

FACTORS INFLUENCING SAFETY OF MOTORCYCLE RIDERS IN KENYA

A CASE OF RUNYENJES MUNICIPALITY

BY

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DECLARATION

This research project report is my original work and has not been presented for the award of any degree in any other university.

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DEDICATION

I wish to dedicate my research report to my daughter Lena, her husband George, and their children: Attut, Murithi and Makena who supported me morally and psychologically while carrying out this research.

May the Almighty God bless them abundantly.

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ABBREVIATIONS AND ACRONYMS

AMA: America Motorcycle Association

APTA: American Public Transportation Association.

BIO: Information Regarding an individual.

CSI: Cambridge Systematic Inc.

C.B.D: Central Business District.

C.D.F: Community Development Fund.

DRCs: District Roads Committees

FTA: Federal Transit Administration

GOK: Government of Kenya

IAM: Institute of Advanced Motorists

ITDP: Institute for Transportation Development Policy.

LOC: Locus of Control

MAK: Mechanical Association of Kenya

MMIC: Motorcycle and Moped Industry Council

MSF: Motorcycle Safety Foundation

MSF: Motorcycle Safety Foundation

NHTSA: National Highway Traffic Administration

NMT: Non- Motorized Transport

POTHLES: A hole or pit, especially one on a road surface.

ROSPA: Royal Society for the Prevention of Accidents

SPSS: Statistical Package for Social Sciences

TRAFFIC: Motorcycles ridden on a public highway

WHO: World Health Organization.

ABSTRACT

Motorcycles have become an indispensable part of many peoples' means of transport in the world. In the past, motorcycles played a major role in the traffic in developing world. Motorcycles in African countries especially those playing the trade popularly known as 'boda boda' in Kenya, have become an important feature in the transport sector, whereby most people, young and old are involved in motorcycle riding as a means of transport and business as well. Therefore this study had aimed at exploring the factors influencing the safety of the motorcycle riders in Runyenjes municipality. The objectives of the study were: To assess how motorcycle riding training skills influence safety of the riders in Runyenjes municipality, to determine how motorcycle riding experiences influenced safety of the riders in Runyenjes municipality, to establish the extent to which implementation of traffic laws influence safety of the riders in Runyenjes municipality, and to establish how nature of roads influence safety of the riders in Runyenjes municipality. The findings of this study are of significance to motorcycle manufacturing firms in relation to protective gear, traffic police to enforce traffic laws, and safeguarding the safety of the riders among others. The study had employed a survey design in data collection process from motorcycles riders, traffic police officers, and medical personnel in Runyenjes municipality and was analyzed by use of frequency counts and percentages. The researcher used scientific package for social sciences (SPSS) tools: statistical analysis, thematic analysis, text analysis in accordance to the demands of this study.

This study had revealed that the safety of motorcycle riders was influenced by factors such as riding training skills, riding experiences, implementation of traffic laws, and the nature of roads. The findings had also revealed that there were numerous and frequent road accidents due to poor training skills and lack of riding experience of motorcycle riders. Further to that the study had revealed that un-implementation of laws by traffic police officers was highly resisted by riders who from time to time complained of harassment by police officers. The nature of roads had also contributed to unsafe conditions of the riders because access roads were not regularly maintained due to complexity of funds disbursement from the central government to the local authorities. Those findings had warranted the researcher to make the following recommendations:-

1. That the government should come up with programmes to have motorcycle riders trained at a minimal cost.

2. That the motorcycle transport customers should be sensitized on the care of the safety and to be provided with protective gears whenever riding a motorcycle.
3. That, a rule should be introduced through an act of parliament for all boda boda motorcycles to be installed with speed governors.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Motorcycles have become an indispensable part of many people's means of transport in Kenya. Recent years have seen the re-entry of many famous high quality motorcycle models (Attoe 2008). In the past, motorcycles played a major role in the traffic in developing world. The great growth rate of motorcycles has modified quickly the whole picture. Now, this kind of vehicle becomes more and more popular by its advantages. The safety of riders is considerably influenced by this motorization. The quantity of fatalities by traffic accidents now is 10 times of that in 5 years ago (Calthorpe 2003). It showed various modes of vehicles on road, the proportion of accidents caused by motorcycles seem extremely high for it reached from 72 % up to 80% of the total number. Among all four basic factors that can lead to traffic accidents are: road users, road system, vehicle and environment, of which the most important are road users and the riders.

Motorcycles pose interesting challenges in developing countries that are not faced by the rest of world (Cervero and World Bank 2008). In the last fifteen years the numbers of motorcycles per capita in many developing nations has doubled (Hiroka 2008). The vehicles are attractive as incomes of families in the region, providing an affordable mobility option that is not otherwise available. They provide door-to-door capability, unmatched navigability in congested road conditions, ease of parking, capacity for passengers and luggage at low cost. Elsewhere, with the recent escalation of petroleum prices, interest and use of motorcycles is growing world wide. Compared with automobiles, motorcycles offer superior maneuverability, braking and acceleration that generally give their riders confidence to ride at higher speeds (Foale 2006). Motorcycles tend to operate at average speeds of 10 k.p.h. faster than autos using the same streets and road ways (Hsu. E t... al 2003).

Approximately one-quarter of urban trips in Developing Asia are made with non-motorized modes (Iwata 1999). However, the fraction of non-motorized trips is generally decreasing where street space is scarce and competition from proliferating motorized modes makes non-motorized travel less safe. Non motorized trips are especially vulnerable to displacement from mixed traffic streets. Public policies in some cities have shifted in the last few decades

to discourage some or all non-motorized modes. Increased motorization, in all nations, has tended to reduce the utility and availability of street network space for non-motorized transport. As a result, walking and riding everywhere is much more dangerous (Benfield et al 2009).

Motorcycles, especially those involved with the trade popularly known as 'boda boda', have become an important feature in Kenya's transport sector. The numerous Chinese makes, which are relatively affordable compared to formerly established brands from Japan, can be found in many parts of the country. It is obvious that the government's waiver of duty on motor bike imports has stimulated the sector's growth. They are involved in various transport sectors, but public transport is the most common, (Cervero (2000)). Having traversed much of Kenya over the last one year, the researcher has seen the transformative nature of the motorcycle transport. Just like the mobile phone telecommunications and this sub-sector has positively impacted on the economic engagements of many Kenyans. It has opened the country, eased transportation of people and goods in both urban and rural areas, provided transport where there was none, created employment and so on. On the flipside, it has also brought enormous problems to the riders' safety.

1.2 Statement of the problem

The resplendent problem of urban growth has in recent years created gridlock jams on Kenyan roads. That has necessitated quick solution of using motorcycles as an alternative mode of transport and a means of quick mobility. Irrespective of whether the impacts are positive or negative, many of the motorcycles riders for boda-boda business in Kenya are from the majority poor population. According to Ongiri Isaac, (Daily Nation 2013) motorcycle riders operate like urban militia in Kampala with political power to cause chaos and even refuse to pay taxes. That has now forced the government of Uganda to push for a policy to make her roads safe. Likewise, it is apparent that most of the urban roads in Kenya are highly congested and therefore needs proper planning. According to Jerry (2002), the opportunities to plan cities with more balanced transport are greatest where cities and urban populations are still developing. That has come about due to increased number of motorcycles because, for as little as Kenya shillings 45,000 a Nairobi can purchase a brand new motorcycle – a far cry from just a few years ago when motorcycles belonged to the rich only (Barasa Daily Nation 2013). According to economic survey (2009) in Nairobi the number of registered motorcycles increased from 4,136 in 2004 to 16,293 in 2007 – a 400 percent rise in just three years.

With the hope of quick monetary gains on a daily basis, urban poor have embraced this mode of transport as a household solution to their livelihoods. They had therefore readily gone into the business without due training in terms of business management and on driving and traffic laws. That had then resulted to a high rate of accidents. Those accidents had deleterious effects on the riders, passengers and other road users. In addition, most of the riders were poor and had no accident cover insurances or health insurance cover. Those resulted to the depletion of the minimal resources the households had as they sold some of their property to get medical services. In some cases the riders were unable to repay the loans secured to purchase the motorcycles thus losing their only source incomes. Most of the riders had saving schemes that were not elaborated thus losing the opportunity to use the economies of scale to better their livelihood, (Ewing 2002). Such problems had been experienced in several African countries such as Nigeria, Togo, Benin, Burkina Faso and Liberia long before they hit Kenya, (Wangai M.Nation 2013).

Previous researchers had identified various problems related to the revolution of motorcycles in various parts of the world- ranging from health related problems, increased in crime rate as they were used to ferry gangs, motorcycles floating traffic regulations, overloading by carrying more than one passenger, and increased road accidents as noted in Indian poor families where traffic deaths and injuries had devastating financial and social consequences which had affected safety of both riders and road users, (McCana and Reid 2003). To the researcher's knowledge a few studies had been conducted in Kenya and none at all in Runyenjes municipality to evaluate factors influencing the motor cycle safety of the riders. This study therefore was seeking to fill that research gap by conducting a study on the factors influencing motorcycle safety of the riders in Runyenjes municipality and her sub-urban areas.

1.3 Purpose of the Study

The sole purpose of this study was to investigate factors influencing the safety of motorcycle riders in Runyenjes municipality.

1.4 Research Objectives

The objectives and the research questions below were used by the researcher to investigate how and extent to which the variables influenced the safety of the motorcycle riders in Runyenjes municipality:

1. To assess how motorcycle riding training skills influence safety of the riders in Runyenjes municipality.
2. To determine how motorcycle riding experiences influence safety of the riders in Runyenjes municipality.
3. To establish the extent to which implementation of traffic laws influence safety of the riders in Runyenjes municipality.
4. To establish how nature of roads influence safety of the riders in Runyenjes municipality.

1.5 Research Questions

1. How does a motorcycle training riding skills influence safety of the riders in Runyenjes municipality?
2. How does a motorcycle riding experiences influence safety of the riders in Runyenjes municipality?
3. To what extent does implementation of traffic laws influence safety of the riders in Runyenjes municipality?
4. How does nature of roads influence safety of the riders in Runyenjes municipality?

