REASONS BEHIND RECKLESS RIDING AMONG COMMERCIAL MOTORCYCLISTS IN DAR ES SALAAM

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By

Felix Aidan Rwegoshola

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Behaviour Change of the Muhimbili University of Health and Allied Sciences

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled ***Reasons behind Reckless Riding Among Commercial Motorcyclists in Dar es salaam*** *in* (partial) fulfillment of the requirements for the degree of Master of Science in Behaviour Change of the Muhimbili University of Health and Allied Sciences.

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Prof. M. T. Leshabari

(Supervisor)

_____

Date

DECLARATION

AND

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I, **Felix Aidan Rwegoshola**, declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for the similar or any other degree award.

Signature…….. Date ……

ACKNOWLEDGMENTS

I am grateful to our Almighty God who is always showering his everlasting love and security over me. He is always there to lift me up when I fall and he recovers my heart whenever it is broken. Thank You Lord!

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DEDICATION

To My Precious Sons Ian Rweyongeza Aidan and Ethan Rweyemamu Aidan.

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LIST OF ABBREVIATIONS

CDC	Center for Disease Control
HBM	Health Believe Model
MHA	Ministry of Home Affairs
MNH	Muhimbili National Hospital
MOI	Muhimbili orthopedic Institute
NHSTA	National Highway Traffic Safety Administration
US	United State**s**
WHO	World Health Organization

DEFINITIONS

1. **Reckless riding:** is riding with a willful or wanton disregard for safety or the operation of a vehicle in which you show a willful disregard of consequences.

2. **Attitude**: is someone’s opinion or feelings about motorcycle helmet, especially as shown by his/her practice towards helmet use.

3. **Helmet**: is a type of protective headgear used by motorcycle riders. The primary goal of a motorcycle helmet is to protect the rider's head during impact, thus preventing or reducing head injury or saving the rider's life.

ABSTRACT

Background: Motorcyclists and their passengers are 37 times more likely to die in traffic injury than drivers of four wheeled vehicles. These rates of death and injury from motorcyclist are reportedly higher in developing countries than in the developed world. Observed risk riding behavior of motorcyclists in the Dar es Salaam City included, carrying more than one passenger, riding under the influence of alcohol, over-speeding, and non-adherence to or ignorance to road traffic laws and regulations such as ignoring traffic police instructions and riding through red traffic lights.

Objectives: The purpose of the study was to explore the reason behind reckless riding among motorcyclists in Dar es Salaam.

Methods: A cross sectional descriptive study design was used for generating data. A total of 279 commercial motorcyclists participated in this study. All riders on the motorcyclists parking points along Morogoro road on the day of data collection were included in the study sample. Structured interview guides were used for getting the required data and included questions which measured knowledge on road use behavior and traffic regulations. The data collected from the field were analyzed using Statistical Package for the Social Sciences, version 20, (SPSS 20).

Results: All commercial motorcyclists were males with the median ages of 27 years. Most of them (73.5%) had primary education or less. None of them had any formal training on motorcycles riding. They disclosed that, they learned how to ride the motorcycles from garages (11.1%), friends (53.8%), and relatives or family member (35.1%). Nearly a half of the respondents (49.5%) had an average knowledge of road use behaviour and traffic regulation. Ignorance of traffic law (99.6%), frequent traffic jam (86.4%), lack of action from traffic police when they ignored traffic rules and regulations (96.7%) were among reasons given for reckless riding behaviors in the city.

Conclusion: Generally, the study participants learned how to ride the motorcycles from informal sources and the majority of them were ignorant of traffic rules and regulations. Reasons for not wearing helmets when on the road included: showoff to other riders, add weight to their heads, helmet affects the visibility and helmet weakens the ability to hear.

Recommendation: There should be regular educational campaigns to all commercial motorcyclists on traffic regulation and road use behaviour so as to enhance awareness on road use behaviour and traffic regulations.

CHAPTER ONE

1.0 INTRODUCTION

The rise of motorcycles as a means of private, public and commercial urban transport is evident in many countries in sub-Saharan Africa (Abuhamoud *et al.*, 2011). The rate of motorcycle accidents which forms a fatal category of motor traffic accidents in the world is alarming and Tanzania is not an exception. Day in day out, the risk of passengers, pedestrians and motorcyclists getting involved in accidents increases making them the most vulnerable road users. About 1.2 million people dies and 50 million others are injured in the world roads' accident each year (WHO, 2004). It is estimated that averagely 3,242 people die daily from road accidents (WHO, 2004). While traffic crashes are predicted to further decrease by 27% in the developed countries by 2020, they are estimated to increase by 83% in low income and middle-income countries (WHO, 2004). At present, road traffic fatalities are the 9th leading cause of death and disability in the world (WHO, 2004). The World Health Organization (WHO) has described them as 'hidden epidemics' and has forecasted that they will be the fifth leading cause of death worldwide and the second leading cause of disability-adjusted life year losses in many developing countries by 2030 (Murray and Lopez, 1996). Consequently, the WHO has declared this decade (2011-2020) as a **'***Decade of Action for Road Safety'*.

Motorcyclists and their passengers are 37 times more likely to die in traffic injury than riders in four wheeled vehicles (Nunn, 2011; WHO, 2004, 2009). These rates of death and injuries from motorcyclists are reportedly high in developing countries relative to the developed world. In Nigeria, motorcycles constitute about 24% of all vehicles; yet account for more than 43% of total accidents (Ybour, 2011). In Singapore, motorcycles constitute about 19% of all vehicles; yet they are responsible for about 36% of total accidents (Haquea *et al.*, 2008). In France motorcyclists account for 20.8% of people killed and 18% of those injured, although they only account for 3.6% of all registered vehicles (ONISR, 2010). Motorcyclists are thus considered one of the groups most vulnerable to transportation accidents (Peden *et al.*, 2004; WHO, 2009). Researchers generally attribute the risky nature of motorcycle transportation to

the general lack of safety devices to entire body or protection structures for drivers and passengers (Albalate & Fernàndez-Villadangos, 2010).

The motorcycle, commonly called “bodaboda” in Uganda, Tanzania and Kenya (Naddumba, 2004, Galukande *et al.*, 2009) and ‘‘okada’’ in Nigeria (Oluwadiya *et al*., 2004; Solagrebu *et al.*, 2006), has recently become increasingly popular in Tanzania as a means of commercial transport (Museru & Leshabari, 2002). In the year 2008, Tanzanian Government allowed motorcycles to be used for commercial purposes as part of efforts to provide the youth with a source of employment and income. Nevertheless, there was no study backing up such government decisions. Nobody thought the good intention of the Government would turn into almost a national disaster. The popularity of this mode of transport in Tanzania could be due to the fact that: they are a quick means of transport especially for short distances in cities and towns; they are efficient in mitigating traffic jam delays in the cities; and they are available throughout the day and at night. The negative side of motorcycle as a means of transport is the risk of injury as reported in other studies (Naddumba, 2004; Galukande *et al.*, 2009).
Most of the motorcycle accidents which occur on the roads have been greatly attributed to the Motorcyclist not adhering to the rules and regulations governing the road and safety measures and also due to bad roads (Astrom *et al.*, 2006).

According to Tanzania Home Affairs 2013 Ministerial report, about 8,178 accidents were caused by motorcycles between January 2013 and May 2015. They claimed 1,282 lives of motorcyclists countrywide. Between January 2012 and December 2013, 5,763 accidents were caused by motorcycles killing 930 people and injuring 5,532 others. About 2,415 motorcycle accidents were recorded countrywide killing 352 people and injuring 2,368 others between. January and May 2013. A report from Muhimbili Orthopedic Institute (MOI) which is the largest hospital catering for different types of injuries in the country (MOI 2015), indicates that the hospital received about three motor cycle cases of road accident per month. However, in the past few years, the number rose to more than five cases per day following the introduction of commercial motorcycling in 2008. Consequently, hospitals and other health

facilities are overwhelmed by patients of road accidents leading some patients to sleep on hospital ward floors due to a shortage of beds.

Among a myriad of causes of accidents includes; ignoring helmet wearing by both passengers and motorcyclists, overloading passengers popularly known as “Mishikaki”, riding under influence of alcohol, lack of certified motorcyclists training and valid licensing, over-speeding, and non-adherence of or ignorance to road traffic laws and regulations, recklessness of motorcycle drivers has been identified as the main cause of fatalities and injuries (Museru and Leshabari, 2002; Chiduo, 2009; Chalya *et al*., 2010; Mwakapasa, 2011; Mcharo, 2013).

1.2 Statement of the Problem

Fatalities and injuries related to commercial motorcycle, nicknamed “bodaboda,” are are fairly highin the country. It is reported that more than 50 motorcycle accidents occur in Dar es Salaam per day (Ministry of Home Affairs, 2013). In response to this challenge, the Tanzanian Government has instituted numerous campaigns to promote road safety, including institutional set up of road safety activities, traffic legislation, law enforcement, training and education, vehicle safety and inspection, road traffic management and post collision assistance with minimal success (Maseru and Leshabari, 2002;Chalya *et al*., 2010). A study by Adogu and Ilika, (2006) revealed that knowledge on traffic regulation plays a vital role in efforts aimed at preventing road traffic injuries among road users especially motorcyclists.

