



PERCEPTION AND COMPLIANCE WITH USE OF SAFETY HELMET AS A PREVENTIVE MEASURE AMONG COMMERCIAL MOTORCYCLISTS IN YORUBA ETHNIC-DOMINATED SOUTH-WEST NIGERIA

Kolade Afolayan Afolabi (PhD)¹ and Adebukunola Olajumoke Afolabi²

¹Medical and Health Services, Obafemi Awolowo University, Ile-Ife, Osun state, Nigeria.
Email: doctorafolabi2@yahoo.com

²Clinical Nursing Services, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun state, Nigeria. Email: bukiefolabi@yahoo.com

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ABSTRACT: *Significant proportion of motorcyclists in Nigeria do not adhere to appropriate safety measures due to ethnic and cultural misconceptions, prominent among which is the perceived belief among Yorubas in South-west Nigeria that motorcycle helmets could be a medium for spells and communicable infections. Study assessed the perception of commercial motorcyclists about safety helmets, examined the attitude of motorcyclists and level of compliance with safety helmets. Study adopted a sequential explanatory mixed method using quantitative and qualitative data collection. Quantitative aspect employed semi-structured questionnaires to collect data from 200 commercials while Focus Group Discussion (FGD) was conducted for the qualitative study. Chi-square statistic was used to examine association between dependent and independent variables, statistical significance taken at $p < 0.05$. Qualitative responses were analyzed and findings presented thematically. Findings revealed that 82.5% of the motorcyclists had positive perception, 62.0% had a negative attitude towards safety helmets while 22.5% of the motorcyclists complied with appropriate safety helmet guidelines. Compliance with safety helmets was significantly associated with motorcyclists' educational qualification ($p = 0.03$), ethnicity ($p = 0.01$) and perception about safety helmets ($p = 0.04$). Study concluded that increased awareness and advocacy which takes cognizance of cultural contexts of motorcyclists are vital if fatalities from road traffic injuries are to be reduced in Nigeria.*

KEYWORDS: Perception and Compliance, Safety Helmet, Commercial Motorcyclists, Yorubas



INTRODUCTION

Road Traffic Injuries (RTIs) account for a significant proportion of disabilities and deaths observed in developing countries of which motorcycle crash injuries constitute a significant proportion (World Health Organization WHO, 2018). Worldwide, road traffic injuries account for the leading cause of death among individuals between ages 15-29 years old and also included among the top three causes of death among 15-44 years old (World Health Organization WHO, 2018).

Motorcycle injuries accounted for a significant fraction of all road traffic injuries in developing countries with Nigeria considered as one of the countries with the worst record of road traffic injuries. The use of motorcycle popularly known as 'okada' for transportation in Nigeria was previously for personal purposes mainly by individuals of low socio-economic class until recently when its use became more widespread in major cities and towns (Nwadiaro, Ekwe, Akpayak & Shitta, 2011; Olubomehin, 2012). Consequently, a significant proportion of motorcyclists in Nigeria and some countries in the West Africa sub-region employ use of motorcycles for transportation as a means of livelihood; a phenomenon referred to as commercial motorcycling. These are partly as a result of the poor state of roads, ineffectiveness of public transport systems and worsening unemployment status in the country (Emiogun et al., 2016). Similarly, increased usage of motorcycles for personal and commercial reasons have also been observed in several other countries in Africa including Benin republic, Uganda, Ghana, South Africa (Kudebong et al., 2011). This is in contrast to the situation in most developed countries where use of motorcycles are mainly for recreational purposes (Tomida et al., 2005).

As a result of these surge in the widespread use of motorcycles as means of transportation in Nigeria and several other countries in Africa for personal and commercial purposes, adequate and proper training for motorcyclists regarding safety were not properly addressed in addition to the fact that appropriate laws regulating use of safety gadgets were either not put in place or enforced (Emiogun et al., 2016).

Studies on road transportation and safety in Nigeria revealed that a significant proportion of motorcyclists do not adhere to appropriate safety measures due to non-enforcement of relevant laws, poor attitude towards road safety gadgets and various forms of socio-cultural misconceptions about safety helmets use. Commercial motorcyclists must therefore be targeted towards reduction in severe morbidities, mortalities associated with road traffic injuries in Nigeria.