1.6 Significance of the study

The findings of this study is of great importance to motorcycle manufacturing firms in addressing the issue of safety in relation to protective gear and sensitization of the riders on the use of the gear. It is also of great importance to the traffic police department in the country to determine various problems of motorcycle revolution associated with flouting of traffic Laws and that will help the traffic department in coming up with regulations and policies to reduce motorcycle accidents and ensure adherence to traffic rules to safeguard safety of the riders.

The findings helps various government agencies in coming up with strategies that reduces level of road accidents associated with motorcycle riders in Kenya as these accidents negatively affect the economy. This study is of significance to driving schools in relation to the training of motorcyclists. The findings helps micro financing institutions set in training programs to enhance the economic liberation of hundreds of thousands of motorcycle traders across the country as a social enterprise transformation. The study is of great importance to motorcycle manufacturing firms in addressing the issue of safety in relation to protective gear and sensitization of users on the use of the gear. This study is of significance to motorcycle

owners on the need to upscale their SACCOs so as to have financial mobility of plausible investment into shuttle transport systems. More significant are the lessons learnt by the ministry of public health and the community at large from the findings of the research in relation to the safety of motorcycle riders.

1.7 Delimitation of the study.

The study was delimited to Runyenjes municipality in Embu County. The area does not operate for 24 hours daily but rather it operates within restricted time. The area is a mixture of urban and rural populations. To the east, Runyenjes municipality boundaries with Tharaka Nithi of larger Meru District. To the north, it is on the slopes of Mount Kenya, and to the East, boundaries with Embu East District, while to the extreme south, it boundaries with the old Mbeere district. The land is fertile with reliable rainfall and diversified cash and food crops.

1.8 Limitations of the study

The limitations of the study include time whereby the researcher had limited time to collect data. He had used research assistants, and some respondents were not willing to participate for unknown fears. The researcher pledged an oath of confidentiality to the information they would disclose. Other challenges like bad weather emerged especially when collecting data from the riders.

1.9 Assumptions of the study

The researcher was guided by the following assumptions;

- i) All the sampled respondents would be able to be reached with ease.
- ii) The respondents included in the study would give honest and accurate responses.
- iii) All the respondents would understand the topic of study and respond accordingly.

1.10 Definition of significant terms

Key terms used in the study are defined as follows:

Boda boda: A single-track, two-wheeled motorcycle. Motorcycles vary considerably depending on the task for which they are designed, such as long distances.

Differences in poverty index level per family: The position of a family poverty level rated by use of 0-9 digits whereby families rated from 0-4 are considered to be very poor, 5-6 above poverty level and 7-9 self sustained.

Policies: Government laid down regulations and laws to guide motorcycles riders' in their operations.

Motorcycle transport: It is a means of travelling by use of motorcycle

Motorcyclists: People who ride motorcycles, including off-road.

Traffic safety: This is an indication of how safe individual users are on some particular roads or on the roads belonging to some regions. The main danger to road users is the likelihood of a traffic collision.

Motor cycle traffic-The motor cycles that are travelling in an area at a particular time

Motorcycle Accidents: motorcycle accidents often result in severe injuries to the operator and any passenger. Because insurance companies often blame the operator for some type of fault, it is important to know your legal rights.

Road traffic safety: an indication of how safe individual users are on some particular road, or on the roads belonging to some region. The main danger to road users is the likelihood of a traffic collision.

Per million vehicle kilometers: this is the number of kilometers occupied by one million Vehicles.

Safety : Riders wellbeing state influenced by motor cycle training skills, motorcycles riding experience, implementation of traffic laws, and the nature of roads.

Rider: A Person who rides or who can ride a motorcycle.

Motorcycles riding training skills: Motorcycles riding knowledge acquired through instructions given by a certified instructor.

Motorcycles riding experiences – Motorcycles riding expertise attained through continuous practicing.

Implementation of traffic laws: enforcement of the traffic laws regulation to the offenders.

The nature of roads – The classified roads in categories: A – International roads terminating at international boundaries; B- National trunk roads linking nationally important centers; class C roads- primary roads linking provincially important centers to each other or two to higher roads.

Maintenance: The laid down routine of repairing the classified roads.

Safety of the motorcycles riders: – The degree of healthy wellbeing of practicing motorcycles riders.

Motorcycles riders: Persons competently capable of riding motorcycles.

Intervening variables: These are elements capable of influencing the process of input variables leading to their variability (independent variables).

Moderating variables: These are processes through which independent variables undergo so as to realize a positive impact on the dependent variables, and in this case, the moderating variables are the Government policies.

1.11 Organization of the study

In chapter one the researcher had looked at the background of the study and had given a general understanding of the intended research. The chapter had further explored the statement of the problem showing the research gap existing, purpose of the study, factors influencing the safety of motorcycle riders in Runyenjes Municipality, the objectives of the study, research questions, definitions of the significant terms such as Boda-boda, motorcycle riders, motorcycles transport, and motorcycle safety of the riders. In chapter two the researcher had reviewed other scholars' literature in line with factors influencing motorcycle safety of the riders in the developing countries, while chapter three presents research design, target population, sampling procedure data collection methods, validity, and reliability. In chapter four, the researcher had explored the way the results of the survey were analyzed and presented to ensure research objectives were met together with the factors influencing motorcycle safety of the riders. Chapter five is the summary of the findings of the study carried out, and in addition to the discussions were implications of the main findings given therein. Further on, conclusions and recommendations of the study have been highlighted while suggestions on the areas that need further research have been provided.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Motorcycles comprise 95% of the nations' private fleet in Vietnam, 84% in Asia, 76% in Cambodia, 28% in Italy, and only 4% in the United States of America (Cervelo World Bank 2007). The motorcycles operating transport business in Africa and Kenya at large are attractive incomes of families as they provide affordable door – to-door mobility when roads are congested and traffic is slowed to crawl for they speed up much higher than automobiles in the same traffic (Crowley e t... al 2011). In this respect they impact either positively or negatively to the riders and other road users. In this chapter therefore the researcher has reviewed other scholars' literature in line with the same factors influencing safety of the riders in the developing countries Kenya inclusive as well as in Runyenjes Municipality such as: Motorcycles training skills, motorcycles riding experience, implementation of traffic laws and finally how nature of roads influenced safety of the Motor cycle riders.

2.2 Motor cycle riding training skills and the safety of the riders.

The term training refers to the acquisition of knowledge, skills and competencies as a result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies. It forms the core of apprenticeships and provides the backbone of content at schools. It is also an organized activity aimed at imparting information or instruction to improve the recipients' performance or to help him or her attain a required level of knowledge or skill. It is the process of bringing a person to an agreed standard of proficiency by practice and instruction. Motorcycle training teaches motorcycle riders the skills for riding on public roads. It is the equivalent of drivers' education for a car driver. Training beyond basic qualification and licensing is also available to those whose duty includes motorcycle riding such as police. In- addition, rider courses are offered for street riding refreshers, sport riding, off-road techniques and developing competitive skills for the motorcycles racetrack (Walker 2006).

In many developed countries riders are now either required or encouraged to attend safety classes in order to obtain a separate motorcycle driving license. Training can help to bridge the gap between a novice and experienced rider as well as improving the skills of a more

experienced rider. Skills training would seem to be the answer to reducing the killed or seriously injured-KSL- rate among motorcycle riders. However, research shows that some the riders who undergo advanced skills training are more likely to be at a higher risk while using the road (Lewis and Fred 2009). This risk compensation effect was commented on in the findings of the evaluation of the “Bike safe Scotland”, a scheme where a number of those who undertook training said they rode faster in non-built-up areas after the course (Ocampo 2008). This is not to say that training is not important, but that more advanced training should be tempered with psychological training (Rimmer 2009).

In the United States, the Motorcycle Safety Foundation (MSF) provided a standardized curriculum to the states that provide low cost safety training for new and current riders. Two states, Oregon and Idaho, eschewed MSF’s curriculum in favor of their own. Even with over 1,500 locations in USA, and over 120,000 annual students, MSF only trains about 3% of the owners of 4,000,000 new motorcycles sold for highway use. Motorcycle injuries and fatalities among US military personnel have continually risen since early 2000s (Evans 2004). Among other initiated programs, the Air National Guard seeks to understand why national safety programs haven’t sufficiently reduced mishaps and how those programs might be modified to cause productive behavioral change.

There exist some bodies both at international and national levels with comprehensive strategies and plans to offer motorcycle riding and training skills to the riders.

According to Walker (2006), organizations such as I AM and ROSPA offer advanced motorcycle riders training with the aim of reducing accident rates. Likewise the Canada safety council provides motor cycle safety training courses for beginners and novice riders through its gearing training program. The motorcycle and Moped Industry council – MMIC- reduces insurance premiums upon successful completion as this program and is recognized and supported nationally.

Mandatory motorcycle training known as compulsory basic training is common in Europe. There are also schools and organizations that provide training for beginners and refresher courses for experienced riders. In the United Kingdom, organizations such as the Institute of Advanced Motorists (IAM) and Royal Society for the Prevention of Accidents (ROSPA) offer advanced rider training with the aim of reducing accident rates. Advanced training is optional but there is often an added incentive to riders in the form of reduced insurance premiums (Frey 2003).

Many motorcycle training courses in the USA use the motorcycle safety foundation (MSF) course materials. Completion of such courses often results in lower insurance rates Frey(2009), but in Kenya the government is yet to publish a curriculum for training motorcyclists and each individual training school uses its own course materials nevertheless the Ministry of transport has the harmonized curriculum agreed on with the stakeholders and was to be published by the year 2011. Motorcycle Association of Kenya has one of the best curricula which include the following: One needs to be 16 years and in possession of driving license. Training consists of five different sections; Introduction, off-road training, off-road riding, on-road training and on-road riding.