Current research efforts related to “bodaboda” have been focused on road traffic accidents, injury morbidity, attitude and practice toward helmet use, pre hospital trauma care for road accidents, injuries pattern and associated factors and pain management (Chalya *et al*., 2010; Chiduo, 2009; Mcharo, 2013; Mwakapasa, 2011). Practically, in the present motorcycle riding behaviours includes, passengers overloading, over-speeding, riding under the influence of alcohol, Non adherence to road traffic laws and regulations, overtaking other vehicles on the left side and riding through red traffic light is fairly common. Little is known about the reasons behind these reckless riding, It is for these reasons this study was designed.

1.3 Rationale of the Study

The findings of this study would provide crucial information required for developing interventions which addresses road traffic injuries associated with 'bodaboda' riders in Dar es Salaam.

1.4 Research Questions

This study focused on the following research questions:

1.4.1 What is the level of knowledge of motorcyclists regarding road use behaviour and traffic regulations?

1.4.2 What are the main reasons do motorcyclists have for riding through red lights?

1.4.3 What are the major barriers to helmet use by the motorcyclist and their passengers?

1.5 Main Objective of the Study

The main objective of the study was to determine reasons behind reckless riding among motorcyclists in Dar es Salaam.

1.6 Specific Objectives

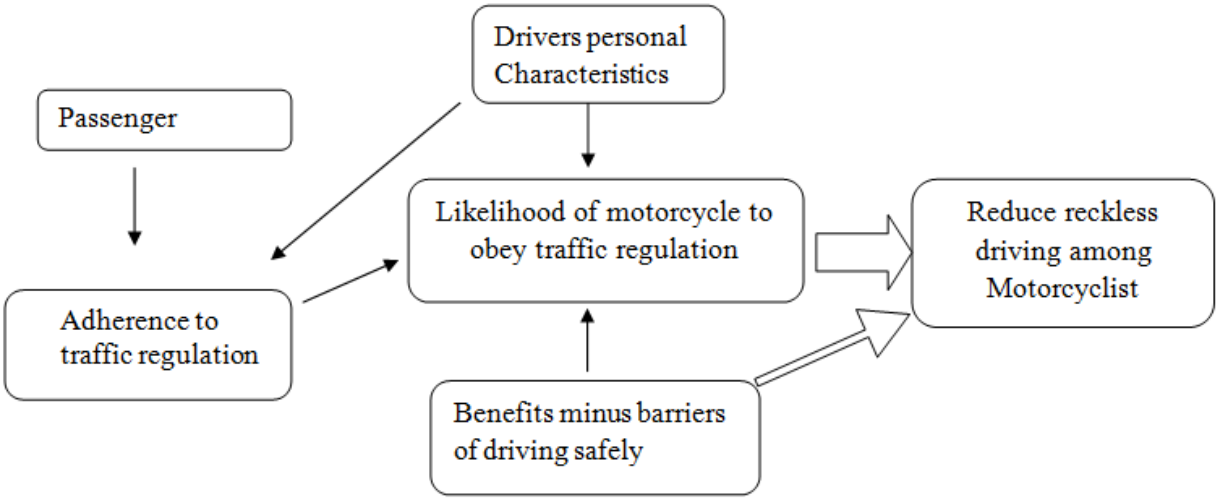
1.5.1 To determine the level of knowledge of motorcyclist regarding traffic regulations.
1.5.2 To find out the motives motorcyclists have for riding through red lights.
1.5.3 To determine the major barriers for helmet use by Motorcyclist.
1.5.4 To determine the major barriers to helmet use by passengers who use motorcycles

1.7 Conceptual Framework

The riding behaviors of Motorcyclists are influenced by many factors, including their personal levels of knowledge, awareness, skills, and experiences; characteristics of and conditions

found in the motor vehicle; and the various conditions of the community in which they live. Individual characteristics that have been found to be related to motor vehicle morbidity and mortality among Motorcycles include race, age, gender, cognition, riding experience, and level of acculturation (Braver 2003). Practically in Dar es Salaam most motorcyclists do speed where they should not, and cross the road at wrong time and place, at a traffic lights junction. They do not respect the light neither do cross at the right sport and forcing pedestrian out of prescribed path, riding while answering their phone, drive under influence of alcohol, poor observation of road sign and overtaking the vehicles on left side of the vehicles. All of these reckless behaviours could be due to lack of knowledge on traffic laws and regulations, poor riding, personal characteristics, passengers and low susceptibility and severity among the motorcyclist.

HBM is modified and used in this study; the model explains that motives to undertake health can be divided into three main categories: individual perceptions, modifying behaviours, and likelihood of action. Individual perceptions are factors that affect the perception of traffic road accidents they deal with the importance of health to the individual, perceived susceptibility, and perceived severity. In the case of this study reducing motorcycle accident depends on the motorcyclist perception to vulnerability and the seriousness of traffic road accident also depends on the benefit they get when riding recklessly. In the present of traffic regulations (as cues to action) it could be seen as barriers for the motorcyclist to drive recklessly. The combination of these factors causes a response that often manifests into action, provided it is accompanied by a rational alternative course of action. Figure 1: Diagrammatic representation of the conceptual framework.



This conceptual framework is modified from Health Belief Model

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 GENERAL OVERVIEW

Road traffic injuries form a significant amount of injury related mortality and morbidity around the world with an estimated 1.2 million people killed and about 20–50 million injured on the roads annually (Peden *et al*., 2004). Studies by Peden *et al*. (2004) and WHO (2010) showed that, the road traffic injury mortality rate is highest in Africa (28.3 per 100,000 populations when corrected for underreporting, compared with 11.0 in Europe). The rate of road traffic deaths in Sub-Saharan Africa is 40% higher than that in all other low- and middle-income countries (28.3 compared to 20.2 per 100,000) and 50% higher than the world level (28.3 compared to 19.0 deaths per 100,000 population) making traffic injuries the 10th leading cause of death in the region, WHO (2010).

The rate of increased frequency of motorcycle related injuries have been largely attributed to bad road networks, careless road use by motorcyclists, poor knowledge of and non-compliance with traffic codes and safety measures such as the use of well-fitting crash helmets, inadequate formal training in the use of the motorcycle, and high level of illiteracy (NHTSA's 2007).
Road traffic accidents and injuries have largely depended on three factors: human, vehicle and road situation with most focus on human. Human behavior has been the key in solving most road traffic issues, therefore the measures aimed at prevention and decrease of road traffic accidents and injuries should be based on valid information and data on these factors (Sowa, 2013). A study by (Demberelsuren and Erdenechimeg, 2010) reported on these factors suggesting that, the information database can be divided into four parts: road and traffic data, vehicle data, road traffic injury and mortality data and data on knowledge, attitudes and practices towards traffic safety among people participating in traffic movement. They however concluded convincingly that, there is a lack of data on road traffic injury risk factors; especially there is limited data on the behavior of people involved in traffic.

Despite the advantages that motorcycles have, motorcyclists form a large proportion of those injured or killed on the roads. This is because they often share the traffic space with fast-moving, heavier and bigger cars, buses and trucks, and also because they are less visible. In addition, their lack of physical protection makes their passengers vulnerable to injures whenever they get involved in a collision (WHO, 2006). The problem is further compounded by the fact that, motorcycles have much higher risks of being involved in crashes involving fatalities than other vehicles, (Deutermann, 2004). Lack of safe riding concepts is another factor that increases the vulnerability of the motorcyclists in road traffic accidents.

Study done in Taiwan, (Chang and Yeh, 2006) observed that, almost all motorcycle riders (engine capacity lower than 250cc) were self-taught with a lack of appropriate riding education or training and many accumulated their experiences via trial-and-error process.

2.2 Knowledge on traffic regulation

Knowledge of road traffic regulation plays a vital role in efforts aimed at preventing road traffic injuries among road users especially motorcyclists. This study sought to determine the level of knowledge among the motorcyclists with regards to road traffic regulation that hunted for keeping them safe from accidents. A related study conducted in Nigeria by (Adogu and Ilika, 2006) revealed that, two thirds of the respondents included in their study had very poor knowledge of road traffic codes and safety giving the indication that, most motorcyclists did not have any form of formal training where they could be given the basics or fundamental principles underlying the road and safety measures.

Another related study (Demberelsuren, 2010) also showed a similar trend. The study considered improvement of road quality and conditions, illumination, crossroads and pathways as well as building bicycle roads as the most important measures to improve the traffic safety situation. The results of the study showed that the most common violation among pedestrians was crossing a road at non-designated places. In the case of drivers the most common violation was crossing a red light.20.5% of pedestrians of the study had been involved in a traffic accident. Furthermore the study found that, the knowledge of drivers about traffic rules

was not sufficient, regardless of age and gender, but augmented with increased education level among all respondents and with age among women.

