

**ASSESSMENT OF ROAD SAFETY MESSAGES BY THE MINISTRY  
OF TRANSPORT AND INFRASTRUCTURE**

**By**

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## DECLARATION

This project is my original work and has not been submitted for a Masters Degree to any other university.

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This project has been submitted for examination with my approval as university supervisor.

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## **DEDICATION**

I dedicate this project to my lovely children Janet, Rhodah, Katie, family and friends for their continuous support and patience that helped me realise the completion of this project at the School of Journalism and Communication, University of Nairobi.

Finally, I dedicate this study to my late brother William Oburu Saola who died on the January 18, 2015 after being involved in a fatal motor vehicle accident along Mombasa road in Nairobi on the January 1, 2015.

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## **ABSTRACT**

In Kenya, the transport industry is dominated by *matatus*. They are the main means of transport for people and luggage. With the large number of *matatus* on Kenyan roads, the risks of accidents have gone high. The recent years have witnessed thousands perish on the Kenyan roads, a trend that is worrying the stakeholders in the transport industry. This is why the road carnage discourse has hit headlines because of the threat it poses to the lives of many Kenyans. This study sought to investigate the effectiveness of road safety advocacy messages towards curbing the rising number of deaths courtesy of road accidents. The main objective of the study was to evaluate effectiveness of road safety advocacy messages in Nairobi County. In addition, it examined the challenges in the design of road safety advocacy messages, the challenges in the dissemination of road safety advocacy information to the public, and sought to find out information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA). It made use of Agenda Setting Theory of Max McCombs, Donald Shaw and Social Marketing Theory to explain the relationship that exists between the design of road safety advocacy messages and their impact on the fight against road accidents. The primary data for this study was obtained using questionnaires and through personal interviews. This data was analysed using SPSS software and then presented on graphs and pie charts for easy interpretation.



## **CHAPTER ONE**

### **INTRODUCTION TO THE STUDY**

#### **1.1 Introduction**

This section provides the background on which assessment of road safety advocacy messages by the ministry of transport and infrastructure: the case is based. It also covers the statement of the problem, the research questions, the research objectives, and the assumptions of the study. In addition, it discusses the justifications and significance of the study and brings to light the scope and limitations of the study.

#### **1.2 Background of the Study**

Matatu vehicles dominate the public transport in Kenya, especially in urban areas. According to statistics by National Transport and Safety Authority, in the early 1960s, the number of matatus that were operating in Kenya was less than 400. However, in the modern days, these figures have zoomed and in Nairobi Country alone, there are about 80,000 matatus in operation. With the industry's vast growth, there have been increased road traffic accidents that have threatened safety of Kenyan travellers. Odero, Khayesi and Heda (2003) observe that Kenya, with an average of 7 deaths from the 35 crashes that occur each day, has one of the highest road fatality rates in relation to vehicle ownership in the world.

The causes of road accidents in Kenya can be attributed to irresponsible motorists, pedestrian related causes, poor road conditions, poor enforcement of traffic road conditions, and use of road unworthy vehicles. A new poll on road safety conducted by Ipsos has revealed that majority of Kenyans do not take personal responsibility for their own safety on the road. This survey indicated that most of them think that the police have the responsibility of ensuring road safety through enforcement of the law. However, in reality this cannot be the case since everyone has the responsibility of ensuring the roads are safe for the users. Traffic safety is a

serious problem in Kenya, with over 12,000 crashes occurring annually. Approximately 26,000 vehicle crashes are reportedly annually that cause over 3,000 fatalities and 9,000 serious injuries. These figures translate to about 32 crashes and about 9 fatalities on a daily basis.

Statistics reveal that road traffic accidents in Kenya is the third cause of death after malaria and HIV/AIDS. It is a menace that has affected the general health and morbidity. Owing to these grim figures, the UN declared the years 2011 to 2020 as the Decade of Action for Road Safety. The aim of doing this was to arrest the escalating figures of fatalities and injuries hence reduce the trend by half. One may be forgiven to think that nothing is being done to deal with road traffic crashes in the country. In Kenya, the Ministry of Transport through the National Transport and Safety Authority has put in place measures that will ensure the road is safe and no harm visits public transport. One of the ways is that of road safety messages that are placed on places thought to be hotspots of accidents. The aim of doing this is to ensure Kenyans are sensitized about safe road etiquettes and alert drivers and other motorists on what to do to ensure they are safe on the road.

### **1.3 Statement of the Problem**

Different countries have employed different strategies to ensure their roads are safe. In this case, strategy implies to a well thought out plan to achieve certain goal (s). Strategy or strategies employed takes cognisance of the cost and the time factor in service delivery. In Kenya, different strategies have been employed in the fight against road carnage. The main step has been the formation of National Transport and Safety Authority. The role of this authority is to ensure all traffic rules are adhered to in order to make roads a good place to ply for passengers and pedestrians through education, prevention, and law enforcement.

According to Ipsos, despite the efforts by the National Transport and Safety Authority, the number of accidents is still high. This survey further notes that less than half (44%) of Kenyans have seen or heard an advertisement on road safety. This begs the question, is there a problem in the way National Transport and Safety Authority's road safety messages are disseminated? It is against this revelation that this inquiry seeks to make a contribution by interrogating whether a link exist between the method of message dissemination and the outcome.

## **1.4 Objectives of the Study**

### **1.4.1 The main objective of the study was**

- i. To evaluate effectiveness of road safety advocacy messages in Nairobi County.

### **1.4.2 Specific objectives of the study include:**

- i. To examine the challenges in the design of road safety advocacy messages
- ii. To find out some of the challenges in the dissemination of road safety advocacy information to the public
- iii. To find out information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA)

## **1.5 Research questions**

This study sought to address the following questions:

- i. What is the effectiveness of road safety advocacy messages in Nairobi County?
- ii. What are the challenges in the design of road safety advocacy messages?
- iii. What are some of the challenges in the dissemination of road safety advocacy information to the public?
- iv. What are the information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA)?