Etiological factors of road traffic accidents and injuries in Nigeria could be attributed to vehicular causes, human causes and deplorable conditions of roads (Olusayo et al., 2015). In addition to this, a new cause of road traffic accidents in Nigeria is the emergence of 'road traffic injury immunity' (Daniel, 2011). This is a situation in which motorcyclists and or other motorists rely on ancestral influence, powers, charms to protect them from road traffic injuries or even protect them from injuries if accidents eventually occur. This perceived protection is one of the factors responsible for several reckless driving on Nigerian roads (Daniel, 2011).

Over 50% of all road traffic deaths occur among pedestrians, cyclists and motorcyclists with about 93% of the global road traffic fatalities occurring in developing countries (WHO, 2020). In Nigeria, a four-year overview of road traffic mortalities in Lagos, South-West Nigeria



between 2010 and 2014 showed that 23.4% were attributed to motorcycle injuries before introduction of safety helmet law while this proportion dropped to 11.2% after the introduction of the safety helmet law (Emiogun et al., 2016).

In addition, most studies on the relevance of compulsory helmets laws supported the effectiveness of these laws in reducing severe disabilities, mortalities and morbidities associated with road accidents (Emiogun et al., 2016); for instance, there are safety helmet laws in countries such as Uganda, Ghana, Iran, Brazil, Spain, Scotland and India (Kudebong et al., 2011; Carrasco et al., 2012; Heydari et al., 2012)

Nigeria however enacted federal laws on mandatory use of safety helmets in 2006 (Solagberu et al., 2006); Federal republic of Nigeria, 2004) but this laws and regulations guiding motorcycles use and safety on Nigerian roads since the last five decades were not effectively enforced by relevant agencies and as a result, significant proportion of motorcyclists do not comply with these regulations citing different reasons such as high cost of safety helmets, unavailability of these gadgets and in some instances, cultural beliefs about taboos related with use of these gadgets. Prominent among these cultural beliefs exist among the Yorubas; a major ethnic group occupying South-Western part of Nigeria where there are strong cultural belief and allegiance to ancestral injunctions including perceived cultural restrictions and taboos towards on use of items like safety helmets because of its perceived means for casting spells on the user. These socio-cultural misconceptions pose serious challenges to compliance with the use of safety helmets in this region of the country. This study is therefore poised to investigate the perception, attitude and compliance with use of safety helmet as a preventive measure against crash injuries among commercial motorcyclists of the Yoruba ethnic descent in South-West Nigeria with aim of exploring and having a documented record on the perception of commercial motorcyclists from Yoruba ethnic origin in South-West Nigeria about safety helmet use, the attitude of the motorcyclists towards safety helmet use and the level of compliance with the use of safety helmet in South-West Nigeria.

MATERIALS AND METHOD

Variables and their Measurements

Dependent variable

Compliance with use of safety helmet: Compliance is described as adherence to rules and regulations relating to safety helmet use.

Perception is described as a commercial motorcyclist's understanding and interpretation of the concept of safety helmets use.

Independent variable: This include selected socio-demographic variables (age and highest level of education) of commercial motorcyclists

Commercial motorcyclists are motorcycle riders that engage the use of motorcycles as means of transportation for other individuals (passengers). Such motorcycle riders consider motorcycle transportation business as a means of livelihood.



Study design

The study adopted sequential explanatory mixed method design using both quantitative and qualitative data collection methods.

Study setting

The study was conducted among commercial motorcyclists in Ile-Ife; the headquarter of Ife Central Local Government Area, Osun State, South-West Nigeria. Ile-Ife is believed to be the Cradle of the Yorubas: a major ethnic group in Nigeria and one of the most important historical town in South-West Nigeria (The town is one of the largest urban centers in Osun State, South West Nigeria and probably the oldest town of the Yoruba people (one of the main ethnic groups in Nigeria). The Yorubas have strong affiliations, allegiance and cultural belief to ancestral lineage with several restrictions and taboos which make the ethnic group renowned for the highest number of traditional and cultural activities in Nigeria. Other ethnic groups like Hausas and Igbos constitute minorities in the town. Ife Central Local Government area where this study was conducted consists of 11 political wards which are for political and administrative purposes.