2.3 Reason for use or not using of helmets

The non-use of helmet was associated with the notion that use of helmet increases rather than decreases the risks of injury by reducing field of vision, creating discomfort, etc. (Dandona, 2005). Although these propositions are controversial, research has found that, although helmets can reduce a motorcyclist's lateral vision, motorcyclists adjust for this by increasing head rotation (NHTSA, 1997). Other reasons for not wearing helmet included the idea that, helmets were necessary for the riders of higher engine capacity motorcycles that travelled at high speed and not necessary for moped and scooter riders; inconvenience of carrying the helmet as it could be stolen if left on the vehicle, and the inconvenience of removing it now and then for taking calls on the hand-held mobile phones while riding (Dandona, 2005). Lack of comfort, negative social perception and inconvenience of helmets particularly in relation to storage of helmets when not riding (Grima *et al*., 1995; WHO, 2006) and being a good rider as an excuse of not wearing helmets (Dandona, 2005). The nature of weather has been reported as another factor associated with helmet usage. Studies done in Nigeria (Solagberu *et al*., 2006) revealed that helmet use was less likely during hot weather and more likely during winter respectively. Helmet use was also reported to be more frequent during day time rather than night hours and during weekdays rather than weekends (Dandona, 2005).

2.4 Road safety measures by motorcyclists

One's attitude towards another; object; or idea can be positive or negative or both. According to (Brehm *et al*., 2002), attitude can be seen to be an evaluative reaction to a concept such as road safety measures. They also noted that, attitudes towards a concept may be mixed and not necessarily be consistent within the individual.

Riding safely is held in high regard among dedicated motorcyclists. However, the enjoyment of taking risks and the enjoyment of speed, in particular, are higher for motorcyclists than for

car drivers. Although speed violations are a significant predictor of at-blame accidents, the biggest predictor of crash involvement among motorcyclists was not attributed to non-deliberate errors but rather than violations of the safety measures.

A study by (Crundall *et al*., 2008) on "*Car drivers' attitudes towards motorcyclists"* reported negative attitudes of car drivers towards motorcyclists on the road suggesting that, most of these drivers were the least experienced ones. They further reported that, men had greater empathy for motorcyclists but actually showed less empathy in their behaviour. Female drivers gave motorcyclists more room when overtaking or when entering at intersections and junctions. Greatest empathy comes from those who are motorcyclists themselves or know motorcyclists. Car drivers who are motorcyclists or have motorcycling relatives are less likely to collide with a motorcycle.

Most of the literatures above showed how motorcyclists rode their motorcycles, but the reasons behind their riding behaviour are not well articulated. This study has expressed the reasons behind their riding behaviour of the motorcyclists.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area

This study was conducted in one of the four major main roads in Dar es Salaam. Dar es Salaam is located at 6°48' south, 39°17' east. It is located at the eastern side of Tanzania and it is bordered by the Indian Ocean at its eastern side and surrounded by the Coastal region. Administratively, it is has five Municipalities, namely Kinondoni, Ilala, Ubungo, Kigamboni and Temeke. It is connected with the neighboring regions through four main roads, namely Morogoro, Nyerere, Kilwa and Bagamoyo.

With an increasing population and associated increases in vehicular traffic in Dar es Salaam, there is a demand for faster mode of transportation, a gap commercial motorcycles ("bodaboda") have conveniently filled. More than 50% of registered commercial motorcycles in Tanzania, are based in Dar es Salam. Having the largest share of commercial motorcycles also predisposes the city to more risk of accidents and fatalities related to commercial motorcycles. A report from the Ministry of Home Affairs suggests that more than 40% of the motorcycle accidents reported in Tanzania happen in Dar es Salaam (MHA, 2013). The large share of commercial motorcycles and associated incidences of accidents and injury in the city makes Dar es Salaam an interesting destination to explore scholarly interests related to commercial motorcycles in Tanzania.

3.2 Study Design

A cross-sectional study design was employed in this study.

3.3 Target population

The target population included all commercial motorcyclists in Dar es Salaam.

3.4 Inclusion criteria

The participants for the interviews were commercial motorcyclists who were present at the time of conducting the interview and those who complied with written consent and signed it before interview.

3.5 Exclusion criteria

Non commercial motorcyclists and all commercial motorcyclists who did not agree to sign a written consent before interview.

3.6 Sample size

An adapted prevalence of 23.1% of the accident based on the findings of Emmanuel Geoffrey Mwakapasa (2011), was used to calculate the sample size.

$$n = \frac{Z^2 P(1-P)}{d^2}$$

Where n=sample size

Z= Z statistics for a level of confidence e.g. 1.96 (95%)

P= expected proportion or prevalence = 23.1%

d= precision (in proportion of one e.g. if 5%, d = 0.05)

Using proportion of 23.1%, precision of 5% and confidence level of 95%,

Substituting, this gave:

$$n = \frac{(1.96)^2 (0.231) (1-0.231)}{(0.05)^2}$$

= 273 Commercial motorcyclists in Dar es Salaam region.

Adding 10% of this value to take care for possible incomplete and non-response gave

= 273 + 0.1 x 273 = 300.3

Therefore the calculated sample size was 300 commercial motorcyclists in Dar es Salaam region.

3.7 Sampling Procedure.

One out of four major roads in Dar es Salaam (Morogoro, Kilwa, Nyerere and Bagamoyo) were involved in this study. Morogoro Road was picked randomly from a sampling frame consisting of the four major roads in the city. All Motorcyclists found in a parking point were interviewed until the desired sample size was reached.

3.8 Selection and Training of Research Assistants

The validity of the content of the questionnaires were examined in collaboration with two research scientists interested in the area of injury prevention; the questionnaire was translated into the national language which is Swahili and back to English to ensure the same meaning was conveyed.

To increase quality of the data, two public health graduates were selected as research assistants. These two research assistants were trained by the researcher for two days. The training focused towards getting their consent to take part in this study, how to ask the questions, how to deal with contingent questions and maintenance of good rapport during the interview. The Data collection tools were first developed in English and translated into Kiswahili, a local language which is used by almost everybody in the city. The interview schedules were pre-tested using10 commercial motorcyclists from Bagamoyo road. There was a close supervision to the research assistants by the researcher on daily basis.

3.9 Data collection

The structured interviews were used to gather the data. Questions were developed in English and later translated into Swahili. Back translation was also done in order to check if the translated questions reflected the expected concepts in the English version of the instrument. The survey questionnaire contained questions regarding demographics, susceptibility and severity on roads injuries, motives behind reckless riding and the general understanding about traffic regulation. Each selected participant was briefed on the purpose of the study to gain his

consent. The study was conducted at a conducive hours (not at busy hour) and the structured interviews took 20 minutes given the mobility of these people when chasing passengers this is part of data collection procedure.

3.10 Quality Control

To achieve quality data collection and accuracy, two research assistants who had completed first degree from and among the public health students were involved in this research. Research assistants were familiarized on the rational for the exercise and the need to abstain from influencing respondent's answers. They were also trained to ensure uniformity. Supervision by the investigator was done effectively to enhance implementation of the methodology. Debriefing was done also after each day's work.

3.11 Data Processing and Analysis

The data collected from the field were analyzed using Statistical Package for the Social Sciences, version 20, (SPSS 20). This software was used for the data entry and data cleaning. Some of the analyses performed included, frequency and cross tabulation.

3.12 Dissemination of research findings

The report is disseminated to the school of public health and social science (SPHSS) as my dissertation as well as for publication and other academic purposes. Also results would be shared with traffic Police in Dar es salaam.

3.13 Ethical Consideration

The study was conducted only after IRB approval from MUHAS. The consent of study participants was sought to in the conduct of this study. Participants received oral and written information on the goal and objectives of the study. The study participants were informed that they were free to opt out at any point during the study without any repercussions. A consent form was prepared for study participant signature or thumbprint explaining that they

understood all of the above and voluntarily agreed to participate. All study participants signed confidentiality forms. No personal identifiers were used in the analysis.

3.14 Study limitations

Due to sensitivity of the issues of study to bodaboda drivers, some were not interested to participate or were not willing to share all the information during the interview. This was minimized by ensuring confidentiality where by participants were given the right to read, understand and sign the informed consent.

CHAPTER FOUR

4.0 RESULTS

This chapter presents the findings of this study in the following order; Socio-demographic characteristics of respondents, riding experience, knowledge of motorcyclist regarding traffic regulation, helmet use, and reasons that make motorcyclists break the traffic rules and regulations.

4.1 Social demographic characteristics of the study sample

A total of 279 commercial motorcyclists participated in the study. All were males whose age ranged from 17 to 46 years with a median of 27 years. A large number of the respondents (78.5%) were married and 88.2% had children. Most of them (79.9 %) had 1 to 3 children and a few (8.2%) had more than four and the rest had none.

Almost three quarters (73.5%) completed primary school, 16% were school dropouts and the rest were secondary school leavers.

Table 1: Socio - demographic information of the Respondents

Age group	**Frequency**	**Percent**
24 Years and Less	49	17.6
25-34	203	72.8
35 years and above	27	9.7
Marital Status		
Single	19	6.8
Married	219	78.5
Divorced	7	2.5
Cohabitate	34	12.2
Level of Education		
Primary school Dropouts	34	12.4
Completed primary School	205	73.5
Secondary school Dropouts	10	3.6
Completed secondary School	30	10.8

4.2 Knowledge of road use behaviour and traffic regulations

Although the study participants were involved in carrying passengers using motorcycles commonly known as ‘bodabodas’, none of them had any formal training on road use behaviour and traffic regulations. They disclosed that, they learned how to ride the motorcycles from garages (11.1%), friends (53.8%), and relatives or family member (35.1%).

An attempt was made to assess their knowledge on what they expected to know in order to comply with road use regulations as expected by traffic laws in the country.