## **1.6 Justification and Significance**

### **1.6.1 Policy justification**

This approach was abet in unearthing the insufficiencies in the road safety advocacy messages and how this could be rectified. This study also provided useful insights especially in regards to how future road safety advocacy messages should be redesigned to enhance efficiency in this fight. Moreover, this study came in handy in determining whether National Transport and Safety Authority should continue with its road safety mandate in its current state.

### **1.6.2 Academic justification**

Many researches focussing on the fight against road carnage have tended to emphasize on its impact on the society and re-examination of the strategies used in fighting this menace. There has however been little emphasis on how the road safety advocacy messages are designed. This study will thus carry out a county specific analysis by focusing on messages generated by National Transport and Safety Authority. This of course will lead to better appreciation and understanding of the internal dynamics of Kenya's public transport and how stakeholders in it operate. In addition this inquiry should add to the already existing stock of knowledge and guide future research on this particular issue.

## **1.7 Scope and Limitations of the Study**

This study focused on National Transport and Safety Authority's road safety advocacy messages. It seeks to analyse if a relationship exists between the design of road safety advocacy messages and its effectiveness on the fight against road accidents. It however, goes without saying that in the course of this study challenges may arise. Financial constraints limited this study to the use of only secondary sources of data. In addition, time factor contributed to this decision. This inquiry thus suffered certain shortcomings.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.0 Introduction**

The chapter contains a review of related literature review on assessment of road safety advocacy messages by the Ministry of Transport and Infrastructure: the case of Nairobi County. The literature review will focus on objectives of the study under the following sub-headings; effectiveness of road safety advocacy messages, challenges in the design of road safety advocacy messages, challenges in the dissemination of road safety advocacy information to the public, and information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA).

#### **2.1 Effectiveness of road safety advocacy messages**

With the rising number of deaths as a result of accidents, there is need to minimise injury and death on the roads through the use of advocacy messages. According to Gladys, (2006) advocacy refers to the act of arguing for action on behalf of a particular issue and the process of influencing, informing and assisting decision and policy makers. However, it is good to note that for road safety advocacy messages to be effective, it will be good to base them on well documented numbers and studies. With good information, it will be easy to make good decisions regarding the kind of messages that should be sent to the stakeholders in the transport industry. At times, advocacy messages target media, sometimes the general public, but decision makers are normally the primary target.

On the global level, Global Road Safety Forum (GRSF) offers a very strong global advocate for road safety. This programme helps raise awareness and brings people together to address the global road safety crisis in developing and transitioning countries. It works in collaboration with the major institutional bodies, and it organises forums for stakeholders on

regional and global level (Peden, 2010). In the Kenyan case, a good example of road safety advocacy activities is “Toa Sauti” campaign. It is a road safety campaign that was launched when Safaricom and the Media Owners Association formed The National Road Safety Trust, in August 2012. These trustees were proposed to be the representatives of the private and public sectors when it comes to active engagement in issues to do with road safety. This campaign has a designed framework for three years in regard to national road safety programme that will help in addressing creation of awareness, education, emergency response, advocacy, research, and traffic policy reforms. This particular campaign launches reports and videos that have documented the need to speak about road carnage in Kenya. It works closely with national partners to mobilize people to sign petitions and lobby governments (Toa Sauti Official Webpage, 2014).

“Toa Sauti” is an advocacy campaign that encourages Kenyan to speak about road safety. On top of this, it sends the message of the need for people to be vigilant as road users and be courteous to other road users. It makes it an obligation for Kenyans to share their story, inform others about black spot areas and educate people around them on the basic road safety measures. The campaign encourages Kenyans to pull together so that they can save lives by creating a culture that will ensure the roads are safer for current and generations to come. It is a campaign that urges Kenyans to raise their voice on social media platforms, post about the black spots and be conscious about road safety (Bachani et al., 2012). According to Chitere & Kibual, (2006) road safety affects everyone whether you are a passenger, driver or pedestrian. This is why there is need to fight back using media in order to call for action for road users to exercise caution. Through “Toa Sauti” people can take the initiative to call upon everyone who is concerned with road safety to take action to ensure the roads are safe. This platform is a mouthpiece for people to take part in saving lives.

'Slow Down, Speed Kills' is another campaign launched in Kenya with the aim of passing information regarding road safety. It is a campaign that employs a coordinated approach towards road safety in Kenya. Through the use of social media, this campaign has managed to highlight on the importance of the efforts to save lives. Since it was launched in the year 2011, its road safety advocacy initiatives have intensified and improved on the reinforcement of speed laws and awareness campaigns. This programme has put in place measurable improvement in regard to speed law compliance. From statistics, it shows that in Thika speed law compliance has improved from 42% (June 2011) to 71% (June 2013) and in Naivasha speed law compliance has improved from 50% (June 2011) to 77% (June 2013) ('Slow Down, Speed Kills' campaign launched in Kenya, 2013). The purpose of the messages of this programme is to increase awareness of road safety and help reduce the global road traffic injuries and deaths. It is a campaign that uses strong messages in order to get the needed attention like it advocates that road safety is a basic human right. This campaign requires that the donor supported road project should set aside a minimum of 10% road safety money to ensure that the roads have been constructed with safety in mind and that effective engineering (Chieter & Kibua, 2012).

## **2.2 Challenges in the design of road safety advocacy messages**

According to Gladys, (2006) strong road safety policies that are coupled with effective enforcement and appropriate penalties are critical to ensuring road users are safe from road crash injuries and deaths. However, in many developing countries, Kenya included, there are many gaps in the road safety policies and advocacy messages. To start with, the issue has its roots in the legislation and enforcement. This is something that has barred the effectiveness of road safety advocacy messages. This is something that has had a huge impact on the daily lives of many people, globally. Chitere & Kibual, (2006) is of the opinion that advocacy is a set of tools which can be used to achieve improved road safety. Its main aim is to influence

and inform with the aim of changing policies, structures and legislation through targeting decision-makers, who have the authority to make changes.