One needs to complete one stage before he moves to the next. Before starting the introduction stage one needs to pass a basic sight test, all one needs to do is to read a standard license plate from 3 meters away either using glasses if needed. The introduction stage is class based and introduces basic road safety and how to act on roads. The other four sections are all practical based. The off- road training involves an introduction to the main parts of the bike and how every component works. One will be made to walk with the bike and then finally get to know how to ride it. This off- road segment involves riding at different speeds and then moves on to how to act at junctions and how to turn and it also covers stopping and starting as well as how to do an emergency stop. Later, one is allowed onto the road after the instructor is satisfied that the student is competent (MAK 2010).

Kenya Police have attributed the rising number of motorcycle accidents to the many unqualified motorists on the country's roads. According to (Obbo O.Daily Nation2012), the Rift Valley Provincial traffic boss asserts that, Riders do not have the requisite class F&G driving license and neither of them, nor their passengers wear protective gears. In Kenya most accidents were caused by the riders who were not properly trained and this had compromised riding standards and road safety in general as training was inadequate .Furthermore, the trainees do not go through theoretical lessons in Highway Code knowledge of the traffic act and practical lessons of model town. Sometimes the training was conducted by unqualified personnel. This may be fellow unlicensed riders or licensed but not experienced riders,(Kenya Traffic Department report (2012).

2.3 Motorcycle riding experiences and safety of the riders.

Work experience is the knowledge gained when a person has been working, or practicing in a specific field or occupation. Motorcycling is an important and popular mode of transport, which has some environmental advantages over other forms of motorized transport, as well as other advantages such as flexible journeys and sometimes more efficient use of road and parking space.

Riding at a high speed is associated with a significant accident casualty risks.

Speeding, particularly in rural areas of Australia is recognized as a risk factor which is under addressed in interventions Evans(2004), yet over represented as a factor in crashes in young drivers (Gonzales et al 2005). There have been a disproportionate number of single vehicle crashes in rural areas as a key indicator of the differences between urban and rural driving crashes (CSI 2009). These studies are all significant in forming the body of knowledge concerning young drivers and their behaviors whilst driving on roads. However there has not been research into these aspects in a specific section of the population which may have had considerable pre-licensing age driving experience, often with associated responsibility for work related tasks.

Personality contributes to riders behavior and other road users.

Linking personality traits or lifestyle with the propensity to take risk has focused on those who take risks in multiple areas of their life, Brookland et al. (2009). The linkages were also shown between risk taking behaviors, in a range of lifestyle issues, including associating with other people who take risks in multiple areas of their lives and their personal crash rate, Fergusson, Swain-Campbell and Horwood (2003). The implications of this are in understanding why risk taking occurs, ranking risk taking behaviors in severity, and hence to develop interventions that whilst reducing extreme risk, fulfill the function that the low risk taking accomplishes for the risk taker.

Motorcycle can follow another vehicle at an oblique position due to their narrowness and small size. As the typical width of a lane is far larger than the need of motorcycles, they do not necessarily keep to the centre of a lane. As a result, when following a vehicle, motorcycles enjoy the freedom to choose the lateral positions in a lane. Thus, it is often to observe that a motorcycle follows a vehicle at an oblique position. By doing so, the motor rider can get a better field of view and have a better chance to filter, overtake or avoid a potential collision and this is described as following pattern called “echelon formation”, (Abrams 2009). Although he did not mention the reasons, such short headways could be due

to motorcycles' oblique following, or lateral following; furthermore this behavior pattern was tried to model the motorcycle behavior in mixed-traffic flow.

Research has also repeatedly found negative relationships between riders' age, gender and accident risk. The decrease in accident involvement is largely attributed to increasing skill with increasing experience, but the extent to which driving skill benefits from experience seems to be a more complex issue than it first appears, interacting with gender and driving style. In a very careful and extensive study done recently, crash rates per vehicle miles driven were examined and the difference between young men and women was much less. On the one hand, this suggests that young men's higher risk may be simply due to the fact that they drive more, but on the other hand, their higher driving experience does not make young men any less crash involved per mile driven. That is, they do not seem to benefit from greater driving experience (APTA 2002).

Human factors in driving are composed of driving skills and driving style. Driving style refers to the way drivers choose to drive, or habitually drive, including speed, attitudes to other road users and to rules, and general attentiveness. This is influenced by beliefs about one's own ability and what makes a good driver, as well as personality and values. Human factors that have been investigated in terms of relationship with driving include aggression hostility, risk taking, sensation seeking and locus of control, (Barrinueve 2008). Locus of control – LOC – is a personality factor for those seeking to influence drivers behavior in terms of developing safe driving for life, suggests that drivers who believe outcomes are controlled by external forces (external LOC e.g., events controlled by fate, not self), may be less likely to change behavior in response to outcomes than those with internal LOC, who perceive outcomes to be dependent on their own skill efforts, or behavior, (Walker Stanton and Young 2008). However, on the research on influence of LOC on driving behavior done recently, it was suggested that externally oriented persons are more likely to be involved in car accidents as they would take fewer precautions to prevent road accidents (Belzer and Gerald 2002).

Skill develops with increasing experience. Deakin (2001) asserts that, early driving emphasis on safety-orientation decreases. In this regards, the newly appointed Nyeri County Director of Education warned parents in Mount Kenya region against buying motorcycles popularly known as *boda boda* for their sons at the expense of their education (Batiko K. Daily Nation 2013). Such young individuals are underage; hence they cannot be trained in the formal

driving schools; additionally, because of their tender age they lack driving experience hence leading to accidents on the roads.

2.4 Implementation of Traffic Laws and safety of the riders.

All commercial motorcycles must be registered under the road traffic rule and regulations. Operators must possess a driving license and a road worthiness certificates, and also use and provide customers with protective helmets. In practice a large number of operators are not compliant with legislation. Over 50 percent of the motorcycles in Lagos are estimated to be operating without valid license.

In Duala, the municipality does not regulate motorcycles access to urban transport infrastructure and operating licenses are granted by the central government. Motorcycles only need to be registered when above 125 cubic centimeters and only 18 percent of motorcycle riders were acknowledged of having a driving license. It is often easier and cheaper to obtain forged certificates of road worthiness than to pass a test with vehicle in good conditions. Similarly, riders licensing systems are not secure and it is possible to obtain fraudulent documents (Ashworth1997).

In Lagos, union control is enforced by contracted youth (area boys) who extract payments from the operators, a practice which can resort to violence should this be with held (Iwata, 1999). These payments pass through a chain of command and used to manage the operations by seeking favors from politicians and police.

Control and implementation of traffic laws has been difficult.

In this connection Brad Ford- Hill (2011) had revealed that it had been difficult to control and implement the traffic laws by police as unions had gained political leverage with an increase in membership of motorcycle riders. With a membership of 200,000 owners providing direct employment to 500,000 riders the economic power was translated into political influence. The government's policy to disengage from provision of public transport had also contributed to the growth of motorcycles. In 1991 the government of Uganda for instance, had relaxed regulations restricting importation of motorcycles of over five years old.

Liberalization measures have led to an increase in importation of used motorcycles which are often in poor conditions. In recent years that has facilitated for over 90 percent of imported motorcycles and most motorcycles were imported from Asia, Particularly India and China and can cost less than US Dollars less than 1,000. There is an influx of smuggled

motorcycles in areas near the border (Congo side) mostly of Chinese brand, on which no import taxes are paid and as a result are cheaper. In addition to the liberalization policy, motorcycle growth in Uganda has been facilitated by a government's program of using motor cycle taxis as a development tool to fight poverty and unemployment (Ashworth 1997). This motorcycle taxi promotion is in line with the central governments' "prosperity for all" programmes to address unemployment and mass poverty amongst youths in the country. In 2005 the local government tax on motorcycles was exempted under the president's directive. In addition, the office of the president's directive initiated credit schemes and released funds for the Boda boda association to purchase motorcycle for its members. However the money was miss-appropriated and did not reach the ultimate beneficiaries (Iwata 1999). According to Polzin (2008), it has proved difficult for the government to regulate the motorcycle riders. However, some operational discipline is provided by the "associations" to which the majority of motorcycle riders belong, although most have only a local jurisdiction. Attempts to form a national organization have been defeated by the chronic instability that plagues most of associations. At each stage there is a committee headed by a master to instill discipline into riders. If the committee cannot handle a particular case it is referred to the association headquarters.

Shimazaki and Rahman (2007) have concluded that the declines in implementation of public transport laws has led to the growth in largely unregulated informally provided non-conventional public transport the most dominant being the motorcycles, which is a common form of public transport system on most secondary roads in Kampala, Lagos, Nairobi and Douala. Across the three cities, the operations share some common characteristics, and public transport is also a necessity in the world cities where population keep on increasing. According to Iwata (1999), one public transport work per household (with an average household size of 5), then well over two million people receive their sustenance from the sector or (15 percent of the total population). This large numerical strength allows them to cripple the local economy by calling a strike in response to any perceived negative police interference with access to their common market interest. This gives them enormous political power and in turn the politicians have a significant stake in maintaining the status quo because of the opportunities for their own financial gain for many informal sector motorcycles are owned by public officials capable of using their position to distribute patronage in return for a financial benefit.

Hsu et al (2003), has argued that the growth of informal unregulated motorcycles can be attributed to a combination of weak institutions government interventions that actually distort

transport market the powerful influence of anti reform stake holders and infrastructure deficiencies that leaves the motorcycle riders with an upper hand over the relevant authorities charged to instill discipline and implementation of traffic laws (Runmer (2009)).

2.5 Nature of Roads and safety of the riders.

Safer and better world network roads promote development.

The International road federation (IRF) is comprised of 70 countries in the world (world development indicators 2004) whose mission is to encourage and promote development maintenance of better and safer roads networks in the world. It, (IRF) helps to put in place technolized solution and management practices that provide maximum economic and social returns from nations road investments. All aspects of roads policy and development worldwide particularly for governments and financial institutional expertise for planning road development and policies are placed in the hands of community road professionals.

Secondary and minor type of roads constructed in the early 1960s need improvement.