Knowledge on road rules and traffic regulations was assessed using 15 multiple choice questions. Each correct answer was awarded a score of one point and any wrong response scored zero. Overall scores obtained ranged from 2 to 11. Those who scored less than 6 points were classified as having low level of knowledge while those who scored between 7 and 9 points had average knowledge. Study participants who scored 10 or more points were classified as having good knowledge.

Based on this knowledge scale, nearly a half of the respondents (49.5%) had average knowledge of road use behaviours and traffic regulations while a third (34.8%) had low knowledge. It was further revealed that only 15.7% of the respondents had good knowledge on what they were expected to know in order to do passengers transportation business using motorcycles, as summarized in figure 1.

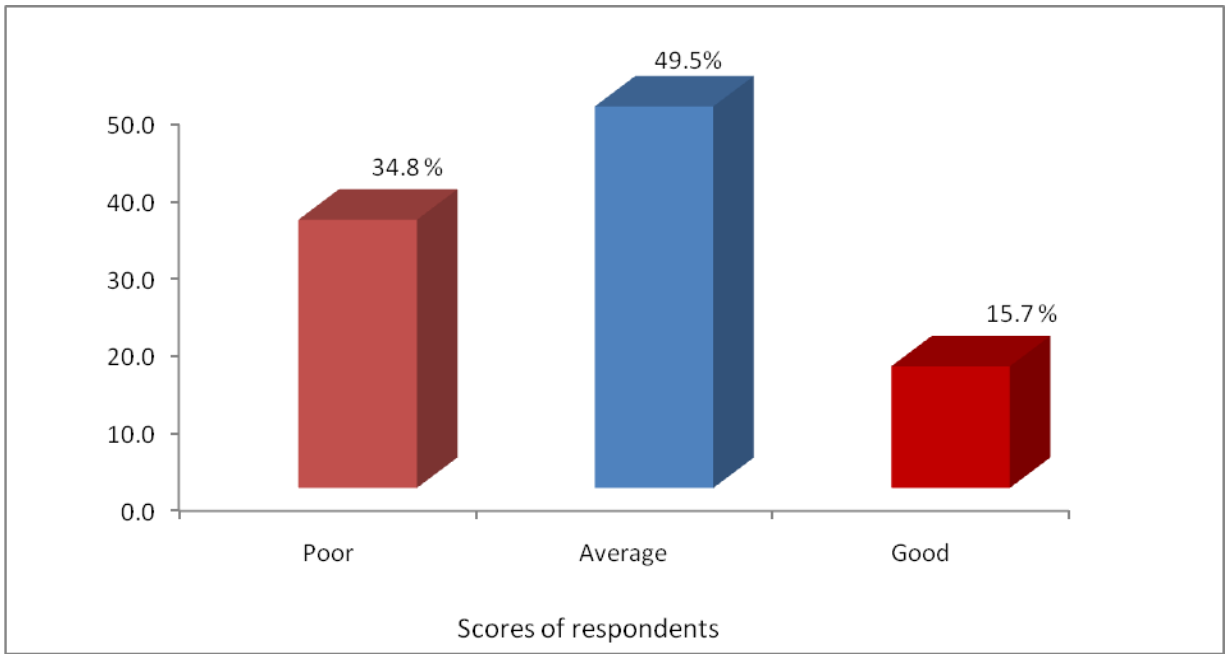


Figure 1: Distribution of knowledge scores on road use behaviours and traffic regulations.

Low knowledge scores decreased with increasing age varying from 42.8% among study participants who were less than 25 years of age to 29.6% among those who were over 30 years old. Good knowledge scores increased with increasing age varying from 2% among the youth (≤25 years old) to 22% among those who were over 30 years old as shown in table 2. These variations were statistically significant ($\chi 2 = 12.465$; $p = 0.01$).

Table 2: Variation of knowledge on road use behaviours and traffic regulations with age of the study participants

Categories		**Group scores**			
		Low (%)	Average (%)	Good (%)	Total
Group Age	24 Years and Less	21 (42.8)	27 (55.2)	1 (2.0)	49 (100)
	25 - 30	60 (34.1)	85 (48.3)	31 (17.6)	176 (100)
	Above 30 Years	16 (29.6)	26 (48.2)	12 (22.2)	54 (100)
Total		97 (34.7)	138 (49.5)	44 (15.7)	279 (100)

A higher percentage of those who completed primary school scored poorly (36%) compared to those who completed secondary school (33%) and those who were school dropouts (27%). These variations were however not statistically insignificant ($\chi^2 = 12.465 p = 0.082$).

Likewise motorcycle riding experience was not significantly associated with knowledge scores. About two out of five (38%) of study participants with riding experience of 3 to 5 years had low scores compared to 26% of those whose riding experience was 2 years or less. Nineteen percent of those with 6 years and above also had low knowledge scores but these variations were not significant ($\chi^2 = 7.032$ $p = 0.722$).

A higher percentage (19.4%) of those who learned how to ride motorcycles from family members had good knowledge compared to those who learned how to ride the motorcycles from garages (16%) or friends (13%). These variation were however, not statistically significant ($\chi^2 = 9.748$, p-value = 0.13).

Generally it appears the study participants just learned how to ride the motorcycles with little or no attention paid to rules and regulations for riding in the city. For example, when asked for the correct riding position on the road with normal traffic, (76.3%) did not know where they should be as part of road users during normal traffic flow. Similarly, 74% of the study participants did not know precautions they should take when entering into the main road(s). Furthermore, the majority (76%) did not know what they should do when approaching a road intersection.

4.3. Reasons for Reckless Riding on the Roads

An attempt was also made to find out why most Bodaboda riders in the city tended overtake vehicles on the left side and cross right in front of moving vehicles. Reasons given were as summarized in table 3 below.

Table 3: Reasons for overtaking on the left side of other traffic and crossing in front of moving vehicles (Multiple answers)

	Reasons	**%**
❖	Ignorance of traffic laws	99.6%
❖	Traffic jam	86.4%
❖	Afraid to drive in the middle of the road	66.3%
❖	Afraid to be squeezed in between	65.6%
❖	Motor vehicle drivers do not like Bodaboda riders to use the same roads	60.2%
❖	Other drivers disrespect them	52.0%
❖	Afraid to be knocked/crashed from the back	51.3%
❖	Due to narrow roads	42.7%
❖	Youths have no family responsibilities	33.7%
❖	Showing that they know to drive	19.4%

A large majority (99.6%) cited lack of knowledge of traffic laws and regulations as the major reasons for overtaking on the wrong side of other traffic and crossing in front of moving vehicles. Also most of them (86.4%), were of the opinion that, traffic jams in the city were among the major causes of this problem while almost two-thirds (65.6%) said this was done due to fear of being squeezed between vehicles. Two-thirds (66.3%) said many of them were afraid of riding in the middle of the roads.

When asked why many of them used to go through red lights, a significant number of the respondents (96.7%) were of the view that, this happened because traffic police were not taking any action when the riders made such traffic mistakes. Moreover, they mentioned fear of being harassed by traffic police or other law enforcement agents like Tambaza, Majembe, and Shirikishi if they stopped as one among reasons for such behaviour. The speed at which most of them drove was given as a reason for this by three quarters of the respondents. Furthermore, many of them stated that, the desire to get hold of quick and more money accelerated such behaviours. This has been summarized in table 4 below

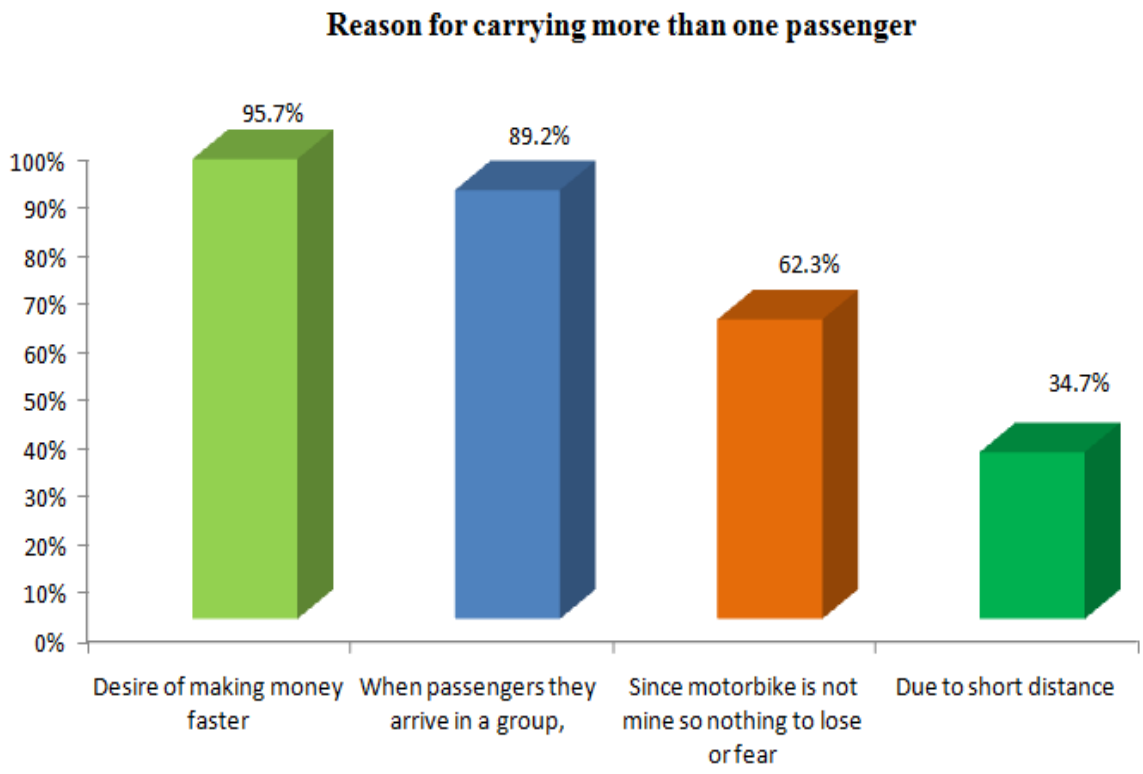
Table 4: Reason for riding through red light