In the Kenyan situation, there are a number of strategies that have been employed by National Transport and Safety Authority with the aim of fighting road accidents. One of the measures that have been taken is training of drivers so that they are competent enough. This has been done through credible institutions that train drivers to enhance professionalism in the field. This authority has come up with messages that it spreads on media stressing on the need to have drivers undergo proper training so that they have the right skills. According to Habyarimana & Jack, (2011) one of the reasons why there are many accidents on the Kenyan roads is because of half-baked drivers who have never gone to a driving class. This is the reason why National Transport and Safety Authority has come up with advocacy messages requiring all drivers to exercise caution. In addition, this authority also is spreading messages requiring that each driver has the right documents. On top of this, the authority has come up with messages warning drivers against speeding and driving recklessly while on road. There are also adverts that require all vehicles to be fitted with speed governors so that they are able to operate within the set speed on different roads.

According to Peden, (2010) in creating these messages the National Transport and Safety Authority has encountered a number of challenges. To start with, there is lack of enough funds to design appealing messages. To design attractive messages that can catch the attention of many people needs money, which the authority does not have. This has limited the quality of the images and messages put across the billboards. For this reason, few drivers and road users get to spot the messages. If the messages were designed using attractive fonts and colours, it could have been easy for them to be spotted. In designing these messages, there is the problem of the right language to use so that it reaches all people. The County of



Nairobi is a metropolitan area that has people from different tribes and countries. This makes it quite challenging for people who are not well-versed with English and Swahili to read what the messages say. This means that language barrier is one of the challenges when it comes to designing road advocacy messages (Chitere & Kibua, 2012).

### **2.3 Challenges in the dissemination of road safety advocacy information to the public**

In disseminating of road safety advocacy information to the public, the National Transport and Safety Authority encounter a number of problems that hinder effective message delivery. Road safety advocacy messages are focused at engaging the target audience who are road users in Nairobi County. These messages target the audience when they are out of their homes i.e. when they are on the move. The role of this outdoor messages erected on billboards has been challenged leading to a lot of creativity, aggression and persuasion. In Nairobi County, roadside billboards, posters on buses and on flyovers and ads on buildings are common in disseminating road safety advocacy messages. Despite spreading the message, this is a dull way of preaching the need to have caution when on the road. Other challenges that hinder the dissemination of road safety messages include costs and language barrier (Gladys, 2006).

### **2.4 Information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA)**

The purpose of road safety advocacy messages is to increase awareness of road safety. These are strong messages that are meant to persuade and send information regarding the observation of caution in order to ensure reduced accidents on the roads (Otsyeno, 2011). Advocacy and communication are vital in raising awareness and changing the attitudes of road users. In addition, advocacy messages will help in sharing experience and expertise and in some cases help in raising funds towards fighting reckless road use by pedestrians and

drivers. Some of these messages offer good guidance to the drivers on the speed limit and careful driving so as to avoid causing accidents (Chitere & Kibual, 2006). According to Habyarimana & Jack, (2011) the World Health Organization (WHO) has also supported collaboration with NGOs to advocate for road safety and rights of those people who are victims of road accidents and their families. This has seen the establishment of the Day of Remembrance for Road Accident Victims that is normally observed every 3<sup>rd</sup> Sunday of November of each year.

According to Peden, (2010) road safety advocacy is undertaken at both national and county level. It is an exercise that aims at advocating on given issues in the transport sector like pedestrian safety, support for road carnage victims, drink drive problems, and seatbelts. The messages send the gospel of ensuring over-drinking and taking harmful drugs like marijuana by drivers is a thing of the past. This is owed to the fact that these substances are the ones that have caused tragic accidents on Kenyan roads. A study by Ipsos found out that majority of Kenyans attributed the causes of road accidents to motorist factors such as speeding (71%) and driving while drunk (58%). In addition, the authority is doing public education/ civic awareness. Civic education is one of the key tenets in letting the public know how to enhance road safety. The authority has been using both the mass media and nationwide sensitization clinics to educate the public on road carnage and its effects on various spheres of life. Use of brochures to highlight some of the impacts of road accidents have had on our society has also been highly employed by the National Transport and Safety Authority.

## **2.5 Theoretical framework**

This research employed agenda setting theory of Dr. Max McCombs and Dr. Donald Shaw describes the ability of media to influence public agenda. It explains that if a news item is given frequent and prominent coverage, the audience will be convinced that this is a very important issue that needs attention. Agenda-setting theory describes the ability of media

platforms to influence topics that regarding public agenda. It explains that if a given item is covered prominently and frequently by different media, then the audience will tend to take this issue serious. Agenda setting theory is a concerned with creating public awareness and concern of salient issues by the news media. One tenet of this theory holds that the media and press do not reflect reality, as they tend to filter and shape the same. Another tenet holds that the concentration of media on a few subjects and issues leads the masses to see these issues as more important than others. In the concept of agenda setting theory, the role of mass media in communication is emphasized. The proponent of this theory argues that different media platform have varying agenda-setting potential. In this particular research, it will be used to explain the relationship that exists between the way road safety advocacy messages are designed and its impact on the fight against road accidents. In addition, this theory was used in explaining the relationship that exist between the way road safety advocacy messages are designed and their impact on the fight against road carnage.

### **Social Marketing Theory**

This theory focuses on how information that is socially valuable can be prompted. This theory is administrative in nature and it seeks at outlining a framework that can be used in designing, implementing, and evaluating information campaigns. Its target audience are normally based on the information need. Once the audience is identified, the information is then packed and distributed so that it can be easily accessed to the audience. This theory aims at understanding how psychological and societal factors manipulate mass media campaigns. It focuses on helping identify different psychological and social barriers that prevent the flow of information via mass media and gives ways and ideas on how these barriers can be prevented. It was used in this study to assess the efficacy of the design and content of road safety advocacy messages in influencing the behaviour change among road users and concomitant of the messages on actual incidences of road accidents.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The chapter presents research designs, variables, location of the study, target population, sampling techniques and sample size, research instruments, pilot study, validity, reliability, data collection techniques, data analysis and finally logistical and ethical issues.

#### **3.1 Research Design**

The study employed purposive sampling, which is a non-probabilistic sampling method. This allowed for intensive investigation of issues and because the universe is small in size. This approach was appropriate because it provided the researcher with the justification to make generalisations from the sample that will be under study (Best & Kahn, 2000). This being a case study, this method looked at in-depth analysis of the road safety advocacy messages by the ministry of transport and infrastructure with the aim of knowing how effective these messages are in reducing road carnage in Nairobi County. This formed a testable hypothesis and allowed the researcher to study the road safety advocacy messages and how effective they can be in reducing road accidents. Through the use of surveys, the researcher found it easy to collect large amounts of data from a large population in a highly economical way.