World roads statistics indicates China having 1698012 km, Tanzania 88 200km, Italy 479688km while Kenya has only 63 942 total roads network,(IRF2004).That means the roads constructed in 1960s in Kenya had deteriorated during 1980s PRS (2001), and Emphasis was placed on reconstruction and improvement of secondary and minor roads. The sector has however continued to suffer negative growth in 1990s. Currently, it is estimated that 57 percent of the classified roads are in good condition and can be maintained while 43 percent are in poor conditions requiring rehabilitation. Rural access roads most of which fall under the local authorities and are unclassified have also continued to deteriorate due to low financing. In order to improve the delivery of roads infrastructure in Kenya (KRB 2001)and district roads committee oversee the maintenance of all major roads rehabilitate and upgrade international trunk roads.

The District roads committee (DRCS) in Kenya however have identified the key issues affecting this road subsector which include:

1. Poor state of the trunk roads network.
2. Poor rural access roads.
3. Poor linkages between rural access and other rural roads and major high ways.
4. Lack of efficiency in use of roads funds.
5. Lack of adequate quality control in excursion of roads works.
6. Misuse of roads facilities.
7. Lack of adequate research and development in roads.

8. Lack of foot paths, bicycles and motorcycles lanes

Government can only raise a small fraction of the funds that Kenya needs to invest in infrastructure after decades of low investment high cost and inefficiency resulting from corruption and poor management. It will be necessary to secure support from development partners to enhance competition in the roads sector and attract private capitals to improve investment in micro business such as motorcycle transport.

Highway authority and the department of feeder roads contractors abandon their projects while the roads continued to deteriorate. Most of the roads in Ghana are potholes infested that can graduate into human trap holes: Cape Coast to Kumasi Kumasi –Techiman- Kinta Approved Tanale-wa road and Bolygatunga roads among other important roads in the country,(<http://www.ghanabusiness.com>).

Contractors should be forced to adhere to the rule of construction.

The rule of construction, states that one year retention should be given to contractors to monitor and repair defects on the roads constructed before the final percentage of the total cost of the project is paid to him / her (contractor). In this respect therefore, the rising of danger is posed by increased inadequate and poor roads supply (Mac and Reid 2003).

Whatever the safety problem encountered by road users, is far exceeded by the much more dangerous situation as a result of poor roads in most cities of the world.

The most affected in this respect are motorcycle riders, bicyclists and pedestrians, and walking is dangerous especially in Indian cities where over half of all the traffic in the poor roads are pedestrians, and compared to China is 25 percent and is probably attributed to the lack of roads sidewalks pedestrians crossings and pedestrian traffic signals mostly in Indian cities (Barber and Conable 2002).

In a research done recently, a motorcyclist was killed, or seriously injured for every 665 894 kilo meters ridden car drivers however, meter ridden car driven however covered an average of 18661 626 kilometers on roads before a serious injury assured mostly attributed by poor road construction by corrupt contractors. A similar picture is given by research in other countries. Motorcycle riders in New Zealand accounted for approximately of fatalities and 25% hospitalization for roads accidents as a whole (Shimaziki, T. and Rahman2007).

Accordingly, each year more than 500,000 people die on the roads poorly constructed and this is a very high number caused by just a single factor. A study done recently forecasts that

poor roads factor alone would cause an alarming number of deaths or disabilities come year 2020 (Hischorm and Paul 2001).

Most of the roads in Kenya are abandoned unfinished due to debts.

Local contractors in Kenya have abandoned most of roads which need rehabilitation and reconstruction because the government owes them well over Kenya shilling 20 billion,(Abdi Rashid Daily Nation 2013) .The responsibility over these roads are not well defined although are classified as class A, B and C. These are known as International trunk roads linking centers of International importance and crossing, or terminating at International boundaries. Those in class B are national trunk roads linking nationally important centers while class C roads are Primary roads linking provincially important centers to each other or two to higher roads (Heggie, Ian G. 1995).

The success of devolution of the roads sector by the central government might ease the headaches of poor roads in Kenya and the treasury that allocates money that goes to the Urban roads authority and Rural roads authority through the National Roads Agency (Kuria Kamau Nation2013) to cater for transport needs within informal settlement such as Kibera access road phase I and Langata access road in Nairobi, Kisimani street- Mkunguni road and VOK- Gichinga road at Ziwa-la-Ngombe in Mombasa and gravel standard access roads in Nyeri, Ongata Rongai, Kilifi and Malava, all of which have opened up the areas and facilitated mobility within and around the slums thereby promoting interaction and business enterprises.

2.6 Theoretical framework

Social exchange theory posits (Laura Stafford 2008) that all human relationships are formed by the use of a subjective

Cost benefit analysis and the comparison of alternatives. The social exchange theory explains social exchange and stability as a process of negotiated exchanges between parties. Both parties in a social exchange take responsibility for one another and depend on each other. According to

Lister, J.D (1993) economic exchanges and social exchanges have some differences: Social exchanges involve a connection with another person; social exchanges involve trust, not legal obligations; social exchanges are more flexible; and social exchanges rarely involve explicit bargaining. The guiding force of interpersonal relationships is the advancement of parties or self-interest. According to Hodges C. etal (1994), interpersonal exchanges are thought to be analogous to economic exchanges where people are satisfied when they receive a fair return

for their expenditures. Fulfilling self-interest is often common within the economic realm of the social exchange theory where competition and greed can be common. The motorcycle operators in Kenya deal with both social and economic exchange. They trust that the clients they are ferrying are trustworthy and may not cause any harm to them even when they take them to isolated areas. The economic exchange is the monetary value which they are paid in exchange for their services.

Individual behavior depends on rewards and costs of his or her undertaking.

This development has five key propositions that assist in structuring individual's behaviors based on rewards and costs. The first proposition, the Success Proposition states that behavior that creates positive outcomes is likely to be repeated. In this case speeding has been used by some motorist so as to save time and make more money. Others have caused accidents in the process of speeding. The second proposition, the Stimulus Proposition believes that behavior of an individual is rewarded in the past, the individual would continue with the previous behavior. Motorist who are sensitive to the customers are rewarded a tip sometimes and this makes them to be gentle to more others. The third proposition, the Value proposition believes that if the result of a behavioral action is considered valuable to the individual, it is more likely for that behavior to occur. Experience is not considered here but rather an individual's personal traits. The fourth proposition, the Deprivation-satiation proposition-believes that if an individual has received the same reward several times, the value of that reward will diminish. Lastly the fifth proposition discusses when emotions occur due to different reward situations. In relation to our study a rigid traffic system will arouse different emotions amongst riders with some for the system and others against it. This theory relates to an individual and the environment for example, external factors like traffic rules which are acted upon differently by different riders in accordance to their personal traits.

2.7 Conceptual Framework

The conceptual framework provided shows how independent variables influence dependent variables. The government policies (moderating variables) are put in place to enable the traffic police to enforce the laws and regulations. But the differences in poverty index levels per family are an intervening variable, as represented in the figure- 1

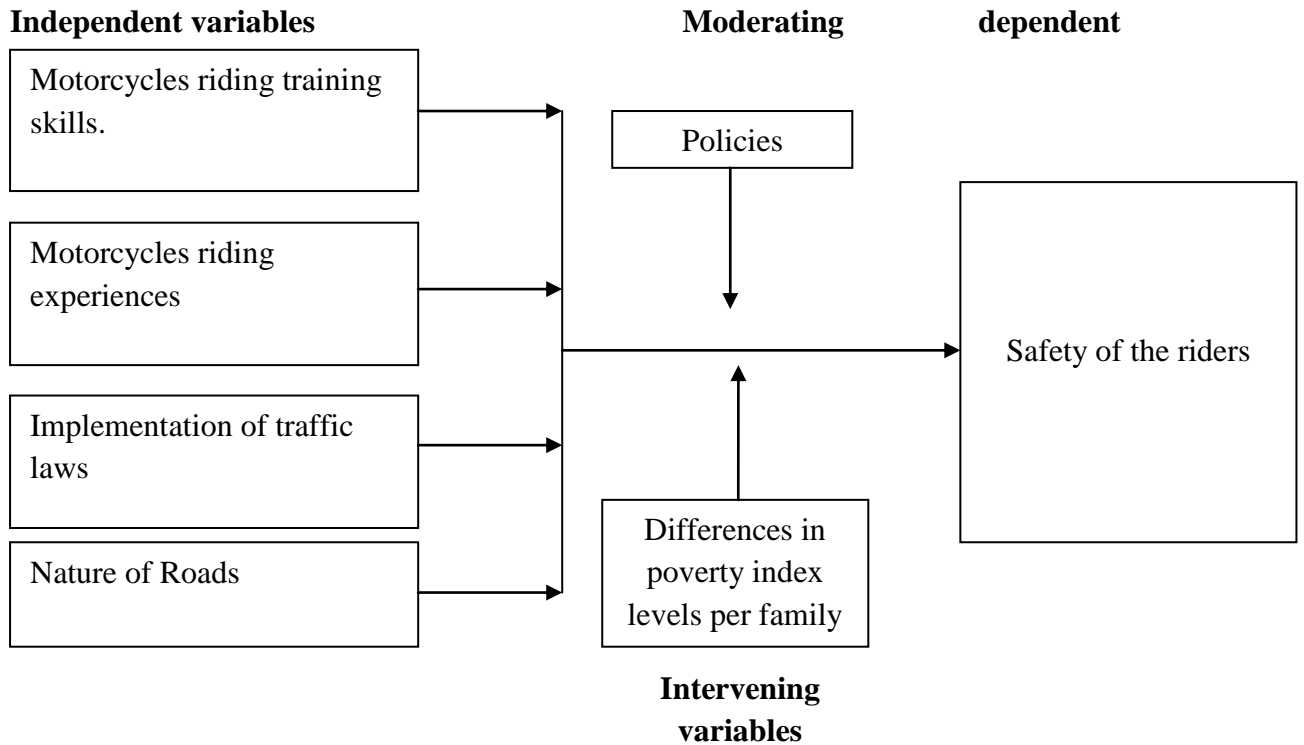


Figure1. Conceptual Framework

2.8 Summary and research gaps.

From the foregone review of the studies done by various researchers globally, it seems that the use of motorcycles by riders in the developing countries was influenced by the motorcycle riding training skills, riding experiences, implementation of traffic laws and the nature of roads among others, but the safety of both riders and motorcycle users had not been adequately investigated, and it is a gap the researcher had conclusively researched on.