	Reasons for riding through red light	**%**
❖	Because traffic police do nothing for such behaviours	96.7%
❖	Fear of been bothered by traffic police or other law enforcement agents if they stop	91.1%
❖	Motorcycle is easy to instantly reach high speed thus making it easy to escape through the red light.	75.8%
❖	To make money faster	69.5%
❖	Motorcycle drivers always have faults and missing documents.	45.4%

4.5. Motives for carrying more than one passenger

A large majority (95.7%) mentioned desire of making money faster as the main reason for carrying more than one passenger. Many respondents (89.4%) were of the opinion that, passengers who arrived in parking stations in pairs or more than two were a major cause of this behavior. Some (62.3%) said they did so because they did not own the motorcycles so they had nothing to lose by overloading the motorcycles. It was alleged by other respondents (34.7%) that, they usually carried two or more passengers when they had to take them to shorter destinations, as summarized in figure 2 in below.

Figure 2: Showing the reasons for carrying more than one passenger (More than one answer were given)



4.5 Barriers for helmet use by Commercial Motorcyclist and passenger

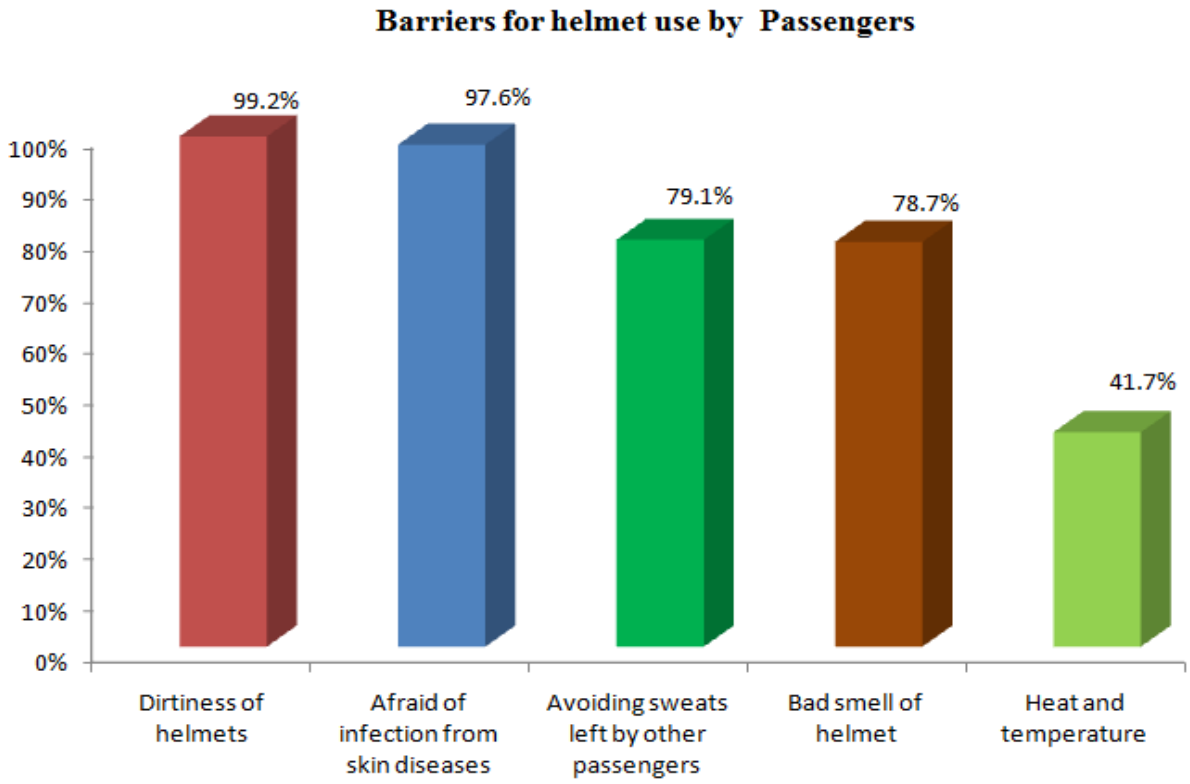
The reasons for not wearing helmets differed from the motorcycle riders to those of the motorcycle passengers. The study revealed that, the common reasons for not wearing helmets among riders were, pride to their colleagues (91.3%). They added that, when they put on helmets, their colleagues could not easily recognize them as they could not see their faces as they majestically rode on the roads. Other reasons included, the helmets seemed to be heavy meaning that, they added some load on their heads (70.2%); other riders claimed that, helmets weakened the visibility (32.1%). Some respondents even alleged that, helmets weakened the ability to hear (17.7%) and the other class asserted that they were not wearing helmets for avoiding Heat and high temperature which resulted into sweating (10.6%), as summarized in the table 5 below.

Table 5: Reasons for not wearing the helmet by Motorcyclist

S/No	Barriers for helmet use by Motorcyclist	%
❖	Pride to their colleagues	91.3%
❖	Feel heavy	70.2%
❖	Affects the visibility	32.1%
❖	Weakens the ability to hear	17.7%
❖	Heat and high temperatures	10.6%

When Motorcyclist were asked what reasons their passengers had for not wearing helmets, the majority of them (99.2%) claimed that, poor hygiene of the helmets was the major reason. About (97.6%) of the motorcyclists reported that, their passenger were afraid of getting skin diseases. Other reasons mentioned by the motorcycle drivers included, passengers fear of catching rushes, awful smells of helmets and Heat as well as temperature as shown in the figure 3 below

Figure 3: Barriers for helmet use by the Passengers (Multiple answers)



CHAPTER FIVE

5.1 DISCUSSION

5.1.1 Socio-demographic characteristics of commercial motorcyclists

All commercial motorcyclists in the study area were males. This male preponderance found in this study is consistent with findings in other countries including Ghana and Nigeria (Amoran *et al*., 2005; Adogu & Ilika, 2006; Alti-Muazu & Aliyu, 2008; Iribhogbe & Odai, 2009). This may be due to the fact that it is a commonly observed phenomenon and customary to see more male than female gender in commercial motorcycling in African cultural context. Furthermore, since motorcycling is a high risk venture, males tend to engage more in risky ventures than their females counterparts.

The commercial motorcyclists' age ranged between 17 to 46 years with a median age of 27 years. This shows that many commercial motorcyclists are young, in productive age groups. However a big number of them are lowly educated with primary education or less. A similar observation was done by Iribhogbe & Odai (2009) in Nigeria; who revealed that, most of commercial motorcyclists (52.8%) had primary education or no formal education. This good number of commercial motorcyclists with low level of education could be partly attributed by the fact that, those who are less educated found themselves with few chances of getting other jobs and thus opted to engage into commercial motorcycling business as a last resort following unemployment regardless of being a risky job (Iribhogbe & Odai, 2009).

5.1.2 Knowledge of road use behaviour and traffic regulations

The study revealed that, none of the study participants doing passengers business using motorcycles, had any formal training on road use behaviour and traffic regulations. This is likely to contribute to the occurrence of road accidents which can ultimately lead to injury or even death. The majority reported that, they learned how to ride motorcycles from friends (53.8%). Similarly, the study done in Taiwan by Chang& Yeh (2006) found that, almost all

motorcycle riders (engine capacity lower than 250cc) were taught how to ride by their friends with inappropriate riding education or training and many accumulated their experiences via trial-and-error process too. In such condition, the motorcyclists are likely to have the techniques of controlling the motorcycles but not knowing safety rules and regulations which governs their safe riding practices.

The result from the study showed that nearly a half of the respondents (49.5%) had average knowledge on road use behaviours and traffic regulations. A study conducted in Nigeria by Adogu and Ilika (2006) revealed that, two thirds of the respondents included in their study, had a very poor knowledge on road traffic codes and safety and that is similar to what was found in this study on knowledge on what to do when approaching major road or an intersection.

This study also found that low knowledge scores decreased with increasing age and good knowledge scores increased with increasing age, opposing the study done by Demberelsuren, (2010) who realized that, the knowledge of drivers about traffic rules was not sufficient, regardless of age and gender. This may be true because it is believed that, individuals who have enough life experience may have more information than those with little of it although other factors needs not to be ignored. As a result, there may be more knowledgeable people among those with big age than in a small age group.

Also this study found that a higher percentage of those who completed primary school scored poorly (36%) compared to those who completed secondary school and those who were school dropouts. These variations were however not statistically insignificant. Poor score among primary school leavers may be attributed by the fact that, they lacked exposure.