Sampling technique for quantitative study

Using Fisher's formula for estimating single proportion, 95% level of confidence and degree of accuracy at 0.05, a sample size of 200 commercial motorcyclists was estimated. These were selected through a two-stage sampling technique: In the first stage, five political wards were selected from a total of eleven wards in the Local Government Area through a simple random sampling technique (balloting). Second stage involved selection of forty commercial motorcyclists in each selected ward by convenience sampling method. The instrument for data collection was pretested during a pilot study among commercial motorcyclists within Obafemi Awolowo University campus located within Ife Central Local Government Area.

Sampling technique for qualitative study

Four sessions of Focus Group Discussion (FGD) were held with eight discussants selected by snowballing sampling technique to participate in each session of the FGD giving a total of 32 participants. Participants for the FGD were selected based on age groups such that two sessions of FGD were held among motorcyclists aged 20- 29 years old and 30-39 years old respectively (these age groups constitute a significant proportion of motorcyclists from the quantitative aspect of this study).

Quantitative data collection

Quantitative data was collected with a semi-structured interviewer administered questionnaire. The questionnaire was used to obtain information on socio-demographic variables of commercial motorcyclists, assessed the perception of the commercial motorcyclists about use of safety helmet as a preventive measure against crash injuries, determined the level of compliance to the use of safety helmet and identified factors that could enhance as well as hinder compliance to use of safety helmet by commercial motorcyclists.



Qualitative data collection

Focus group discussion (FGD) explored motorcyclists' perception about safety helmets use and associated factors. Each session of focus group discussion was conducted by the researchers with help of research assistants who have been previously trained in qualitative data collection. Each episode of the focus group lasted 45 minutes 55 minutes and was conducted in Yoruba language which is the native language of participants. The aim of the study was explained to participants and informed consent taken for the audio proceedings of the discussion to be recorded by tape recorder to complement field notes. All relevant documentation and audio recordings were extracted.

Instrument for quantitative data collection

The semi-structured interviewer administered questionnaire has four sections. Section A contains socio-demographic variables of motorcyclists, Section B sought information on perception about use of crash helmets, and Section C obtained information about motorcyclists' attitude towards safety helmets, while Section D assessed motorcyclists' level of compliance with use of safety helmets. The questionnaire was translated into Yoruba language for good understanding and objective responses from respondents.

Instrument for qualitative data collection

An FGD guide containing ten items was used to collect qualitative data. The FGD further explored motorcyclists' perception about safety helmet use and associated factors. The FGD guide was translated into Yoruba language which is the native language of participants.

Data analysis

Quantitative data was imputed into SPSS version 22 and analysed at univariate and bivariate levels. Univariate analysis used frequency and percentage distribution to present socio-demographic characteristics of the motorcyclists. Bivariate analysis employed use of chi-square statistics to examine association between selected socio-demographic variables (age and highest level of education) and compliance with safety helmet use. Perception about use of safety helmets was assessed using a five-point Likert scale. Perception was rated as positive or negative. Attitude towards use of safety helmets by commercial motorcyclists was assessed using a 5- point Likert scale. Attitude was categorized as good or poor. Compliance with use of safety helmets in this study was assessed as a composite measure involving 3 items which assessed the frequency of use of safety helmets, types/quality of safety helmets being used and maintenance of the safety helmets. Compliance was assessed as good, fair and poor.

Qualitative findings from the focus group discussion were extracted, analysed and results presented thematically. FGD findings were used to validate quantitative findings.

Ethical consideration

Permission was obtained from the authority of Ife Central local Government Area where this study was conducted. Informed consent was also obtained from commercial motorcyclists' prior data collection.



RESULTS

Quantitative findings showed that 41% of the motorcyclists were within the 21-30 years age groups while only 20% of respondents were within the age group 51-60 years (table1). This probably might be due to the fact that young adults mainly engage in commercial motorcycle business as means of livelihood in Nigeria. Educational qualification of the motorcyclists showed that 40% of the motorcyclists have secondary school as educational qualifications while 58.5% attended tertiary institution. This finding is probably a reflection of widespread unemployment rate among graduates of tertiary institutions in Nigeria (Emiogun et al., 2016).

Table 2 showed that 82.5% of respondents have positive perception about the use of safety helmets as a preventive measure against road traffic injuries while 15.5% have negative perception with 2% being indifferent. Only 38% have a good attitude towards the use of safety helmets while the majority (62%) have a poor attitude (table3). Findings also showed that only 22.5% of motorcyclists have good compliance with use of safety helmets.