CHAPTER THREE

RESEARCH METODOLOGY

3.1 Introduction

In this chapter the researcher has presented the research design, target population, sampling procedure, methods of data collection, validity, reliability, and finally the methods of data analysis that is relevant to this project report.

3.2 Research design

The research design used was survey which is a research process in collecting data in order to answer the research questions concerning the current status of the subjects in the study (Ahuja 2001).

The survey design had been chosen for this study due to its appropriateness in educational fact findings which yields accurate information. According to Mugenda and Mugenda (1999) this type of design attempts to describe such things as possible behavior attitudes values, and characteristics. The survey design chosen matched with the objective of this study as the study had investigated factors influencing the motorcycle safety of the riders in Runyenjes Municipality.

3.3 Target population

In Runyenjes municipality there is a target population of 280 Motor cycle registered riders. This had enabled the researcher to do the survey with the population of interest consisting of respondents from various categories: Traffic police in Runyenjes police station, medical officers in Kieni hospital and riders in Runyenjes municipality. Mugenda and Mugenda (2003), indicate that purposive sampling allows the researcher to get cases that have the required information with respect to the objectives of his/her study. Categorically there were 220 riders, 15 traffic police officers and 50 qualified medical personnel's in Runyenjes Municipality, who made the total target population of 285 respondents used in this study.

3.4 Sampling procedure

Through stratified sampling the target population was grouped into three strata, police, medical officers and riders, from within each stratum the researcher used simple random

sampling to select the sample population. Purposive sampling was also used to select 20 qualified medical personnel and 15 police officers in the traffic department and 127 riders in Runyenjes municipality, and that made sample population of 162 which represents 57% of the entire population. This is a purposive sampling method as noted by Mugenda and Mugenda (2003), and a deliberate non-random method of sampling which aimed at selecting a sample of people, settings or events with predetermined characteristics. In this respect the sample size of the study was therefore 162 respondents, as presented in table 3.1.

Table 3.1 Sampling Frame

Group	Population	Percentage	Sample size
Motorcycle riders	220	44.6	127
Medics	50	7.0	20
Traffic police officers	15	5.4	15
Total	285	57.0	162

3.5 Methods of data collection

Data collection is the process of gathering relevant data from the field by the researcher Mugenda and Mugenda (1999). Primary data was used in this research study. Survey questionnaires were administered to all respondents selected at random for the study in order to gather the primary data and information on the various aspects of motorcycle revolution. Relevant structured and unstructured questions were constructed to solicit for the desired data. One question was open-ended (comments) and others were close-ended. This mode of data collection technique was applied on the sample population of riders, police officers, and the medics.

3.6 Validity of instruments

Content validity is the accuracy and meaningfulness of inferences which are based on the research results. Face validity is the degree to which results obtained from the analysis of the data represents the phenomenon under the study Mugenda and Mugenda (2003). For face validity to be ensured research instrument will be presented to one expert at the University of Nairobi department of education for scrutiny and examination to face content validity. Suggestions made by the supervisor were used in redrafting the instruments. Validity in relation to research is a judgment regarding the degree to which the components of the research reflect the theory concept, or variables of the study. The validity of the instruments

used and validity of the research design as whole were important criteria in evaluating the worth of the results conducted.

3.7 Reliability of instruments

Reliability refers to the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. In short, it is the stability or consistency of scores over time or across scales (Kothari C.R.(2004). Similarly, the degree to which an individual's responses (their scores) on a survey would stay the same over time is also a sign of reliability Peter C.B.(2010).In this regards therefore , the researcher had carried out a pilot study to a selected sample for the first time and after a week, they were given back for a re- test. The two sets of results obtained were correlated to determine coefficient calculated using Pearson's products correlations coefficient. The results obtained established the content of the questionnaires were constant in eliciting the same responses. The formula for this relationship was:

Where r = Pearson's correlation coefficient

x = Scores for test 1

y = Scores for test 2

The Pearson's coefficient for this study was found to be 0.834 which is a value close to 1. According to Mugenda and Mugenda (2003) if a Pearson's coefficient is closer to "1" the research tools are regarded as reliable.

3.8. Methods of data analysis

Data were analyzed by use of descriptive statistics. Quantitative data collected from the closed-ended questionnaire items were tallied and presented using descriptive statistics in form of tables, percentages and frequencies. Qualitative data were transcribed and organized into themes categories and subcategories as they emerged during the analysis. The data was analyzed by means of the Scientific Package for Social Sciences (SPSS),frequency counts and percentages.

The tools used were: Statistical analysis, thematic analysis, text analysis in accordance to the demands of this study. This study required an in-depth understanding and consideration over the methods as it is the base to provide findings of the research. Each method of data analysis presented the data in a different way, which could have raised the different interpretation for same data. It had reduced the ability of researcher to explore the research problem significantly. The use of SPSS tools had helped the researcher to present the findings in

quantitative manner, which had increased understanding about the research results. The use of this method required more information from the quantitative methods. On the other hand, use of thematic analysis method to analyze data required fewer amounts of data. Themes were presented to analyze the pre and post research conditions, which had helped to determine what exactly was to be achieved from the study.

The text analysis is the simplest form of data analysis, which was beneficial for this study. It had presented the data in the form of tables, which were significant to improve the research effectiveness and reliability.

3.9 Ethical considerations.

Ethical considerations are cautions that the researcher had taken to avoid causing psychological, financial or social harm to the respondents, Mugenda and Mugenda (1999). The researcher had to inform the respondents the purpose of her research and had to pledge an oath of confidentiality to their responses. The researcher had to give the respondents a choice and only volunteers were used to collect data.

3.10 Summary to the chapter.

This chapter explains how research design, target population, sampling design and the sample size were conducted. It also shows how data collection methods and tools were used, how validity and reliability were ascertained, together with how the data collected were analyzed.

Table 3.2 Operationalisation of variables

Objectives	Types of variables	Indicators	Measurements	Tools for analysis	Types of analysis
a) To assess how motor cycles riding training skills influence safety of riders' in Runyenjes Municipality.	(Independent variables) - Training - Curriculum to be covered	-Motorcycle Driving license; Classification of license. - Expirely date of license	Nominal (Gender)	Mean / Percentage	Editing, coding, classification and tabulation of data.
b). To determine how motorcycles riding experiences influence safety of riders in Runyenjes Municipality.	(Dependent variables) Number of years as a rider, purpose for riding, number of kilometers covered per day, number of	Age in years, cases of accidents involved in	Ordinal (ranking in order of importance)	Ratio / mean	Descriptive

	accidents ever caused.				
c). To establish the extent to which implementation of traffic laws influence safety of riders in Runyenjes Municipality.	(Independent variables) Traffic laws and regulations	Copies of Traffic laws; traffic police officers, road signboards, crossing sites for Pedestrian, Insurance cover.	Interval Nominal (Gender / perceptions)	Statistical analysis / thematic analysis / text analysis	Descriptive
d) To establish how nature of roads influence safety of riders in Runyenjes Municipality.	(Dependant variables) International roads, National roads, Primary roads.	Classification of roads: A (KM) B (KM) C (KM) Maintenance schedule routine, Potholes	Ordinal Ratio Objective - : (The number of Km for each class)	Statistical analysis / thematic analysis / text analysis	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1. Introduction

This chapter has explored the way the results of the survey were analyzed and presented to ensure research objectives were met and altogether with the factors influencing motor cycles riders' safety in Runyenjes municipality. The response rate refers to the number of respondents out of the sampled size who turned up to answer the research questions.

The Bio-data refers to the age, gender, level of education, marital status and their dependants.

4.2. Response of Rate

The response rate of respondent was analyzed as males or females. A sample size of 162 respondents was derived from a target population of 280 motorcycles riders in Runyenjes municipality to ensure a 100 percent confidence level achievement since all the respondents cooperated in answering questions from the questionnaires. According to (Kothari C.R.2004), a response rate of 50 percent is good enough in social studies.

4.3. Bio data.

Bio data or personal details of respondents were classified in gender categories: table 4.1.

Males category had 100 respondents while females were 62 totaling to 162. The percentage for males was 61.7 and for females was 38.3 totaling to 100 percent .Table4.1.

Table 4.1 Categories respondents by gender

Categories By Gender	Frequency (R)	Percentage
Males	100	61.7
Females	62	38.3
Totals	162	100

Table 4.1 findings revealed that there were more males (61.7%) than females (38.3%). This showed that men were the ones mostly involved in boda-boda business. Although 38.3% volunteered as respondents, they did so as users of motorcycles as means of transport.

4.3.1. Age categories

Respondents were categorized in ages from 15 to 49 years: table 4.2

There were 162 respondents who had responded to the questionnaires administered to them in categories of age brackets as indicated in table 4.2. ranging from 15 to 49 years: Table 4.2.

Table 4.2 Categories respondents by gender

Categories	Frequency (R)	Percentage
Below 15 years	0	0
18 – 24 years	50	30.8
25-30 years	20	12.4
31-36 years	24	14.8
37-42 years	32	19.6
43-48 years	24	14.8
Above 49 years	12	7.6
Totals	162	100

Table 4.2 Revealed that most youths in the age bracket between 18 and 24 years were the majority in boda-boda business. That was followed by those who were in age category from 37-42 years. That was 32 in number or 19.6%. The age group of 31-36 and 43-48 year shared the same percentage- 14.8. The table further revealed clearly that boda-boda business in totality was mostly popular amongst the youths and middle aged males.

4.3.2. Marital status.

Marital status of respondents were in categories for married, singles, widowed or divorced; table 4.3. The marital status categories of respondents (table 4.3) was for married, which had attracted 88 respondents or 54.3 percent. That was closely followed by singles with 66 respondents or 40.7 percent. Widowed and the divorced were each 4 or 2.5 percent. All that had totaled to 162 respondents or 100 percent.