Likewise motorcycle riding experience was not significantly associated with knowledge scores. About two out of five (38%) of study participants with riding experience of 3 to 5 years had low scores compared to those whose riding experience was 2 years or less and those with 6 years and above also had low knowledge scores but these variations were not statistically significant. Though it is mentioned that experience is a good teacher, it also

depends on the kind of riding training one got (whether formal or informal), level of education, adaptability and age.

5.1.3. Reasons for Reckless Riding on the Roads

This study found that, nearly all of respondents (99.6%) cited lack of knowledge of traffic laws and regulations as the major reasons for such behaviour. These results are however, related to the finding of another study done by NHTSA's (2007) which showed that, the rate of increased frequency of motorcycle related injuries have been largely attributed to careless road use by motorcyclists, poor knowledge of and non-compliance with traffic codes and safety measures such as the use of well-fitting crash helmets.

The study revealed that a lot of them (96.7%) used to go through red lights, because, traffic police were not telling them anything when they saw such traffic mistakes, similar result was revealed by John (2014) that, 66% of the motorcycle riders do proceed in the red light under the belief that a traffic-control light was for a vehicle not for the motorcycle and no any measures were taken by traffic police when they saw such traffic mistake. This study revealed that speed at which most of them rode was one of the reasons for this behaviour. Comparably, the study done by Mwakapasa (2011) found that, speed at which motorcycles were rode was one of the causes of road accidents.

5.1.4. Motives for carrying more than one passenger

The result from this study revealed that, the majority of the motorcyclists (95.7%) carried more than one passenger because they wanted to make money faster. This observation matches with finding of other authors, (Mwakapasa, 2011; Crundall *et al.*, 2008; Brehm *et al.*, 2002). It was further revealed that, sense of ownership of the motor bike was another reason for motorcyclist to overload. Other researchers such as Crundall *et al*. (2008) also found the same results.

5.1.5 Barriers for helmet use by Commercial Motorcyclist and passenger

The study outcomes revealed that, the reasons for not wearing helmets differed from the motorcycle riders to those of the motorcycle passengers. The common reasons for not wearing helmets among riders found in this study were, pride to their colleagues. They did so because, when they put on helmets, their colleagues could not easily recognize them as they could not see their faces as they majestically rode on the roads. Other reasons included, the helmets seemed to be heavy meaning that, they added some load on their heads; other riders claimed that, helmets weakened the visibility. Similarly, the study done by Dandona (2005) realized that, the non-use of helmet was associated with the notion that use of helmet reduced visibility and created discomfort.

Some respondents in this study alleged that, helmets weakened the ability to hear and the other class asserted that, they were not wearing helmets for avoiding heat and high temperature which resulted into sweating. The mentioned reason that helmets were not comfortable corresponds to the findings of another study done in Iran whereby one of the reasons given for poor compliance to helmet wearing was that helmets were designed to be used in temperate countries and were uncomfortable to use in hot weathers (Zargar *et al*., 2006).

Also the reasons their passengers had for not wearing helmets were also revealed mainly being, the dirtiness of helmet and fear of getting skin diseases. Other reasons mentioned by the motorcycle drivers included, passengers fear of catching rushes, awful smells of helmets and Heat as well as temperature. These observation corresponds with finding of other authors (Crundall *et al.,* 2008; Brehm *et al.,* 2002; WHO, 2006).

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

- Most of motorcyclist learned how to drive the motorcycles from their friends with little or no attention paid to rules and regulations for riding in the city.
- The major reason for riding through red traffic lights was because traffic police do not take any action for such traffic violations.
- Reasons for not wearing helmets when on the road included: showoff to other riders, add weight to their heads, helmet affects the visibility and helmet weakens the ability to hear.
- Most Motorcycle passenger do not wear helmet due to dirtiness of helmets, afraid of getting skin diseases, fear of catching rushes, awful smells of helmets and feeling hot and sweating.

6.2. RECOMMENDATION

1. There should be regular educational campaigns to all motorcyclists on traffic regulation and road use so as to increasing awareness on road use behaviour and traffic regulation
2. Traffic police should enforce road use behaviours, regulations of motorcycle riders and their passengers.
3. Motorcyclist should be educated on the import of wearing the helmet and severe punishment should be given to those who drive without helmet.

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APPENDIX

Consent Form (English)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES - DIRECTORATE OF RESEARCH & PUBLICATIONS

ID-NO: ...../......../.......

A. <u>Consent to participate in this study</u>

Greetings!! My name is …..... from Muhimbili University of Health and Allied Sciences, Dar es Salaam. At the moment, I am carrying out a study on factors underlying reckless riding among motorcyclists in urban areas Tanzania.

B. Purpose of the study

This study aims to collect information on factors underlying reckless riding among motorcyclists in urban areas, Tanzania. You are being asked to participate in this study as one of the person who can be affected by reckless riding and would be grateful if you are willing to participate by answering questions from this study.

C. What Participation Involves

If you agree to participate in this study the following will occur:

1. You will sit with a trained interviewer and will be required to answer questions that have been prepared for the study through interview in order to obtain the intended information to health planners to guide decisions for interventions, coordination and integration of prevention and control strategies to reduce road injuries. The interviewer will be recording your responses in the questionnaire.
2. No identifying information such as name will be collected from you during this interview.
3. You will be interviewed only once for approximately 10 minutes in a private setting.

D. Confidentiality

I assure you that all the information collected from you will be kept confidential. Only people working in this research study will have access to the information. We will ensure that any information included in our report does not identify you as a respondent as we will not put your name or other identifying information on the records of the information you provide.

E. Risks

You will be asked questions about your personal particulars and understanding regarding traffic regulation. Some questions could potentially make you feel uncomfortable. You may refuse to answer any particular question and may stop the interview at anytime.

F. Rights to Withdraw and Alternatives

Your participation in this study is completely voluntary. If you choose not to participate in the study or if you decide to stop participating in the study you will not get any harm. You can stop participating in this study at any time, even if you have already given your consent. Refusal to participate or withdrawal from the study will not involve loss of any benefits to which you are otherwise entitled.

G. Benefits

The information you provide us is extremely important and valuable. It will help to increase our understanding on factors underlying reckless riding among motorcyclists in urban areas Tanzania. Also the information will help to design preventive interventions and strategies.

There is no direct benefit however; individual benefit will be obtained through intervention programmes which can be conducted in this particular area.

H. In case of injury

We are not anticipated that any harm will occur as a result of your participation in this study

I. Compensation

There will be no compensation of time spent during the interview or discussion; however your participation is highly appreciated**.**

J. Who to contact

If you have questions about this study, please don't hesitate to contact: AIDAN RWEGOSHOLA FELIX, The Principal Investigator, Muhimbili University of Health and Allied Sciences (MUHAS), P.O. Box 65001, Dar es Salaam (Tel. no. 0755 322454).

PROF. MELKIZEDECK LESHABARI, The supervisor of this study. Muhimbili University of Health and Allied Sciences (MUHAS), P.O. Box 65001, Dar es Salaam (Tel no. 0754 287 062).

PROF.**S. Aboud**, Chairman of Senate Research and Publications P. O. Box 65001, Dar es Salaam Tel: 2150302-6.

Signature ----------

Do you agree to participate and answer questions in this study?

Participant Agrees [__]

Participant Disagree [__]

I _____ have read/understood the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of Participant	Signature of witness (if participant cannot read)
_____	_____
Signature of research assistant	Date of signed consent
_____	_____

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI

KITENGO CHA UTAFITI NA MACHAPISHO

Nambari ya utambulisho: ...../......../.......

Fomu ya ridhaa

Salamu/ Jina langu ni ….....kutoka Chuo Kikuu Cha Afya na Sayansi Shirikishi Muhimbili, Dar es Salaam. Sisi tunafanya utafiti juu ya sababu zinazosababisha tabia za uendeshaji unaosababisha ajari kwa baadhi ya madereva wa pikipiki za kibiashara mjini. Kama utakubali kujiunga katika utafiti huu utatakiwa kujibu maswali yaliyoandikwa katika dodoso kama utakavyoulizwa na mtafiti. Majibu yote yatakusanywa kutoka katika eneo la utafiti na yataingizwa kwenye compyuta kwa kutumia namba ya utambulisho tu. Hakuna jina la mshiriki yeyote litakalochapishwa. Hatutegemei kwamba kutakuwa na madhara yoyote kwa wewe kujiunga na utafiti huu isipokuwa kutumia muda wako tu katika majadiliano.

Kushiriki katika utafiti huu ni uchaguzi wako. Unauhuru wa kukubali au kukataa kushiriki katika utafiti huu. Pia unaweza kuacha kushiriki katika utafiti huu muda wowote utakapojisikia hivyo hata kama umeshakubali kushiriki. Kukataa kushiriki au kuacha kushiriki katika utafiti huu hakutakufanya upate adhabu au ukose kufaidika na yale unayostahili kupata.

Ukikubali kushiriki katika utafiti huu hakuna faida ya mojakwamoja utakayopata lakini tunaamini maelezo utakayoyatoa yatasaidia kupendekeza njia zinazofaa kutatua matatizo ya ajali kwa waendesha pikipiki.

