of the respondents in the study area use motorcycles for commercial purposes only and the rest 17% of the respondents indicate the use of motorcycles is strictly for private use. This shows one of the reasons why the rate of motorcycle accidents is common in the study area. Therefore, this is significant for the implementation of helmet usage in the study area.

Table 5: Use of motorcycle

Use of motorcycle	Frequency	%
Commercial	233	83
Private	55	18
Total	288	100

Source: Field survey, (2023).

On the usage of safety helmet by both the riders and passengers, only 31% out of respondents as shown in Table 6 uses helmet and the majority, 69% does not use helmet at all for so many reasons. This therefore demonstrates that safety compliance is not in place and the cause of fatal accidents becomes a daily occurrence in the study area.

Hypothesis test

H_o: Motorcycle users are not aware that helmet reduces injury during traffic crash hence do not use it.

Table 6: The level of awareness that a helmet reduces injury during a traffic crash

			Total	o-e		$\frac{(o-e)^2}{E}$	
	Not using (N)	Using(U)		N	U	N	U
Aware	164(144)	45(65)	209	20	-20	3	6
Not aware	35(55)	44(24)	79	-20	20	7	17
Total	199	80	288	0	0	10	13

Source: Field survey, (2023)

Xc= 10+23=33
Xt at df2=7.8
Xc<Xt hence no significant difference, H_o is accepted because the level of awareness is low and the level of injury sustained during a traffic crash is significant as a result of low level of awareness.
H_o: Level of education has influenced the use of crash helmet

Table 7: Level of education has an influence on the use of crash helmet

	o(e)		Total	o-e		$\frac{(o-e)^2}{E}$	
	Use (U)	Not using (N)		U	N	U	N
<WAEC	23(46)	120(97)	143	-26	23	14	6
WAEC	35(24)	40(51)	75	11	-9	5	2
OND/NCE	20(15)	28(33)	48	5	-5	2	1
Graduate	14(7)	8(15)	22	7	-7	7	3
Total	92	196	288			28	12

Source: Field survey, (2023).
Xc= 28+12=40
Xt at df3= 20
Xc<Xt

Hence, there is no significant difference; H_o is accepted because the level of education does have influence on the use of crash helmets by riders and passengers.
H_o: The use of a crash helmet does not depend on whether the motorcycle is used for private or commercial reasons

Table 8: Influence on the use of helmet

	o(e)		Total	o-e		$\frac{(o-e)^2}{e}$	
	Using (U)	Not using(N)		U	N	U	N
Commercial	75(27.4)	158(145.6)	233	-12.4	12.4	1.76	1.06
Private	33(20.6)	22(33.4)	55	12.4	11.4	7.64	3.89
Total	108	180	208			9.4	4.95

Source: Field survey, (2023)
Xc= 9.4+4.95=14.35
Xt at df2=7.8
Xc>Xt Hence there is a significant difference, H_o is rejected because the private riders are using crash helmet while commercial users are not.
H_o: The use of a helmet does not depend on whether the motorcycle user is a rider or passenger

Table 9: Usage of a helmet does not depend on whether the motorcycle user is a rider or passenger

	o(e)		Total	o-e		$\frac{(o-e)^2}{e}$	
	Using (U)	Not using(N)		U	N	U	N
Rider	40(30)	125(134)	165	10	-9	3.3	0.6
Passenger	13(23)	110(100)	123	-10	10	4.4	0
Total	53	233	288			7.7	0.6

Source: Field survey, (2023).
Xc= 7.7+0.6=8.3
Xt at df2=7.8
Xc>Xt Hence there is a significant difference, H_o is rejected because most often riders are always using them while passengers are not.

H_o: Both Riders and passengers have similar attitudes towards the usage crash helmet

Table 10: Riders and passengers have similar attitudes towards the usage of helmet

	o(e)		Total	o-e		$\frac{(o-e)^2}{E}$	
	Yes(Y) No(N)			Y	N	Y	N
Helmets can be infectious	133(16)	155(17)	288	17	-18	3	2
I cannot share a helmet	130(11)	158(17)	288	14	-15	2	1
Passengers need to have helmets	111(11)	177(17)	288	-5	4	0	0
My culture forbids wearing	89(116)	199(17)	288	-27	26	6	0
Total	463	689	1152			11	3

Source: Field survey, (2023).