Table 4.3 Marital status categories of respondents

Category	Frequency (n)	Percentage
Single	66	40.7
Married	88	54.3
Widowed	4	2.5
Divorced	4	2.5
Widower	0	0

TOTALS

162

100

Table 4.3 revealed that the highest of number of respondents were married 88 or 54.3 percent. That was followed by singles who were rated at 66 or 40.7 percent. The table therefore revealed that the married males were mostly engaged in boda-boda to earn their living. As for the singles who are not necessarily youths were also engaged in boda-boda as employees or as their own business.

4.3.3. Dependants categories of respondents.

Dependants of respondents were categorized in 0, 2, 3 – 4 number of dependants : Table 4.4. Table 4.4 was for the numbers that depended on the respondents. The category with 0 or 38.2 percent did not have dependants. The category with 2 dependants had 36 or 22.2 respondents. The category of respondents with 4 dependants had 32 or 19.8 percent.

Table 4.4 Dependants categories of respondents

Category	Frequency (N)	Percentage
0 Dependants	62	38.2
2 Dependants	36	22.2
3 – 4 Dependants	64	39.6
TOTALS	162	100

The findings tabulated in table 4.4 showed that 62 or 38.2 percent of the total respondents had none dependants and dominated the boda- boda business whom the researcher had identified to be engaged in boda boda business.

The category with 2 dependants had 36 or 22.2 percent while those with 3-4 dependants had 64 or 39.6 percent. The two categories : 38.2 percent ,or 62 in frequency were pushed into the business so as to sustain the high number of dependants. Hence, the higher the number of their dependants the more active the respondents were in as for as doing boda boda business was concerned.

4.3.4. Educational levels categories of respondents.

Educational levels of respondents were indicated in non formal, primary, high school, college or university level of education attained: table 4.5. Table 4.5 indicated the educational levels of respondents who had no formal education, and were 22 or 13.6 percent. Those with primary level of education were 40 or 24.8 percent. The High school level of education

respondents were the highest with 62 or 39.6 percent. The college level of educationists were 34 ,or 20.9 percent, while the respondents with university level of education were 4 or 2.1 percent.

Table 4.5 Education level categories of respondents

LEVEL	FREQUENCY (n)	PERCENTAGE
None formal	22	13.6
Primary	40	24.8
High school	62	39.6
College	34	20.9
University	4	2.1
TOTALS	162	100

The findings in table 4.5 indicated that the highest number of respondents were those who had high school level of education with 62 or 39.6 percent. That showed that, although they had attained high school level of education they were not employable because they had no skills or experience, nevertheless they had to engage in any entrepreneurial activity like boda-boda business for their lives' sustainability. 34 or 20.9 percent was of the respondents who had attained college training in assorted job skills; however, opportunities for jobs were not forth coming. Therefore, they had to engage themselves in the most available occupation such as boda-boda business. That revealed that the category of respondents were in the city and very few in the sub-urban areas like Runyenjes municipality. The researcher had found out that the university category of educationists who had responded to the questionnaire had engaged themselves, either on full time in various jobs, or owned business.

4.4.Data analysis on the factors influencing motorcycle safety of the riders in Runyenjes municipality.

4.4.1. Introduction .

The data on the factors influencing motorcycle safety of the riders were analyzed on the basis of: Motorcycles training skills, riding experiences of motorcycles riders', implimentation of traffic laws, nature of roads and how they influenced the safety of riders in Runyenjes Municipality. The data analyzed and findings were recorded in tables: 4.6, 4.7, 4.8, 4.9, 4.10 and 4.11.

4.4.2. Motorcycles riding training skills and safety of the riders

Motorcycle riding training skills was a factor to assess the safety of riders in Runyenjes municipality: Table 4.6.

Table 4.6 Motorcycles riding training skills categories of respondents

Category	Training period	Licensed / not licensed	Expenses in k.sh.	Paid by	Frequency (n)	Percentage
1	One week	Not licensed	500	Self	32	38.2
2	5. days	Not licensed	300	Self	16	22.2
3	6. 2 days	Not licensed	200	self	25	39.6
4	7. Months	Licensed	10,000	CDF	24	
5	8. Months	Licensed	10,000	CDF	30	
TOTALS					127	100

Table 4.6 revealed that most of the respondents were trained for riding motorcycles in less than one month at a cost ranging from Ksh 200 to Ksh 500. That was 56.9 percent of the respondents who did not have valid riding licenses. During the interviews the researcher detected that most of the boda boda operators were on casual labour on daily basis, and one was not sure of the same engagement the following day and had to try to make as many trips as possible per each day. As for those who had obtained riding licenses, table (4.6) revealed that they had their training expenses paid for them from the community development fund kit-C.D.F. That number ranged at 64 or 42.7 percent.

That had revealed that very few motorcycles riders had not put their own initiatives to be trained in motorcycles riding and obtain riding certificates. According to the police officer in charge of traffic department in Runyenjes police station, 50 percent of the motorcycles riders did not have riding licenses, hence many road accidents in the area. On the whole the boda boda business in Runyenjes municipality was more of a hide and seek game because boda boda operators kept on dodging traffic police, but not realizing it was at the expense of their safety.

4.4.3 Motorcycle riding experience and safety of the riders

Motorcycles riding experience was a factor meant to determine the safety of the riders in Runyenjes municipality: Table 4.7.

Table 4.7 showed that riders who had 6 months experience were 62 or 39.6 percent. Those who had 1 year experience in riding were 40 or 31.5 percent. Those who had 2 years

experience were only 30 or 23.6 percent. The 3 years and over 4 of riding experience were 7 or 5.3 percent. The total number of respondents who had responded in all the categories was 127 or 100 percent.

Table 4.7 Motorcycles riding experiences and the riders' safety.

Category	Months / years of experience	Frequency (n)	Percentage
1	6 Months	50	39.6
2	1 year	40	31.5
3	2 years	30	23.6
4	3 years	3	2.2
5	Over 4 years	4	3.1
Total		127	100

Table 4.7 revealed that above 50 percent of motorcycles riders in Runyenjes municipality did not have riding experiences of at least one year, or 71.1 percent. Only 30 respondents who had 2 years experience in riding, or 23.6 percent. Those with 3 and above 4 years of experiences were only 3 and 4, or 5.3 percent. That was a serious scenario on our roads because boda-boda business was operated by riders with minimal number of riding experiences. In this case the high number of non-experienced riders on the roads had caused most of the accidents.

4.4.4 Implementation of traffic laws and safety of the riders

Implementation of traffic laws was a factor to establish the extent which traffic rules influenced safety of riders in Runyenjes municipality: Table 4.8. Table 4.8 showed the distribution categories of traffic offences and how they had influenced the motorcycles riders' safety in Runyenjes municipality. According to this table (4.8) careless riding cases were 3 or 20.0 percent. None fatal accidents, but serious cases were 4 or 26.7 percent. The injury cases whereby the accidents had occurred and the riders or the motorcycles users were injured were 3 or 20.7 percent. There were 3 cases of accidents whereby the riders or the motorcycles users died altogether and were 3 or 20 percent. The motorcycles rider defaulters who did not wear protective gears or who had not observed traffic laws in general were 4 or 26.6 percent. All that had totaled to 100 percent or 15 respondents of the sampled size on, table 3.1.

Table 4.8 Implementation of traffic laws categories of respondents

Category	Frequency (n)	Percentage
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1. Careless riding	3	20.0
2. Non fatal accidents	4	26.7
3. Injury cases of accidents	3	20.7
4. Fatal cases of accidents	3	20.0
5. Protective gears defaulters cases	4	26.6
Total	15	100

Source: Researcher

Table 4.8 revealed that motorcycle riders did not wear the protective gears - helmet and reflectors when riding. At the same time there were frequent accident cases of injuries and none fatal which were 7 or 46.7 percent according to what respondents had indicated on table 4.8. Careless riding had 3 or 20 percent. There was one case of death or 6.7 percent as a result of accident. The scenario from that analysis were that the safety of the riders in the course of riding on the roads were highly influenced by the riders' ignorance to adhere to the traffic laws not minding of their body's health.

4.4.5 Nature of roads and safety of the riders

Roads maintenance was a factor meant to establish how the safety of motorcycle riders was influenced in Runyenjes Municipality: Table 4.9. Table 4.9 showed the distribution categories of nature of roads and how they influenced safety of the riders in Runyenjes municipality. The table showed that most access roads were poorly maintained because 8 respondents or 53.3 percent had so confirmed. Most sections of the roads had potholes on them which were confirmed by 7 respondents or 46.7 percent of respondents.

Table 4.9 Response on Roads maintenance

Category	Frequency (n)	Percentage
1. Poorly maintained roads	8	53.3
2. Potholes on the roads	7	46.7
Total	15	100

Table 4.9 revealed the roads and more so the access ones were poorly maintained. That was confirmed by 8 out of 15 respondents or 53.3 percent. Due to the failure of regular roads maintenance potholes were numerous as was pointed out by 7 or 46.7 percent of respondents. To overcome that problem contractors should adhere to one year payment retention as a measure to monitor and repair defects on the roads constructed before the final portion of the total cost of project is paid to him or her (MacCann.B andReid2003).

4.4.5.1 Medic's response on safety of the riders.

Medic's response on the safety of the riders was part of the questionnaire meant to catch the frequencies of motorcycle riders' accidents and how medic's responded to them: Table 4.10. Table 4.10 showed that there were usually 2 cases of accidents which were referred to the government medical officers for treatment per week. That was 10 percent of the respondents. Category 2 showed fatal cases out of motorcycles riders' accidents per 6 months were only one, or 5 percent. However, medics at the government hospitals attended only the genuine cases because accidents which had resulted from fault of the riders were taken to private hospitals. The cost of accidents treatments ranged at K.sh. 2000 or more, and the response for that category was 16 or 80 percent. There was only one accident case covered by insurance, or 5 percent. The response was 20 or 100 percent. According to Brand ford-Hill (2011), road accidents and fatalities accounted for 25 percent and hospitalization for all roads accidents as a whole in New Zealand.