Majority of the motorcyclists (57.5%) have fair compliance while 20% of the motorcyclists were observed to have poor compliance with use of crash helmets (table 4). In addition, table 5 showed that 39% of the motorcyclists claimed that motorcycle helmet could be a source of contagious infection hence could hinder the compliance to the use of safety helmet while 29.0% believed that cultural taboo about motorcycle helmet being a medium for casting spells could hinder its compliance, 18.5% believed inadequate enforcement by relevant agencies could be a factor hindering compliance and 13.5% believe high cost of standard quality helmet could hinder compliance with motorcycle helmet use (table5).

Table 6 showed that 50% of the motorcyclists responded that an increased awareness campaign about safety helmet could enhance compliance to motorcycle helmet use, 18% responded that motorcycle helmet price subsidy could enhance motorcycle helmet compliance while 23.0% believed that enforcement of the crash helmet law could enhance motorcycle helmet compliance.

Findings further showed a statistically significant relationship between motorcyclists' educational qualification ($p=0.03$), ethnicity ($p=0.01$), perception about safety helmets ($p=0.04$) and compliance with safety helmets (Table 6).

Qualitative findings

Findings from the qualitative survey resulted in development of 3 sub-themes and 8 sub-themes (Table 7)

Perception about safety helmets

Participants at the Focus Group Discussion (FGD) opined that motorcycle helmet use is capable of reducing the magnitude of injuries that could be sustained from road traffic accidents. Participants also opined that the quality of the helmets also determine the extent of the protection against injuries in case of road accidents. A few participants however retorted that motorcycle helmets could be a source of infectious diseases in addition to being a medium to cast spells. In expressing her opinion, a 28 year old motorcyclist retorted that:



'...Truly speaking, the motorcycle helmet can actually reduce the extent and severity of injuries in case an accident occurs. I use helmet anytime am on my motorcycle to protect me from sustaining severe injuries' **(a 28 year old motorcyclist)**

The above submission was similar to the view of a 32 year old motorcyclist who opined that motorcycle helmets could be source of infections or medium for spells:

'...Am aware that motorcycle helmets can protect against severe injuries especially head injuries if used properly, though use of helmet is not always convenient in addition to the fact that infection can be contacted if someone shares an helmet'. **(a 32 year old motorcyclist)**

A 23 year old motorcyclist however differed in his response:

'.....I do not believe the helmets could protect as such, because once an accident occurs, the injuries are usually severe whether the rider uses helmets or not. The motorcycles are made in such a way that there are no protective accessories attached that could protect parts of the body such as the legs, thighs and the body'. **(A 23 year old motorcyclist)**

Perceptions about compliance with use of safety helmet

Participants were asked to express their opinion regarding compliance and frequency of helmet use. Participants generally opined that safety helmets should be used every time a rider is on the motorcycle since the essence of its use is to protect against injuries. A few participants however opined differently claiming non-enforcement of relevant laws as excuse for infrequent use of the safety helmets. Below are excerpts from participants to buttress the submission above:

'...I feel the motorcycle helmets should be used every time in order to protect the riders against head injuries since no one could predict when accidents will occur'. **(A 27 year old motorcyclist)**

The above response was similar to the response of a 32 year old participants who responded that:

'...Motorcycle helmets should be worn at all times but most passengers did not want to put on the helmets. I think the law should also mandate passengers tom also put the helmets on to protect them also from severe injuries'. **(a 32 year old motorcyclist)**

'.. I put my helmet on whenever I am on my motorcycle so as to protect me. The helmets also serve as caution for me to ride gently whenever am tempted to over speed'. **(29 year old motorcyclist)**

A 34 year old participant however retorted that he seldom uses the safety helmet because he's yet to procure a personal safety helmet.

'...I don't usually use a helmet, I don't even have one. I don't have enough money to procure a helmet and am not under pressure to get it because even the law enforcement agents are not enforcing it'. **(A 34 year old motorcyclist)**



Response from the FGD also revealed that motorcyclists often improvise the standard safety helmets citing reasons such as high cost of the standard recommended safety helmets, unavailability and un-accessibility of the standard helmets. Below are excerpts from participants:

'...I use improvised helmets which are not convenient and often fall off from my head. The recommended helmets are more expensive. I even know of someone who wanted to buy the standard helmet but could not get it because the standard helmets are scarce and not usually accessible'.