Hatutegemei kwamba utapata madhara yoyote ya kimwili kwa kushiriki katika utafiti huu. Hata hivyo, ikiwa kutakuwa na madhara yoyote yatakayotokana na kushiriki katika utafiti huu,

tutakupa huduma ya matibabu kulingana na viwango vyahuduma za afya vya Tanzania. Hakutakuwa na fidia yanyongeza kwako.

Kama utakuwa na swali lolote kuhusu utafiti huu unaweza kuwasiliana na mkuu wa utafiti huu ndugu **Aidan rwegoshola Felix** kwenye Shule ya Afya ya jamiii, Chuo Kikuu cha Afya ya Tiba ya Sayansi Muhimbili, S.L.P. 65004, Dar es Salaam. Na ukiwana swali lolote kuhusu haki zako kama mshiriki, wasiliana nae kwa namba 0755 322454 au Msimamizi wa utafiti huu **Profesa M. Leshabari,** S.L.P. BOX 65001, Dar es Salaam. Simu: 2150302-6 67 (0754 287 062), **PROF. S. Aboud,** Mwenyekiti wa SRPC, Box 65001, Dar es Salaam Simu: 2150302-6.

Sahihi

Je umekubali?

Mshiriki amekubali……..…Mshiriki Hajakubali…….

Mimi, ...nimesoma maelezo ya fomu hii. Maswali yanguya mejibiwa.Nimekubali kushiriki katika utafiti huu.

Sahihi ya mshiriki_____

Sahihi ya shahidi (kama mshiriki hawezi kusoma) _____

Sahihi ya mtafiti _____

Tarehe ya ukubali wa kushiriki_____

ASANTE KWA KUSHIRIKI KATIKA UTAFITI HUU

APPENDIX 3: Questionnaire (English version)

MOTORCYCLIST QUESTIONNAIRE

Participant's ID .....

Commercial Motorcycle parking point ID_____

SECTION A: DEMOGRAPHIC DATA

No.	Question	Coding category	Code
1.	Sex (Do not ask this Question tick the correct sex by looking the respondent)	Male Female	1 2
2.	How old are you? in years?		
3.	What is your marital Status	Single	1
		Married	2
		Widowed	3
		Divorced	4
		Separated	5
		Cohabitate	6
4.	Do you have children (s)?	Yes No	1 2
5.	If yes, how many Children (s)	1-3	1

	do you have?	4-6 More than 6	2 3
6.	Do you have any other dependants?	Yes No	1 2
7.	How many dependant (s) do you have	None 1-3 4-6 More than 6	1 2 3 4
8.	What is your level of education	Never gone to school	01
		Incomplete primary school	02
		Completed primary School	03
		Incomplete secondary school	04
		Completed secondary School	05
		Incomplete post-secondary education	06
		Incomplete vocational Education	07
		Completed vocational Education	08
		Others (specify)……..	99

Section B: Let us now talk about your riding experience

9.	Do you have a riding license		1. Yes 2. No
10.	Do you have a commercial motorcycle riding license		1 Yes 2. No
11.	Where did you learn how to ride		
12.	Where do you live		
13.	How long you have been riding Motorcycle	Below 1 Year 1-2 3-4 5-6 7-8 Above 8 Years	1 2 3 4 5 6
14.	How many hours per day do you ride the bike In Hours	1-5 6-11 12-16 Above 16	1 2 3 4

Section C: Knowledge of motorcyclist regarding traffic regulations

It is believed by majority of the young men that riding motorcycle is simple and everybody can ride.

Let us now talk about what you know about what drivers of this type should know.

1. When merging onto the freeway from the entrance, you should: -

    a) Drive straight on as you have the right of way
    b) Sound your horn, turn on your indicator lights and move onto the freeway.
    c) Stop and check the traffic behind you on the entrance.
    d) Look for a large enough break in the traffic and adjust your speed so as to fit into the traffic flow.

2. If you are riding through a road work zone in the left hand lane and you see this sign you should:

    a) Merge to the right and give way to other traffic.
    b) Speed up to get in front of any cars traveling in the right hand lane.
    c) Stop and wait for directions.

3. Which of the road signs below means: no entry for all vehicles?

a)

b)

c)

d)

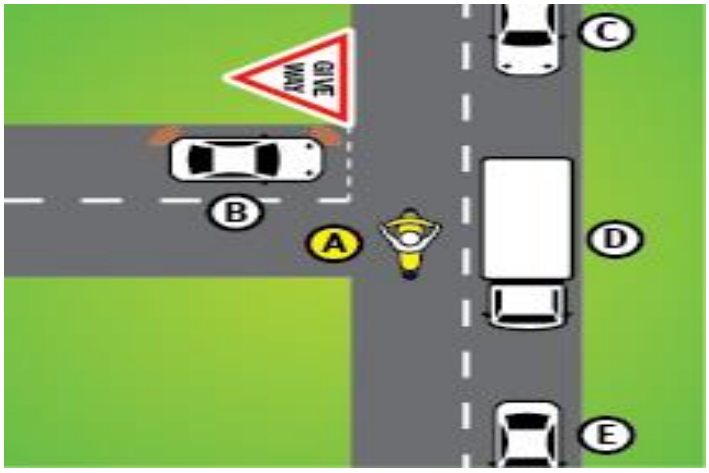
4. What is the meaning of this road sign?

a) End of advisory speed
b) Advisory speed
c) Maximum speed limit
d) End of maximum speed limit

5. After overtaking a truck you can only return to the drive lane only when you are sure you can see

a). The entire front of the truck in the side mirror
b). The entire front of the truck in the rear view mirror
c). The entire side of the truck in the side mirror
d). The entire side of the truck in the rear view mirror