#### **3.2 Variables**

This particular research made use of three types of variables: independent, intervening and dependent variables. The independent variables in the study was road safety advocacy messages. The intervening variables in the study included strategies that have been laid in place by stakeholders in the transport industry to ensure road safety advocacy messages are effective in meeting their goal. On the other hand, the dependent variable was road carnage.

### **3.3 Location of the study**

The study was conducted in Nairobi County, Kenya.

### **3.4 Target Population**

The target population in this study was PSV crew, NTSA officials and passenger of various routes within Nairobi County, Kenya.

### **3.5 Sampling technique and sample size**

The study used purposive sampling in determining the study area. This was a good sampling technique as it saw the subject for study picked based on how they interacted with road safety advocacy messages. In addition, this method was good because it ensured balance when it comes to group size. Through the use of simple random technique, the researcher picked sample population who have interacted with road safety advocacy messages. With the help of a research assistant, the researcher met the participants to gather information. The researcher inquired on the kind of road safety advocacy messages that they have interacted with. In addition, the researcher sought information regarding the effectiveness of these messages on reducing road carnage in Nairobi County. This information was of great help in determining how road safety advocacy messages affected the number of road carnage on Kenyan roads.

### **3.6 Research instruments**

Structured interviews and questionnaires were used to collect information from the drivers and other matatu crew who operate on roads in Nairobi County. The interview schedule provided rich information to address the research questions. Equally, questionnaires were used to collect information from NTSA officials and other stakeholders in the transport industry. One reason why questionnaires were used is because they are practical. In addition, it can be used to collect large amount of information from many people in a short time with relatively low cost. This method has less chances of affecting the reliability and validity of

the research. The results from the questionnaires are easy and quick to analyse through software package. In the event there were participants who found it hard to interpret the questionnaires, prior arrangements were made to enhance interpretation. The items in the instruments were formulated by the researcher.

### **3.7 Pilot study**

Piloting of research instruments helps in eliminating misunderstanding and ambiguities in the items (Kothari, 2005). The clarity of questions, relevance, appropriateness, and comprehensiveness of the research were checked through piloting study. The researcher carried out a pilot of the instruments in Kisumu County. The city was selected because it has similar characteristics as the sample institutions but then the results were not be included in the sample of this research study. In order to ensure solicit of the needed information, there were a number of adjustments made to the items. Of importance to note is that respondents who were used in the pilot study were not be included in the main study.

#### **3.7.1 Validity**

In order to ensure there was validity of the instruments used in the study, the researcher established whether the variables under study were reflected in the items in the instrument. An expert opinion was also be sought from the supervisors. Each item was examined in terms of its relevance to the variables under study and the research objectives.

#### **3.7.2 Reliability**

To determine the reliability of the instruments, the researcher had different researchers follow the same methods to see if results were duplicated. In the event the results were similar, then the method was reliable. The results were analysed descriptively and correlatively to modify the research instruments. According to Creswell, (2003), qualitative data can be made reliable

and valid by triangulating different data sources of information by examining evidence from the source and using it to build justification for themes.

### **3.8 Data collection techniques**

This research employed a mixture of methods in the collection of data. It included collection of content analysis of the existing literature (books, journal articles, dissertation, NTSA accident reports), conducting face to face interviews of the sampled respondents, administration of questionnaire, and use observation method. The researcher met the participants in person, issued questionnaires to the respondents, and interviewed them face-to-face. During this visit, the researcher carried out interviews with the selected respondents starting with the drivers and other crew in the transport sector. Because of the comprehensive research that was done within a limited time, the researcher made use of services of a research assistant. The researcher visited the sampled city armed with questionnaires to administer to the relevant people. In order to ensure there was high return of questionnaires, the researcher allowed enough time to the respondents. This ensured they took their time to respond accordingly.

### **3.9 Data analysis**

The quantitative data was collected on the effectiveness of road safety advocacy messages in Nairobi County, Kenya was coded and analysed using the strata package. In addition, analysis of variance (ANOVA) was made use of when it came to investigating if there was a relationship between road safety advocacy messages and road carnage. Analysis of variance was of great importance as compared to the use of multiple t-tests because it reduced the probability of a type-1 error (Cohen et al., 2007). Additionally, tables, pie charts and percentages were utilized in order to analyse this quantitative data. On the other hand, qualitative data was analysed thematically. The raw data that was collected from the

respondents was arranged systematically to help in filtering data that was of no use. This systematic arrangement helped in the interpretation of ambiguous answers and in highlighting errors and correcting them. Kombo and Tromp (2006) argue that qualitative data can be categorized in regard to major themes. The aim of doing this is to enable easy analysis. The data was triangulated through the use of mixed method, where qualitative and quantitative data analysis was used.

### **3.10 Ethical considerations**

To start with, there was need to seek permission from the Ministry of Transport and Infrastructure. The researcher did this by presenting an introduction letter from the university. This activity took place before the data collection procedure commenced. Once the authorization letter was secured, the researcher took copies to relevant authorities in the Ministry of Transport and Infrastructure. Because this was a case study research, it was good that the researcher sought consent from the respondents. In order to ensure the respondents gave information, the researcher assured them that the information they gave was confidential and their identity was not to be revealed (Jackson, 2009).



## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.0 Introduction

This chapter presents the data analysis and discussion of the study findings. The data was presented in the form of frequencies and percentages using pie chart, graphs and charts. The data presented covers response rates for the questionnaire, interviews and what the researcher observed. The objective of the study was to investigate the road safety advocacy messages by the ministry of transport and infrastructure: the case of Nairobi County. The findings of the study were discussed under the following themes derived from the research questions:-

- i. What is the effectiveness of road safety advocacy messages in Nairobi County?
- ii. What are the challenges in the design of road safety advocacy messages?
- iii. What are some of the challenges in the dissemination of road safety advocacy information to the public?
- iv. What are the information on road safety advocacy messaging opportunities for the newly formed National Safety and Transport Authority (NTSA)?