(A 32 year old motorcyclist)

'..., I cannot afford the real helmet because it's very expensive. I usually use the improvised one to avoid being arrested by the police and the road safety officials'. **(a 36 year old motorcyclist)**

Perception about inhibiting/enabling factors to safety helmets use

Participants at the FGD identified risk for contagious infections from sharing safety helmets, cultural taboo about helmets being a medium for spells as reasons for poor compliance. Below are few excerpts reflecting the above:

'...I do not use helmet so as to avoid contacting scalp infections from sharing the helmets with

other motorcyclists because a friend of mine once contacted scalp infection after sharing the helmets' (a 34 year old motorcyclist)

'...Helmets could be a medium for spells if shared with other motorcyclists. My culture (Yoruba) discourages sharing such items to be put on the head because the head directs the fortune of an individual' (a 37 year old motorcyclist)

Responses from participants below further revealed the cultural belief about the use and sharing of motorcycle helmets among motorcyclists in this study area:

'...I have had of people disappearing after placing helmet on their head, that's one of the reason why most motorcycle riders and passengers will not share helmets in my area. in my home town, no one is permitted to use an helmets belonging to another person' (a 27 year old motorcyclist)

'...It's a common belief in my culture (Yoruba) that the head is the custodian of good fortune, therefore no one should just put any item on his head to avoid being influenced by demonic powers or strange influences' (a 23 year old motorcyclist)

Participants at the FGD further identified an increased awareness campaign, subsidy on safety helmets and enforcement of motorcycle helmet law as factors that could enhance compliance with helmet use among motorcyclists. Below are few excerpts:

'...motorcyclists will comply with safety helmets use if law enforcement agents intensify efforts to punish defaulters' (a 36 year old motorcyclist)



'... Compliance with safety helmets could improve if awareness about the benefits of its use is communicated to motorcyclists. This is in addition to government's subsidy on the standard safety helmets in order to encourage more people to procure the standard helmets' (a 21 year old motorcyclist)

'...majority of motorcyclists are not aware about the importance of the safety helmet. More motorcyclists need to be aware about the benefits and dangers associated with safety helmets use' (a 25 year old motorcyclist)

DISCUSSION

Findings from this study revealed that motorcyclists whose ages ranged between 21 and 30 years old constitute a significant proportion (41%) of commercial motorcyclists in Ile-Ife, South West Nigeria (Table1). The WHO (2018) similarly published that road traffic injuries were the leading cause of death among motorcyclists between ages 15-29 years old.

This study also revealed that the majority (82.5%) of the motorcyclists (table2) have positive perception about use of safety helmets though only a third (38.0%) of the motorcyclists have a good attitude towards use of the safety helmet. This finding contrasts the observation by Mu'awiyah & Sagir (2012) who found that 95.2% of motorcyclists in North-West Nigeria have poor attitude towards motorcycle safety helmets use. Compliance with the use of safety helmet among motorcyclist in this study however is considered low because only 22.5% of the motorcyclists have good compliance with use safety helmet, 57.5% of the motorcyclists were observed to have fair compliance while level of compliance among 20% was observed to be poor. This observation was similar to responses from the FGD where compliance with safety helmets use among participants was also low. This finding however corroborate the submission of Ambak et al., (2011) who observed from a Malaysian study that only 46.6% of motorcyclists complied with proper helmets use, 10.6% often untied the helmets while 42.8% were without the safety helmets. Olakulehin et al. (2015) however observed in their study that 4.3% of motorcycle riders studied use safety helmets. The low compliance rate observed in this study might be responsible for severe disabilities and death resulting from motorcycle crashes observed in hospitals especially in this study area.