Table 4.10 Medics categories of respondents

Category	Frequency (n)	Percentage
1. Motorcycle riders accidents treatment per week.	2	10
2. Fatal cases per 6 months	1	5
3. Below K.sh. 2000 cost of treatment of the riders accident.	16	80
4. Number of accident case covered by insurance	1	5
Total	20	100

Table 4.10 revealed that there were at least 2 accidents reported cases every week, or 10 percent and many more victims did not show up due to fear of prosecution by police. Only one fatal case per 6 months had occurred. That was 5 percent according to the respondents from the medics. There were 16 or 80 percent on the cost of accidents involving motorcycles. From table 4.10 it was evident that such accidents were frequent because riders had their treatments catered for and discharged to go to wait for cure at home avoiding their cases known by the police. The table further revealed that there was only one case of accident covered by insurance. That indicated that most of the motorcycle riders on the roads were not insured for medical cover. In that respect the researcher concurred with the findings of the research done recently to the effect that there would be an alarming number of deaths of roads accidents come year 2020 (Hiscorn and Paul 2001).

4.4.5.2 All sections categories of respondents on safety of the riders

Section B to F of the questionnaire was meant to catch the respondents' feelings towards the safety of motorcycle riders in comparison with the monetary value in the course of doing boda boda business: Table 4.11.

The respondents of all sections of the questionnaire were asked their feelings towards the safety of the riders. Their responses were based on the content of section B- F of the questionnaire as indicated in table 4.11.

Table 4.11.B-F SECTION OF RESPONDENTS ON SAFETY OF THE RIDERS.


Category	Content of the Questionnaire	Section	Frequency	Percentage
1.	It is important to wear protective gears.	B  F	162	100
2.	Protection of riders' safety is very important			
3.	Observation of traffic laws should be stepped up.			
4.	Riders' safety is more important than money earned by doing boda-boda business.			
5.	Advice is hereby given to all motorcycles riders to wear protective gears to protect themselves from harm when riding.			
Total			162	100

Table 4.11 revealed that all categories of respondents in sections B-F totaling to 162 or 100 percent respondents were of the opinion that: it was important to wear protective gears, protection of riders' safety is very important, observation of traffic laws would be stepped up, riders' safety was more important than money they had earned by doing boda-boda business, and it was advised by respondents in all sections that motorcycles riders had to wear protective gears to protect themselves from harm when riding. In that respect it showed that the riders were aware of their safety measures provided by the law, but they ignorantly fail to adhere to it.

4.5. Summary

This chapter presented the quantitative data analysis of the study using frequencies and percentages. The findings were in line with the objectives of the study and had revealed how independent variables such as: motorcycles riding training skills, riding experiences, implementation of traffic laws and the nature of roads had influenced safety of the riders in Runyenjes municipality.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS.

5.1.Introduction

This chapter contains a summary of the findings extracted from chapters four. It also discusses the findings as per the reviewed literature, makes conclusions and recommendations. Finally it outlines the areas suggested for further research.

5.2.Summary of the major findings.

The research carried out revealed that motorcycles riders operating the boda-boda transport business in Runyenjes municipality did not have driving licenses, and also did not wear the protective gears when riding. More so the safety of the riders was at risk due to frequent accidents on the roads as a result of them not observing the traffic rules. 57.4 percent of the riders were operating without driving licenses while those who had them were equal to 42.6percent with experiences ranging from 1 year to six months. Most of the roads were poorly maintained with potholes all over. It was also found to be very important for traffic police officers not to relent in their efforts in making sure that traffic rules are adhered to by all motorcycle riders for their safety and other road users.

5.2.1. Motorcycle riding training skills and safety of the riders.

The findings revealed that majority of the motorcycle riders had no riding licenses- 57.4% .Only 42.6% had acquired them-licenses- but had done so through the C.D.F kit which was a political strategy to gain popularity come general elections in future. On the other hand, it was also a strategy to minimize accidents rate amongst motorcycle riders. That was confirmed by Walker (2006) in his study of organizations such as I AM and ROSPA which had to offer advanced motorcycles riders training with the aim of reducing accident rates. On the contrally, Lewis and Fred (2009), had argued that the riders who had undergone advanced training skills were more likely to be at risk while using the roads. That was a compensation effect as was commented on in the findings of the evaluation of the –Bike Safe Scotland – that , those who had taken training had said that they rode faster in none –built-up areas after the course (Ocampo R.(2008).

The findings had further revealed that riders were trained for a few days or hours, and then start operating on the roads. It was -also revealed that those who were assisted by the C.D.F to get riding licenses took 5 to 6 months of intensive training. That concurs with MAK (2010) study whereby the off-road segment riding training is comprehensive and it involves riding at different speeds and then moves on to how to act at junctions and how to turn to cover stopping and starting as well as how to do an emergency stop. It was further revealed that most accidents occurred with the riders who were not properly trained. That concurs with the Rift valley provincial traffic boss that the riders who were not properly trained had compromised riding standards and the road safety in as for as motor cycle riders were concerned, (Balasa L., Daily Nation, 2012).

5.2.2. Motorcycle riding experience and safety of the riders.

This research revealed that most of the motorcycle riders had experience of only one year and below (71.1%). It further revealed that the boda – boda business was dominated by youths as it was a new enterprise in Kenya’s convenient means of transport in the rural areas. That had been confirmed risky, and a fact which was under addressed in Australia (Evans 2004) yet over represented as a factor in clashes with young drivers (Gonzales et al 2005). Those two studies were significant in forming the body of knowledge concerning young riders and their behaviors while riding on the roads.

5.2.3. Implementation of traffic laws and safety of the riders.

This study revealed that most riders did not adhere to the traffic rules. The riders also ride carelessly on public roads thereby causing road accidents involving road users and pedestrians. Some of the rules that riders did not conform to were: possession of road worthiness certificates and providing the customers with protective gears (Ashworth 1997). It was also revealed that traffic laws were not fully implemented due to the motorcycle riders none cooperation with traffic police officers. That had been confirmed by Bradford – Hill (2011) who had argued that it was difficult to control and implement the traffic laws by police as unions have gained political leverage with an increase in membership of motorcycle riders with at least 200,000 owners providing direct employment to 500,000 riders then, that was an economic power translated into political influence. That sort of scenario was common in most urban and sub-urban areas.

According to Mutembei Phares,(Standard 22-11-2013) for example, boda-boda operators in Embu town had engaged in running battles protesting against alleged harassment by traffic

police officers, whereby a journalist was seriously injured and also had lost a camera and as a result the transport was paralyzed for the whole day as demos and lit bonfires on the roads made it difficult for other road users in the town to travel. However, thanks be to the area Office Commandant Police Division-O.C.P.D- Embu Mr. Gasper Maka who assured other road users and the riders alike that they- traffic officers- would not relent in their efforts to make sure that traffic rules were adhered to by all, riders inclusive.

5.2.4. Nature of roads and motorcycle safety of the riders

This study revealed that the roads and more so the rural access roads were poorly or never maintained regularly- 53.3%. Further more, potholes were numerous (46.7%) and the factor contributing to that was the complexity of a process for releasing funds from the central Government for road maintenance channeling to various local authorities. The emphasis was placed on reconstruction and improvement of secondary and minor roads since the ones constructed in the 1960s in Kenya had deteriorated during 1980s most of which fall under local authorities and are unclassified and continued to deteriorate due to financing (KRB 2001). In this study, it was also revealed that members of public in general concur that money earned by boda-boda transport operations was not more important than the safety of the riders. According to Hischorn and Paul (2001), care must be taken as poor roads factor alone would cause an alarming number of deaths or disabilities come year 2020.

5.3. Discussions of the major findings on the factors influencing safety of the riders.

5.3.1. Motorcycle riding training skills and safety of the riders.

The researcher had to assess how motorcycle riding training skills influenced the safety of riders and road users in Runyenjes municipality. The findings revealed that majority of the motorcycles riders (57.4 percent) were riding without valid driving or riding licenses. It had also revealed that those who had the licenses (42.6%) were assisted to get them by the community development fund -CDF. The study also revealed that most of the riders were on casual wages per day and some of them did not own motorcycles. The owners of the motorcycles did not care so much about the routes the riders were operating on provided that they receive the agreed amount of money to the end of a day. The findings of the research had revealed that most of the riders in transport operations had their instructions on how to ride for a few days and some even took hours and then start operating. Those findings highly influenced the safety of the riders because operating without valid licenses impacted negatively on the safety of the riders and the entire road users especially pedestrians.

5.3.2. Motorcycle Riding experience and the safety of the riders.

This study aimed to determine how riders' experience influenced the safety of riders operating on the roads in lines of boda-boda business.

The research had revealed that most of the riders (71.1%) had a riding experience of only one year and 23.6 percent of riders had riding experiences of 2 years. Those who had riding experience above 3 and 4 years were only 5.3 percent, and from what the researcher had found out that the last category of riders did the riding as a personal means of transport to various places. It was also revealed boda-boda business was a new enterprise in Kenya and most of the youths, - 43.2% below 30 years of age - had taken up with it to earn their livelihood. Only 3.5 % of respondents were married -Table 4.3 and 4.2 confirmed that the boda-boda business was highly dominated by youths. Those findings in total revealed that the safety of riders had highly been influenced by riding experience for any casualty may it be accident, or ill bodily health befalls on them- riders.

5.3.3. Implementation of traffic laws and the motorcycle safety of the riders

The researcher established that the extent to which implementation of traffic laws influenced the safety of the riders in Runyenjes municipality. The findings further revealed that most of the riders did not adhere to the traffic laws as they mostly never wear protective gears like helmet and reflectors when riding. Furthermore, the riders were careless when riding and never minded about other road users especially pedestrians. There were 46.7 percent cases of accidents which confirmed truly that traffic laws had not been fully implemented due to reluctance and none co-operation attitudes of the riders with traffic police officers in adherence to the law.