#### 4.1 Effectiveness of road safety advocacy messages in Nairobi County

This study sought to establish the effectiveness of road safety advocacy messages in Nairobi County. This entailed asking respondents if they have ever seen road safety advocacy messages' billboards on the road, if the billboards containing the road safety advocacy messages were strategically placed, the color that was used in designing the road safety advocacy messages, if the road safety advocacy messages you have seen on the roads are attractive enough, the language was used on the road safety advocacy messages, and if they were familiar with the language used on road safety advocacy messages that you have ever come across. Data collected from the respondents was presented in the tables below.

#### 4.1.1 Gender of the participants

This study involved the PSV crew, NTSA officials, and passengers within Nairobi. It sought to establish the gender of the participants.

##### i. Gender of PSV crew

Out of the 30 PSV crew who were interviewed, 27 were male while 3 were female.

<b>Gender</b>	<b>No.</b>	<b>Percentage (%)</b>
<b>Male</b>	27	70
<b>Female</b>	3	30
<b>Total</b>	30	100

**Table 4.1: Gender of PSV crew**

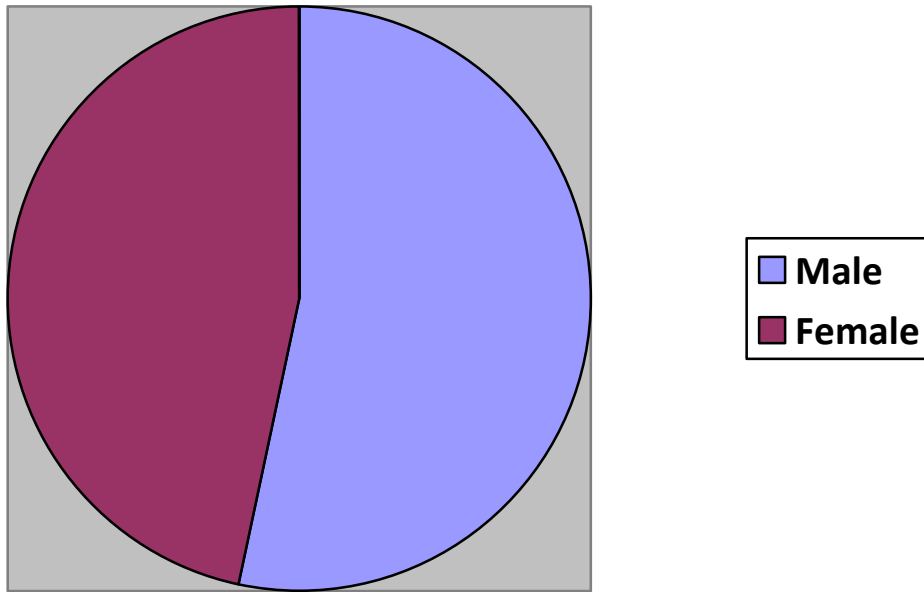
This is a clear show that in Nairobi county, the large number of matatu crew are male. A great disparity exists between the males and females who are in the matatu industry. Maybe this justifies the notion that some jobs are meant to be done by males while others by females.

##### ii. Gender of the NTSA officials

Out of the 30 NTSA officials who were interviewed, 14 were female while 16 were male.

<b>Gender</b>	<b>No.</b>	<b>Percentage (%)</b>
<b>Male</b>	16	53.3
<b>Female</b>	14	46.7
<b>Total</b>	30	100

**Table 4.2 : Gender of NTSA officials**



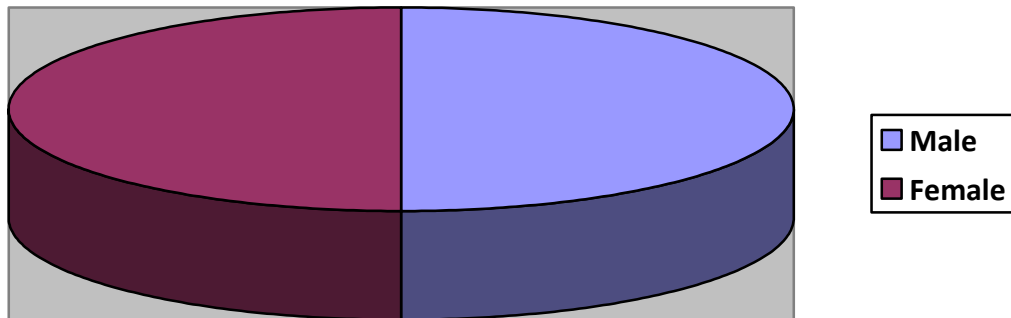
In the NTSA officials, there is a gender balance. This is a clear show that there is gender consideration when employing NTSA employees.

**iii. Gender of passengers**

Out of the 30 passengers who were interview, 15 were male while 15 were female. The researcher selected equal number with the aim of giving passengers an equal chance to get the views regarding the NTSA messages.

Gender	No.	Percentage (%)
Male	15	50
Female	15	50
<b>Total</b>	<b>30</b>	<b>100</b>