This study further revealed that 39% of the motorcyclists identified helmet as a source of contagious infection which hindered their use and compliance with the safety helmet while 29.0% identified cultural taboo about motorcycle helmet being a medium for casting spells as a factor that hindered compliance. Participants at the FGD similarly identified risk for contagious infections, cultural taboo about helmets being a medium for spells as reasons for poor compliance. Participants at the FGD retorted that sharing of safety helmets has been discouraged among the Yoruba culture because of perceived taboo and strong belief that sharing a helmet could predispose an individual to spell in addition to the perceived possibility of contracting scalp infections. Regarding factors that could enhance compliance with the safety helmet, more than half (59%) of the motorcyclists responded that an increased awareness campaign about safety helmet could enhance compliance to motorcycle helmet use, while about one-fifth (23.0%) responded that enforcement of the crash helmet law could enhance motorcycle helmet compliance. Eighteen percent however responded that introducing helmet price subsidies could enhance compliance in addition to increasing awareness and enforcement



of motorcycle helmet law. These factors were also identified during the focus group discussion as capable of encouraging motorcyclists to procure standard helmets. The above observations were consistent with findings by Olakulehin et al. (2015) who concluded in their study that there was need for enforcement of safety helmet laws in addition to enlightenment programs on use of safety helmets. Similarly, Adetunji & Aloba (2014) advocated enforcement of safety helmet law in addition to other measures so as to improve compliance with use of safety helmets.

Findings from this study further revealed that there is a significant relationship between motorcyclists' educational qualification ($p=0.03$), ethnicity ($p=0.01$), perception about safety helmets ($p=0.04$) and compliance with safety helmets. This observation implies that compliance with safety helmet use improves with increasing age of motorcyclists. The above assertion is strengthened by the submission of Mu'awiyah & Sagir (2012) who observed in their study that motorcyclists' age significantly influenced compliance with safety helmets.

CONCLUSION

Majority of motorcyclists among the Yoruba ethnic majority have positive perception about use of safety helmets, a significant proportion of the motorcyclists have good attitude towards use of the safety helmet though compliance with use of the safety helmet was observed to be low. Motorcyclists' educational qualification, ethnicity, perception about safety helmets significantly influenced compliance with safety helmets. Increase awareness, enforcement of safety helmet laws and advocacy which takes cognizance of cultural contexts of motorcyclists within this ethnic group are vital if fatalities from road traffic injuries are to be reduced in this study area. It is therefore necessary for all stakeholders to channel more efforts towards promoting factors that enhance compliance to the use of crash helmets such as increased awareness campaign and enforcement of the crash helmet law if fatality and death from road traffic accidents are to be reduced.

Recommendations for Public Health Practices

Awareness campaigns towards safety helmet use by stakeholders should take cognizance of the socio-cultural context of motorcyclists in order to address various misconceptions relating to safety helmets.

High quality standard helmets and other protective gadgets should be made available at affordable costs to motorcyclists to enhance more compliance and in order to reduce morbidity and mortality resulting from road traffic injuries.

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APPENDIX

Table 1. Socio-demographic Characteristics of Motorcyclists N=200

| Variable | Frequency | % |
|-----------------------------------|-----------|------|
| Age | | |
| 11 – 14 | 45 | 22.5 |
| 21 - 30 | 82 | 41.0 |
| 31 – 40 | 58 | 29.0 |
| 41 – 50 | 11 | 5.5 |
| 51 – 60 | 4 | 2.0 |
| Marital status | | |
| Married | 102 | 51.0 |
| Single | 98 | 49.0 |
| Sex | | |
| Male | 131 | 65.5 |
| Female | 69 | 34.5 |
| Ethnicity | | |
| Yoruba | 161 | 80.5 |
| Hausa | 15 | 7.5 |
| Igbo | 24 | 12.0 |
| Religion | | |
| Christianity | 108 | 54.0 |
| Islam | 88 | 44.0 |
| Traditionalist | 4 | 2.0 |
| Highest level of education | | |
| Primary | 3 | 1.5 |
| Secondary | 80 | 40.0 |
| Tertiary | 117 | 58.5 |

Table 1 shows that 41.% of the motorcyclists were within the 21-30 years age groups while only 20% of respondents were within the age group 51-60 years. This probably might be due to the fact that young adults mainly engage in commercial motorcycle business as means of livelihood.

The table also shows that 51% of respondents are married while 49% are unmarried.

Table 1 also revealed that 80.5% of respondents are of Yoruba ethnic group. This is largely due to the fact that Ile-Ife where the study was conducted is a Yoruba town. In addition, fifty four percent of the motorcyclists were Christians while only 4% were traditional worshipers (traditional festivities and beliefs are held in high regard in Ile Ife). Educational Qualification



pattern shows that 40% of motorcyclists have secondary school as educational qualifications while 58.5% attended tertiary institution. This finding is probably a reflection of widespread unemployment rate among graduates of tertiary institutions in Nigeria.