Xc= 11+3=14
Xt at df3=**7.8**
Xc>Xt hence there is a significant difference, H_o is rejected because the riders and passengers have similar attitudes towards the usage of helmets.

H_o: The enforcement of the use of helmets is not adequate

Table 11: Enforcement of use of the helmets is not adequate

	o(e)		Total	o-e		$\frac{(o-e)^2}{E}$	
	Yes(Y)	No(N)		Y	N	Y	N
It is difficult to detect motorcyclists using a helmet	123(12)	165(163)	288	0	2	0	0
It is difficult to arrest motorcyclists and passengers not using a helmet	180(12)	108(163)	288	5	-55	24	19
There is no law prohibiting the use of a helmet	65(125)	223(163)	288	0	60	29	22
The fine imposed on helmet offenders is not punitive	134(12)	134(163)	288	9	-9	1	0.5
Total	502	650	117			54	42

Source: Field survey, (2023).
Xc= 54+42=6
Xt at df4=**7.8**
Xc>Xt hence there is a significant difference, H_o is rejected because enforcement of the use of helmets is not adequate.

SUMMARY OF FINDINGS

The analysis of the assessment of the use of safety helmets among the users of motorcycles as a means of transportation between Kagini-Kubwa area of the Federal Capital Territory (FCT) was done with both simple percentage and Chi-square. The demographic characteristics shows that out of 288 sampled respondents, 52% were male and 48% female. 61% of the motorcyclists had less than a school certificate level of education and no formal education which has a significant impact on their level of understanding of the rules and regulations guiding motorcycle riding while 82% of the sample were commercial motorcyclists with about 52% of them had less than a year experience in riding while 69% of the population do not use safety helmet.

The first hypothesis which proposes that motorcycle users are not aware that wearing of helmet can reduce injury during road crashes was accepted thus confirming that the initial high public enlightenment for the use of safety helmets has waned considerably due to the large population of near illiterate operating motorcycles in the area. Consequently, the second, third and fourth hypotheses proposed that the level of education, the use to which the motorcycle is being put (private or commercial) and the user category (rider or passenger) cannot influence the use of safety helmets were rejected even though the fifth hypothesis confirms that both riders and passengers have a similar attitude of predominantly not wearing a safety helmet when commuting with a motorcycle. Finally, the sixth hypothesis which proposes that the level of enforcement of safety helmets by the motorcyclist is inadequate was equally rejected.

Furthermore, many studies have documented low usage of helmet use in Nigeria, especially the study of Nzegwu *et al*, (2008) but the reason for this study is mostly the change in focus from a mixture of enlightenment and enforcement to enforcement alone by the law enforcement agents. To this end, this research sees continuous entrants of new riders into the motorcycle taxi business as one of the critical factors responsible for the low awareness of safety helmet usage which is quite different from the view of Okpoko (2000) which recorded that great awareness of the importance of helmet usage among motorcycle users.

CONCLUSION

The use of motorcycles as a commercial means of transportation has been banned in the city centre of FCT. Their activities have been limited to suburban and rural areas, such as within Kubwa or within Kagini town. However, due to a lack of appropriate transportation services to attend to the needs of people motorcyclists often fill the gap. The crashes often witnessed during transit are issues of concern as many of the motorcycle riders do not wear crash helmets during the process. However, the attention of law enforcement has shifted fully towards law enforcement which does not in any way promote the use of crash helmets without its back up by enlightenment, particularly by the largely uneducated motorcyclists.

RECOMMENDATIONS

The study therefore makes the following recommendations:

1. Enforcement of the use of safety helmets: The Federal Road Safety Corps and all other regulatory organisations should ensure strict enforcement of the use of safety helmets by the motorcyclists and the users so as to reduce the danger of fatal accidents in the cause of road crashes.
2. Public enlightenment of motorcyclist and users: The government officials and ~~the concern~~ stakeholders of motorcyclists should ensure that there is an awareness programme on the safety importance of the use of helmets.
3. Provision of safety helmet: All arms of government at the local, state and federal levels as well as the Nongovernmental Organisations should make it an issue of responsibility to provide safety helmets for the motorcyclists and users so as to mitigate the danger of road crashes.

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