**Table 4.3 : Gender of passengers**



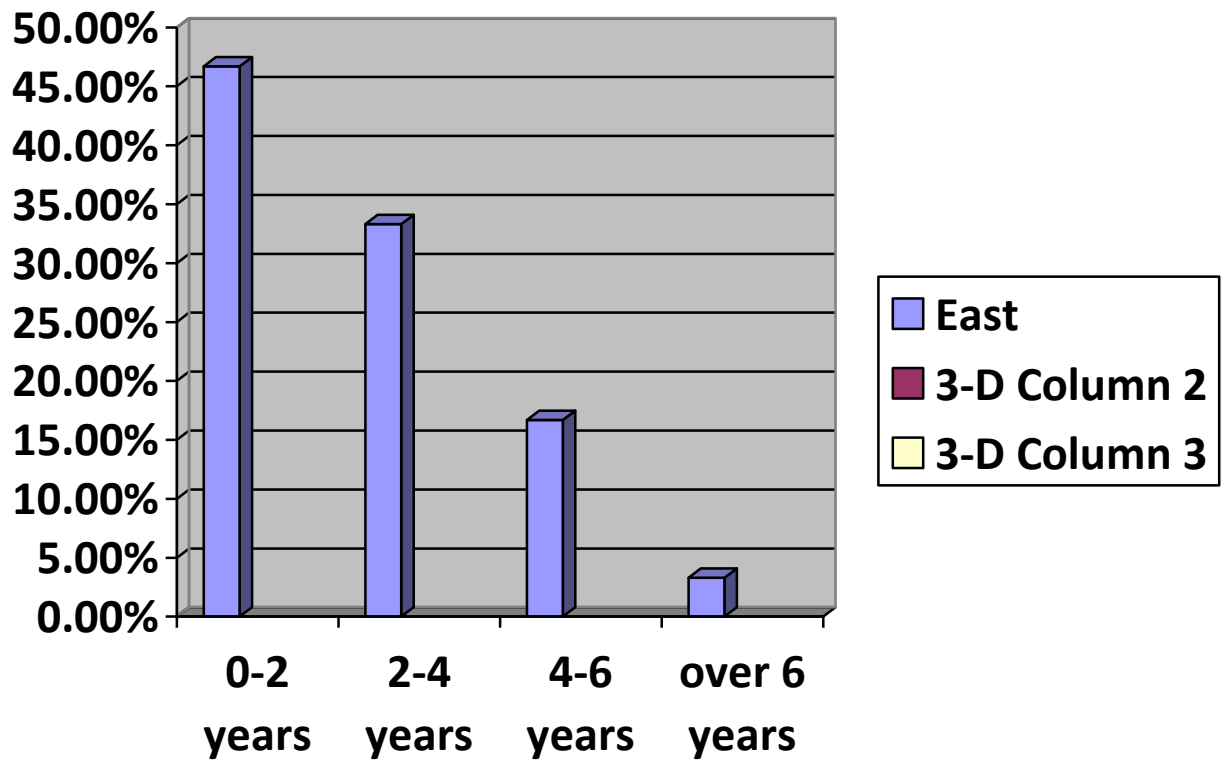
It comes out clear that there is a relatively equal number of people, in terms of gender, using the matatu industry within Nairobi county.

#### 4.2 Time the participants used the route

The study sought to establish for how long the matatu crew and the passengers have been using the route.

##### 4.2.1 Passengers

Time	No.	Percentage
0-2 years	14	46.7
2-4 years	10	33.3
4-6 years	5	16.7
Over 6 years	1	3.3
<b>Total</b>	<b>30</b>	<b>100</b>

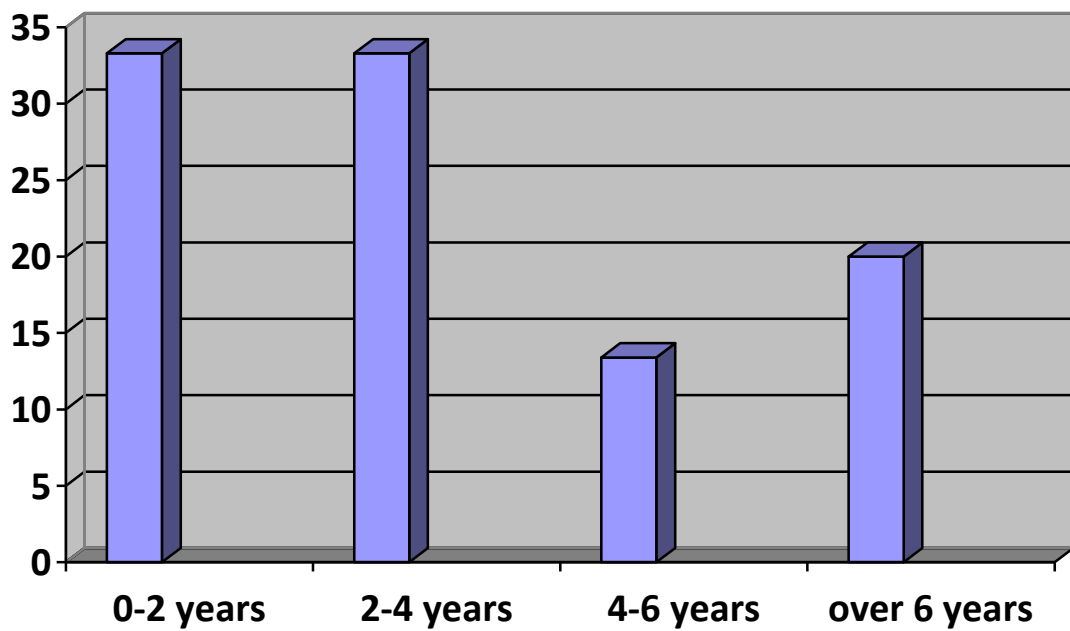


**Table 4.2.1 Time passenger have used a given route**

From the results, it comes out clear that most passenger in Nairobi have at least used a given route for some time. The time keeps varying as years move. Most of them have used a given route for less than 2 years. This is a show that maybe by the time they were using a given route, the billboards may have not been erected. In addition, this time may be less for one to gauge whether the message is effective or not. There is need to be time such that passenger can compare the accidents before and after the message was erected.

#### 4.2.2 Matatu crew

Time	No.	Percentage
0-2 years	10	33.3
2-4 years	10	33.3
4-6 years	4	13.4
Over 6 years	6	20.0
<b>Total</b>	<b>30</b>	<b>100</b>



**Table 4.2.2 Time matatu crew have used a given route**

It came out clear that most matatu crew have operated on a given route for less than four years. This could be an indication that most of them have seen the NTSA messages on billboards.

### 4.3 Participants who have ever seen road safety advocacy messages

#### 4.3.1 Passengers

Out of the 30 passengers who took part in this study, 27 attested to have seen the road safety advocacy messages erected by NTSA along the roads in Nairobi.

	No.	Percentage (%)
<b>Yes</b>	27	90
<b>No</b>	3	10
<b>Total</b>	30	100

From this statistics, the research established that most passengers have seen the messages on billboards that are erected by NTSA. This shows that if they can adhere to these messages, then it will be a good way of curbing accidents on the roads.