Table2: Motorcyclists' Perception about Use of Safety Helmet N=200

| Perception | Frequency | % |
|-------------|-----------|------|
| Positive | 165 | 82.5 |
| Negative | 31 | 15.5 |
| Indifferent | 4 | 2.0 |

Table 2 shows that 82.5% of respondents have positive perception about use of safety helmet as

preventive measure against road traffic injuries while 15.5% have negative perception with 2%

being indifferent.

Table 3: Motorcyclists' Attitude towards Use of Safety Helmet N=200

| Variables | Frequency | % |
|---------------|-----------|------|
| Good attitude | 76 | 38.0 |
| Poor attitude | 124 | 62.0 |

Table 3 shows that 62.0% of the motorcyclists have poor attitude towards use of safety helmet.

Table 4: Compliance with Use of Safety Helmets N=200

| Compliance | Frequency N=200 | % |
|-----------------|-----------------|------|
| Good compliance | 45 | 22.5 |
| Fair compliance | 115 | 57.5 |
| Poor compliance | 40 | 20.0 |

Table 4 shows that only 22.5% of motorcyclists had good compliance with the use of safety helmets while the majority of the motorcyclists (57.5%) had fair compliance. However, 20.% had poor compliance with use of crash helmets.

**Table 5: Factors that hinder Compliance with Safety Helmet Use**

| Factors that hinder compliance | Frequency | % |
|--|-----------|------|
| Belief that helmet is a source of contagious infection | 78 | 39.0 |
| Cultural taboo about motor motorcycle helmet being medium for spells | 58 | 29.0 |
| High cost of standard quality motorcycle helmet | 27 | 13.5 |

Table 5 shows that 78 (39.0%) motorcyclists believed that safety helmets are sources of contagious infection which could hinder its use while 27 (13.5%) considered high cost of safety helmet as factor that could hinder compliance with safety helmet use.

Table 6: Factors influencing Compliance with Safety Helmets**N=200**

| Variables | Compliance | | | | Statistic | | |
|----------------------------------|------------|------|------|-------|-----------|----|---------|
| | Good | Fair | Poor | Total | χ^2 | df | P value |
| Age group (Years) | | | | | 35.56 | 3 | 0.14 |
| 11-20 | 6 | 21 | 18 | 45 | | | |
| 21-30 | 23 | 50 | 9 | 82 | | | |
| 31-40 | 8 | 40 | 10 | 58 | | | |
| 41-50 | 8 | 4 | 3 | 15 | | | |
| Educational qualification | | | | | 36.72 | 2 | 0.03 |
| Primary | 0 | 2 | 1 | 3 | | | |
| Secondary | 27 | 35 | 18 | 80 | | | |
| Tertiary | 18 | 77 | 22 | 117 | | | |
| Ethnicity | | | | | 14.32 | 2 | 0.01 |
| Yoruba | 31 | 100 | 30 | 161 | | | |
| Hausa | 10 | 5 | 0 | 15 | | | |
| Igbo | 4 | 10 | 10 | 24 | | | |
| Motorcyclists' attitude | | | | | 12.73 | 1 | 0.12 |
| Good | 24 | 36 | 16 | 76 | | | |
| Poor | 21 | 79 | 24 | 124 | | | |
| Motorcyclists' perception | | | | | 10.53 | 2 | 0.04 |
| Positive | 26 | 100 | 39 | 165 | | | |
| Negative | 18 | 13 | 0 | 31 | | | |
| Indifferent | 1 | 2 | 1 | 4 | | | |

Table 6 shows no significant relationship between motorcyclists' age ($p=0.14$), attitude towards safety helmets ($p=0.12$) and compliance with safety helmets.

**Table 7: Qualitative findings on Perception about Safety Helmets**

| Main Theme | Theme | Sub-theme |
|--|---|--|
| Perception about Use of Safety helmets | Perception about safety helmets | Helmet reduces extent of injuries Helmets could be source of infection Helmets are medium for taboo or spells |
| | Perceptions about compliance with use of safety helmet | Safety helmets should be used every time Compliance requires enforcement of relevant laws |
| | Perception about inhibiting or enabling factors to safety helmets use | Belief that helmet is a source of infections Cultural taboo about motorcycle helmet being medium for spells High cost of standard quality motorcycle helmets |