6. You are riding vehicle A. Which road position provides the best buffer to other vehicles?

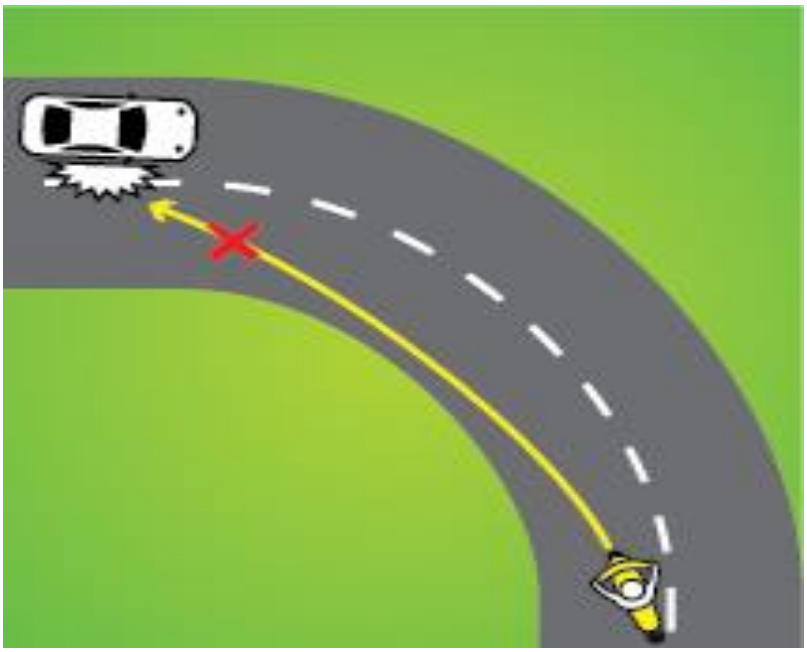


a). Left side of the lane

b). Centre of the lane

c). Right side of the lane

7. What is the meaning of the diagram?

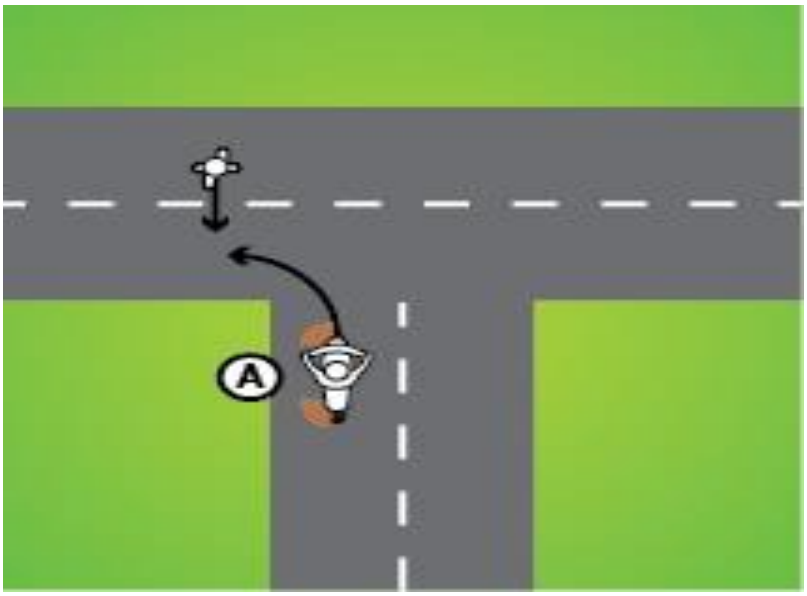


a). Exiting wide from a curve or bend can result in a crash

b). You should start braking where the cross is

c). Beware because there is a puddle of water next to the car

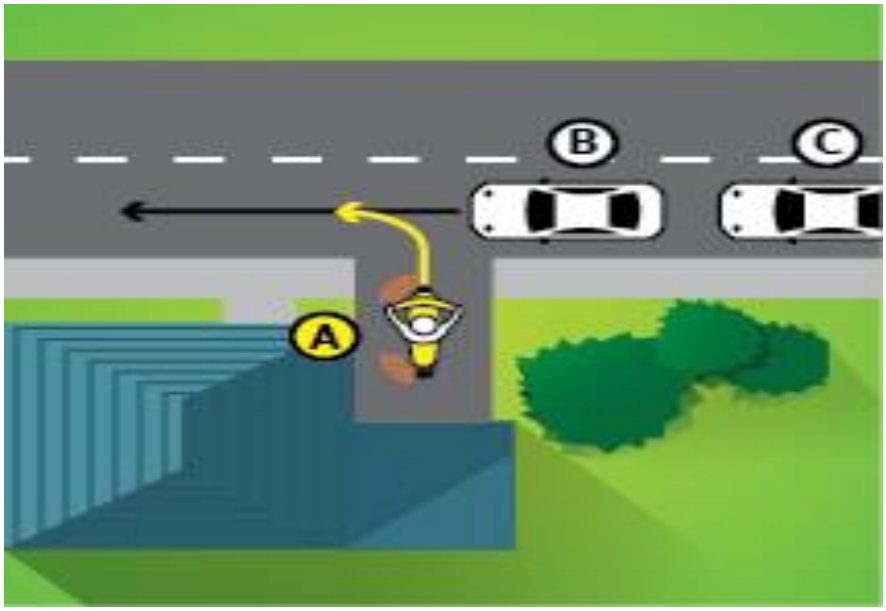
8. In the diagram, who must give way?



a) Vehicle A

b) The pedestrian

9. You are riding vehicle A form private property. You must give way to -

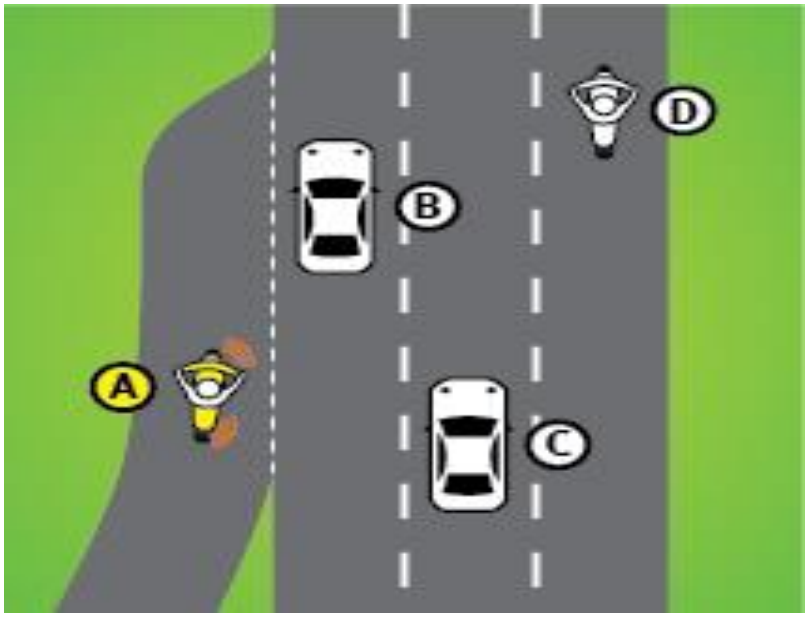


a). Vehicle B only

b). No one, the other vehicles must give way to you

c). Both vehicle B and C

10. You are riding vehicle A. What must you do when merging onto a freeway?



a) Ride onto the hard shoulder until a gap appears

b) Give way to the vehicle in the lane you are moving into

c) Stop at the end of the on-ramp

11. **You hear the siren of an ambulance approaching you from behind. you SHOULD?**

a). Speed up as not to impede the ambulance.

b). Slow down to the speed of other traffic

c). Continue at the same speed.

d). Move into the left lane

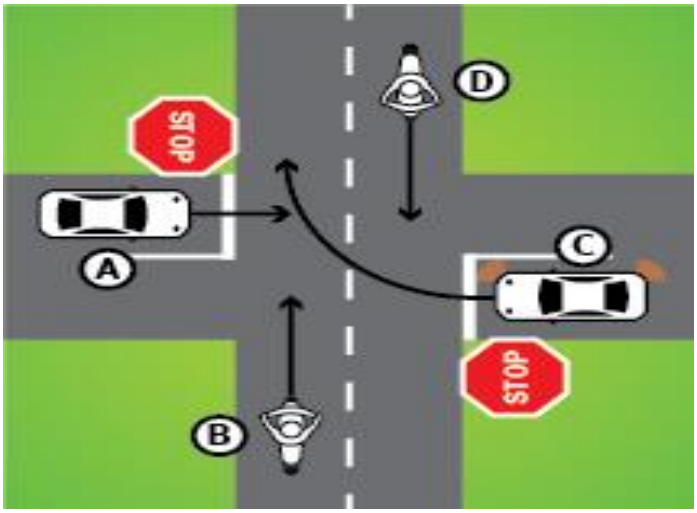
12. What should you do when you see a 'roundabout ahead' sign?

a). Speed up to get through the roundabout

b). Turn around as you are going the wrong way

c). Check your mirrors, slow down and be prepared to stop

13. In the diagram, which vehicle would go last?



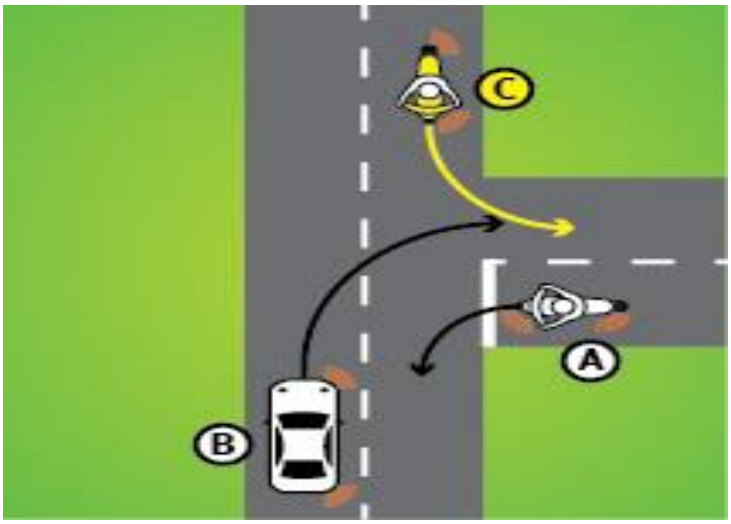
a). Vehicle C

b). Vehicle B

c). Vehicle A

d). Vehicle D

14. You are riding vehicle C. You must give way to -



a). vehicle B only

b). vehicle A only

c). neither vehicle A or B

15. What do this traffic sign mean?

a) Slippery road ahead

b) Tires liable to punctures ahead

c) Danger ahead

d) Service area ahead

Section D. Now let use talk about the reasons that make most of you to break the traffic rule and regulation. Choose what is appropriate to you. ***Put a mark if the appropriate answer is selected.***

1. What are the reasons that make most of Bodaboda ride to overtake on left side of other traffic and crossing in front of Moving vehicles

1. Due to ignorance of traffic laws
2. Afraid to be squeezed in between
3. Other drivers disrespect them
4. Ignorance on the proper side to drive
5. Other driver feels like the Bodaboda ride have no right to use the road
6. Traffic jam
7. Afraid backward Collision
8. Afraid to drive at the middle of road
9. Due to road slim/ narrow
10. Youth has no family responsibilities
11. Showing that knows to dive
12. Any other reason(s).....

2. Why most of Bodaboda rider do go through red light or ignore traffic police when controlling traffic in lights area

1. Quick to get the money of the lord
2. cowardice and fear of being arrested by Soldiers (Nick named Tigo)
3. Because traffic police do not arrest bodaboda driver
4. Motorcycle is easy to reach high speed

3. Why do most of bodaboda take two or more passengers?

1. Greed of money
2. when passengers they arrive in pair, difficult to separate them
3. Due to short distance
4. Since motorcycle is not mine so nothing to lose or fear

4. Why bodaboda do not wearing helmets

1. Show-off /boast
2. weak sight
3. Seems lout
4. Heat
5. weak hearing

5. Why most of bodaboda passenger do not wear helmet

1. Dirtiness/ Debris of helmet
2. Stink of helmet
3. Heat
4. Afraid of transmitting diseases
5. Catching rushers

6. What Sex do you prefer as passenger and why

A. Women

1. There are afraid so tries to control every move you make
2. They site properly in the bike without creating a gap between a drive and a passenger
3. They grab you and feel comfortable
4. They have nice voice
5. They console you
6. When they get seated behind you, create comfortability/ comfort

B. Men

1. They give freedom to drive you like
2. They are fearless
3. They have no further directive and remain silent

7. Why some of bodaboda drivers do drink alcohol and drive?

1. They do so to get energy to perform work
2. Influenced by others
3. Many bodaboda parking area is where alcohol is sold
4. Poor knowledge on the effect of riding while drunk
5. Poor knowledge on safe riding
6. They I have no family, dependencies hence no fear

End of questionnaire

Thank