#### 4.3.2 Matatu Crew

The study sought to know if the matatu crew were aware of the NTSA road safety messages erected on their routes. From the results, out of the 30 matatu crew members who were interviewed, 24 said they had seen the messages while 6 said they have never seen the messages.

	No.	Percentage (%)
<b>Yes</b>	24	80
<b>No</b>	4	20
<b>Total</b>	30	100

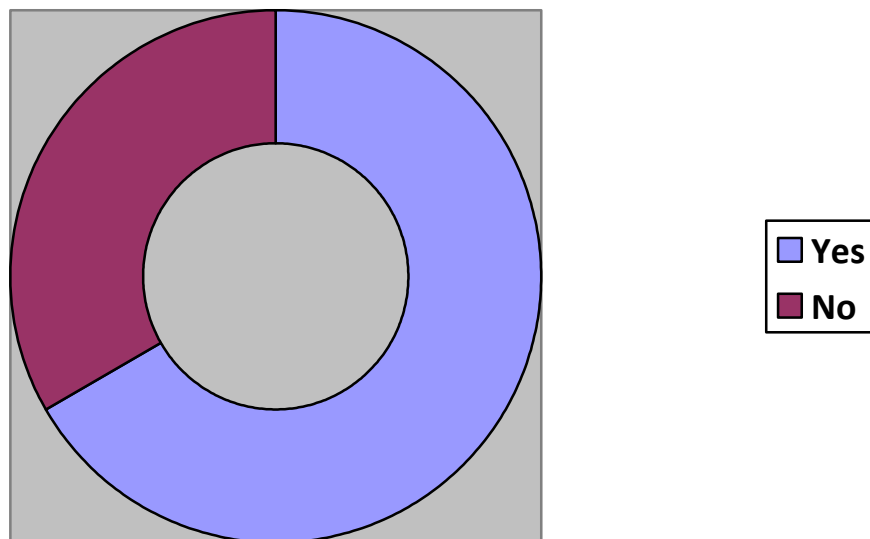
This is a clear show that most of the matatu crew have seen these messages. Despite this, there are view who have not seen the message. Therefore, it cannot be argued that the messages have reached the matatu crews fully.

#### 4.4 Positioning of the billboards

##### 4.4.1 Passengers

Out of the 27 passengers who saw the NTSA road safety advocacy message billboards, one 18 said they were strategically place while 9 said they were not.

	No.	Percentage (%)
<b>Yes</b>	18	66.7
<b>No</b>	9	33.3
<b>Total</b>	27	100



This is a clear show that NTSA needs to do something about the way it places its messages if at all they aim at capturing the attention of road users.



#### 4.4.2 Matatu crew

Out of the 24 matatu crew members who said they had seen the NTSA road advocacy messages, only 20 said the message was strategically situated and 4 said they were not.

	No.	Percentage (%)
<b>Yes</b>	20	83.3
<b>No</b>	4	16.7
<b>Total</b>	24	100

This study established that most of the matatu crew were satisfied with the positioning of the message while a few were not. Nevertheless, there is need to have all billboards placed in a strategic place if at all they are to meet their mission.

#### 4.5 Color used in designing the NTSA road safety advocacy messages

The study sought to establish if matatu crew and passengers who ply different parts of Nairobi were satisfied with the colors used on NTSA road safety advocacy messages. It did this by interviewing matatu crew and passenger plying in different parts of Nairobi County.

##### i. Passenger

Out of the 27 passengers who saw the NTSA road safety advocacy message billboards, one 21 said the color used on these messages was bright while 6 said it was dull.

	No.	Percentage (%)
<b>Bright</b>	21	70
<b>Dull</b>	6	30
<b>Total</b>	27	100

## ii. Matatu Crew

Out of the 24-matatu crew members who said they had seen the NTSA road advocacy messages, 21 said the color used on the NTSA road advocacy messages was bright while 3 said it was dull.

	No.	Percentage (%)
<b>Bright</b>	21	87.5
<b>Dull</b>	3	12.5
<b>Total</b>	24	100

The study established that most of the matatu crew like the color used on the message. This could be the reason why most of them are able to see the messages while operating in given routes within Nairobi County.

## 4.6 Attractiveness of the NTSA road safety advocacy messages

The study sought to establish what passengers and matatu crew thought when it comes to the attractiveness of the NTSA road safety advocacy messages.

### i. Passengers

Out of the 27 passengers who saw the NTSA road safety advocacy message billboards, 25 said the messages were attractive while 2 said the messages were not.

	No.	Percentage (%)
<b>Attractive</b>	25	92.6
<b>Not attractive</b>	2	7.4
<b>Total</b>	27	100

The study found out that most passengers are satisfied with how attractive the NTSA road safety advocacy messages are. It shows that in designing their messages, NTSA have put in place messages that can catch the attention of road users. According to Otsyeno, (2011) the purpose of road safety advocacy messages is to increase awareness of road safety. These are strong messages that are meant to persuade and send information regarding the observation of caution in order to ensure reduced accidents on the roads. This is something that can be achieved if the message are attractive enough to catch the attention of road users i.e. passengers and matatu crew like drivers.

**ii. Matatu Crew**

Out of the 24-matatu crew members who said they had seen the NTSA road advocacy messages, 22 said the NTSA road advocacy messages was attractive enough while 2 said they were not.

	<b>No.</b>	<b>Percentage (%)</b>
<b>Attractive</b>	22	87.5
<b>Not attractive</b>	2	12.5
<b>Total</b>	24	100

The study established that the NTSA road safety advocacy messages were attractive enough to matatu crew. This is the reason why they managed to see these messages.

**4.7 Languages used on NTSA road safety advocacy messages**

The study sought to establish the language that was used on NTSA road safety advocacy messages and if the road users were familiar with the same.

**i. Passenger**

<b>Language</b>	<b>No.</b>	<b>Percentage</b>
<b>English</b>	5	18.6
<b>Swahili</b>	11	40.7
<b>Sheng</b>	10	37.0
<b>Others</b>	1	3.7
<b>Total</b>	27	100

The study established that 18.6% of passengers prefer English language, 40.7% prefer Swahili, 37% prefer Sheng, while 3.7% prefer other languages i.e. local languages.