5.3.4. Nature of roads and safety of the riders.

The researcher wanted to find out how the nature of roads influenced the safety of riders. The findings revealed that most of the access roads were never regularly maintained. Although roads were classified in alphabetical order – A,B,C or D that did not warrant maintenance when needs be due to complications of releasing maintenance funds from the central government to local authorities such as Runyenjes municipality and others. The study finally revealed that most of the access roads were full of potholes which adversely contributed to many road accidents. 53.3 percent had confirmed to those findings while 46.7 percent confirmed about numerous presence of potholes on the roads impacting negatively to the

safety of motorcycles riders in Runyenjes municipality. Furthermore, it was a bit expensive for accidental injury treatments because, to treat such cases riders must spend Kenya shillings two thousand and 80 percent had confirmed to those findings. Finally, it was also revealed that most people were in agreement that the money earned through boda-boda business was far less important than the riders and their body health and to that effect all means should be employed to safeguard the motorcycles riders' safety in Runyenjes municipality. In particular, the study had revealed that the general public, especially parents to the young riders, were of the opinion that the government should improve the approaches in dealing with the riders who default the traffic rules.

5.4.Conclusions.

This study had revealed that the safety of the riders was influenced by factors such as riding training skills, riding experiences, implementation of traffic laws and the nature of roads. The findings had also revealed that there were numerous and frequent road accidents due to poor training skills and lack of riding experiences of the riders. Further to that, the study had revealed that un implementation of laws by traffic police officers was highly resisted by riders who from time to time complained of harassment by police officers. The nature of roads had also contributed to unsafe conditions of the riders because, access roads were not regularly maintained due to complexity of funds disbursement from the central government to local authorities.

5.5.Recommendations.

In view of the findings discussed in this study, the following recommendations were made:-

1. That, the government should come up with programmes to have motorcycles riders trained at a minimal cost.
2. That, the motorcycles transport customers should be sensitized on the care of their safety, and to be provided with protective gears whenever riding on a motorcycle.
3. That, a rule should be introduced through an act of parliament for all motorcycles to be installed with speed governors.

5.6.Recommendations for further studies.

Due to the shortcomings experienced by motorcycle riders and the road users, the researcher recommends further studies to be done on the safety of the riders and the road users as follows:

1. That, another study be done elsewhere, either in Nyeri , or Kisii counties.
2. That, training curriculum of the motorcycle transport trainees should include psychiatry for detection of those who suffer from mental disorders

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Appendix 1: LETTER OF INTRODUCTION TO THE RESPONDENTS

Njiru Kimotho Silvester REG.No.L50/78829/2009

University of Nairobi

Department of Extra – Mural studies

P.O. Box 30197- 00100

Nairobi.

Date: 1st July, 2013.

Dear Sir/Madam,

REF: A LETTER OF INTRODUCTION TO THE RESPONDENTS.

I am a master of arts student in the University of Nairobi pursuing a course in project planning and management at Embu Extra Mural Center. I am carrying out a research on factors influencing the motorcycles riders' safety in Runyenjes Municipality, Embu County.

Your response will be confidential.

Therefore do not indicate your name in the questionnaire. Please complete sections of the questionnaire relevant to you as objectively as you can. Your positive response will be highly appreciated

Yours Faithfully,

Njiru Kimotho Silvester

APPENDIX 2. RESEARCH INSTRUMENTS FOR THE STUDY.

Appendix 2.1. Questionnaire for all categories of respondents for section A-F.

DATE FILLED: **SERIAL NO.**
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This interview questionnaire is comprised of six sections and each section is meant to capture data related to particular respondents as per the independent and dependent variables.

- SECTION A:-**
- A:- Bio data.
 - B:- For motorcycles riders training skills.
 - C:- For motorcycles riders experiences.
 - D:- For traffic police officers.
 - E:- For medical officers
 - F:- For safety of motorcycles riders' by all respondents.

And finally general remark by respondents after filling the relevant section.

SECTION A: BIO DATA FOR ALL RESPONDENTS

To be filled by ticking one of the options provided:- A,B,C,D,E, and F where applicable.

1. Area of residence
2. Gender: (a). Male [] (b). Female []
3. Age: (a) Below 18 years [] (b) 18-24 [] (c) 25-30 [] (d) 31-36 [] (e) 37-42 []
(f) 43-48 [] (g) Above 49 []
4. Marital status (a) Single [] (b) Married [] (c) Widow [] (d) Divorced [] (e) Widower []
5. Number of dependants (a) 0 - 2 [] (b) 3-4 [] (c) 5-6 [] (d) More than six []
(e) Many []
6. Level of education (a) None formal [] (b) Primary [] (c) High school []
(d) University [] (e) College [] (f) High school drop out []

SECTION B: QUESTIONNAIRE TO BE ADMINISTERED TO MOTORCYCLES

RIDERS ONLY.

1. Are you trained as a motorcycle rider? **(a)** Yes [] **(b)** No [] **(c)** Yes/No []
(d) Not thoroughly [] **(e)** I don't know []

2. If yes, do you have a valid riding license? **(a)** Yes [] **(b)** No [] **(c)** Not given []
(d) Never paid for it [] **(e)** Its of no use []

3. How long did it take you to be trained as a motorcycle rider? **(a)** 6 months [] **(b)** 5
months [] **(c)** 4 months [] **(d)** 3 months [] **(e)** 2 months []

4. How much fee did you pay for the training? **(a)** Kshs 10,000 [] **(b)** Kshs 5,000 []
(c) Kshs 3,000 [] **(d)** Kshs 1,000 [] **(e)** Kshs 500 []

5. Who paid for your training fee? **(a)** My parents [] **(b)** My relatives [] **(c)** Myself []
(d) My employer [] **(e)** My friend []

Comments

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SECTION C: QUESTIONNAIRE FOR EXPERIENCES TO BE ADMINISTERED TO MOTORCYCLES RIDERS ONLY.

1. How many years have you been riding a motorcycle? **(a)** 6 months [] **(b)** 1 year [] **(c)** 2 years [] **(d)** 3 years [] **(e)** Over 4 years []

2. Why do you involve yourself in motorcycle riding? **(a)** For leisure [] **(b)** As a business [] **(c)** As a means of transport to various places [] **(d)** It's the only means of transport provided to me by my employer [] **(e)** I don't know []

3. How many kilometers do you cover per day? **(a)** 50 km [] **(b)** 100 km [] **(c)** 200 km [] **(d)** 300 km [] **(e)** 400 []

4. How many cases of accidents have you ever caused?
(a) One [] **(b)** Two [] **(c)** Three [] **(d)** Five [] **(e)** Ten []

5. How many of the above cases can be categorized as worst according to your own assessment? **(a)** One [] **(b)** Two [] **(c)** Three [] **(d)** Five [] **(e)** None []

Comments

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SECTION D: QUESTIONNAIR FOR IMPLEMENTATION OF TRAFFIC LAWS AND NATURE OF ROADS TO BE ADMINISTERED TO TRAFFIC POLICE OFFICERS.

1. How long have you worked as traffic police officer? **(a)** 0-3 years [] **(b)** 4-6 years [] **(c)** 7-9 years [] **(d)** 10-12 [] **(e)** Above 12 []

2. How many cases of motorcycle accidents have you ever attended to? **(a)** 5 [] **(b)** 7 [] **(c)** 9 [] **(d)** 11 [] **(e)** 13 and above []

3. From the answer given in 2 above how many of them were fatal? **(a)** None [] **(b)** One [] **(c)** Two [] **(d)** Three [] **(e)** Above three []

4. How many of them ended in the court of law? **(a)** None [] **(b)** One [] **(c)** Two [] **(d)** Three [] **(e)** Above three []

5. According to you, what factor or factors from the ones given below mostly contribute to motorcycles riders accidents? **(a)** Weakness [] **(b)** Curse [] **(c)** Poorly maintained roads [] **(d)** Potholes on the roads [] **(e)** None of the above []

Comments

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SECTION E: QUESTIONNAIRE FOR MEDICAL OFFICERS.

1. How long have you worked as a medical officer? **(a)** 3 years [] **(b)** 5 years []
(c) 7 years [] **(d)** 9 years [] **(e)** Above 10 years []

2. How many cases of motorcycle riders accidents do you treat per week? **(a)** 0-2 per week []
(b) 3-4 per week [] **(c)** 5-6 per week [] **(d)** 7-8 per week [] **(e)** 9-10 per week []

3. How many of the above cases have been fatal? **(a)** None [] **(b)** 0-1 [] **(c)** 1-2 []
(d) 3-4 [] **(e)** Above 5 []

4. What is the average cost of treating non fatal accidents? **(a)** Ksh. 2,000 [] **(b)** Ksh. 5,000 []
(c) Ksh. 8,000 [] **(d)** Ksh. 11,000 [] **(e)** Above Ksh. 13,000 []

5. How many of the above cases are catered for by insurance cover? **(a)** None [] **(b)** Some of them []
(c) Half of them [] **(d)** Most of them [] **(e)** All of them []

Comments

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SECTION F: QUESTIONNAIRE FOR MOTORCYCLES RIDERS SAFETY TO BE ADMINISTERED TO RESPONDENTS OF ALL SECTIONS.

1. Why should motorcycles riders wear heavy clothes and a helmet when riding? (a) To hide their identity [] (b) To protect themselves from strong wind [] (c) To look conspicuous [] (d) For their body safety in case of accidents [] (e) B and D above []
2. How many at least out of 10 (Ten) motorcycle riders wear the above, for their body protection and health safety? (a) 1/10 [] (b) 2/10 [] (c) 3/10 [] (d) 5/10 [] (e) Over 5/10 []
3. In your own opinion why would you advise motorcycles riders to wear heavy clothes and a helmet when riding? (a) Because it is fit for them [] (b) Because they protect them from harm of any kind [] (c) Because they look nice wearing them [] (d) Because police traffic officers check for them most regularly [] (e) I don't know []
4. It is important to observe traffic laws
(a) Strongly Agree []
(b) Disagree []
(c) Agree []
(d) Fairly Agree []
(e) Strongly Disagree []
5. Safety of motorcycles riders is more important than money earned through boda boda business by riders (a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Fairly Agree [] (e) None of the above []

Comments

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