**ii. Matatu Crew**

Out of the 24-matatu crewmembers who took part in the study, it was established that 8.3% of the matatu crew prefer English language, 25% prefer Swahili, 58.4% prefer Sheng, while 8.3% prefer other languages i.e. local languages.

<b>Language</b>	<b>No.</b>	<b>Percentage</b>
<b>English</b>	2	8.3
<b>Swahili</b>	6	25
<b>Sheng</b>	14	58.4
<b>Others</b>	2	8.3
<b>Total</b>	24	100

#### 4.8 How often road safety advocacy messages are seen

##### i. Passengers

Out of the 27 passengers who saw the NTSA road safety advocacy message billboards, 16 said they see the messages often, 8 said they see the messages regularly, while 3 said they see the messages occasionally.

	No.	Percentage
<b>Often</b>	16	59.3
<b>Regularly</b>	8	29.6
<b>Occasionally</b>	3	11.1
<b>Total</b>	27	100

The study established that most of the passengers saw the NTSA road safety messages erected on billboards along the routes they use. This is a show that a large number of its target receives the messages that NTSA sends to road users.

##### iii. Matatu crew

Out of the 24-matatu crewmembers who took part in the study, it was established that 41.7% of the matatu crew see the message often, 41.7% see the message regularly, while 16.6% see the message occasionally

	No.	Percentage
<b>Often</b>	10	41.7
<b>Regularly</b>	10	41.7
<b>Occasionally</b>	4	16.6
<b>Total</b>	24	100

The study established that most of the matatu crew see the messages often and regularly. This is a clear show that the NTSA messages get to the target audience.

#### **4.9 Kind of message contained on the NTSA road safety advocacy messages**

The study sought to establish the kind of message that NTSA has placed on the billboards erected on various routes within Nairobi County.

##### **i. Passengers**

Out of the 27 passengers who saw the NTSA road safety advocacy message billboards, 16 said they see the messages often, 8 said they see the messages regularly, while 3 said they see the messages occasionally.

<b>Message</b>	<b>No.</b>	<b>Percentage</b>
<b>Over speeding</b>	<b>7</b>	<b>25.9</b>
<b>Alcohol</b>	<b>13</b>	<b>48.1</b>
<b>Mobile phone while driving</b>	<b>4</b>	<b>14.8</b>
<b>Seatbelts</b>	<b>3</b>	<b>11.2</b>
<b>Total</b>	<b>27</b>	<b>100</b>

The study established that NTSA had prioritized alcohol and over speeding messages while little priority has been given to messages that talk about seatbelts and mobile phones.

##### **ii. Matatu crew**

Out of the 24-matatu crewmembers who took part in the study, it was established that 41.7% of the matatu crew saw over speeding, 33.3% saw messages on alcohol, 16.7% saw messages on mobile phone while driving, and 8.3% saw messages on seatbelts.

<b>Message</b>	<b>No.</b>	<b>Percentage</b>
<b>Over speeding</b>	<b>10</b>	<b>41.7</b>
<b>Alcohol</b>	<b>8</b>	<b>33.3</b>
<b>Mobile phone while driving</b>	<b>4</b>	<b>16.7</b>
<b>Seatbelts</b>	<b>2</b>	<b>8.3</b>
<b>Total</b>	<b>24</b>	<b>100</b>

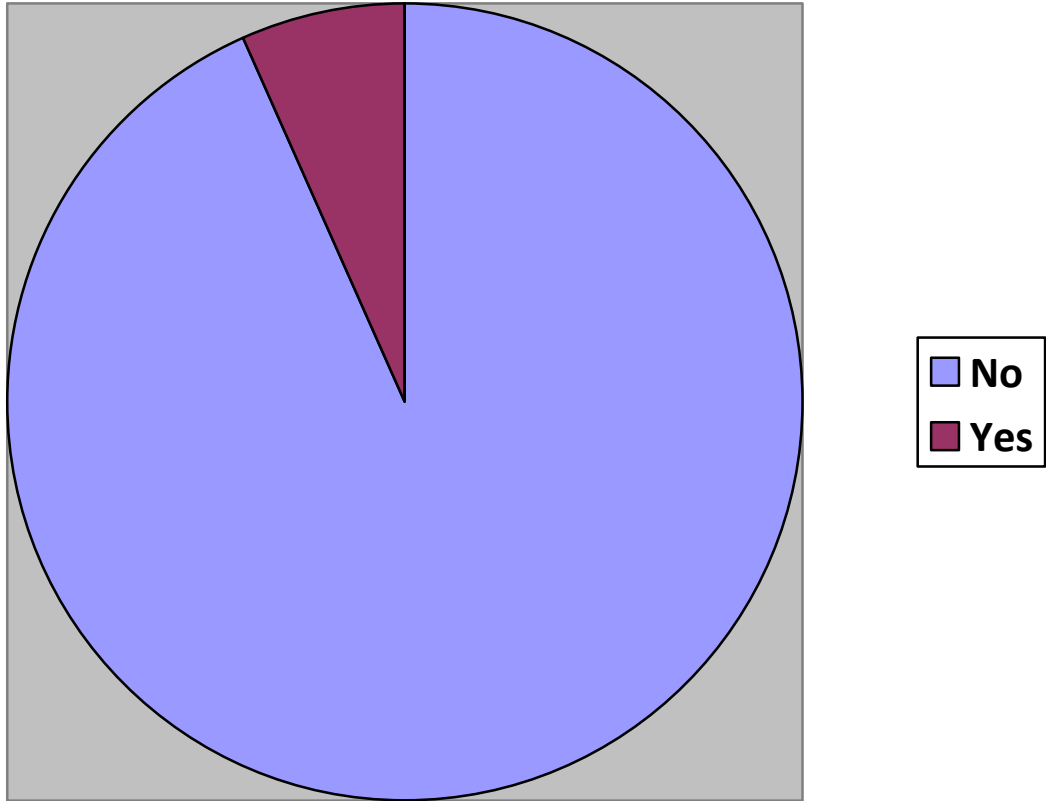
The study established that most of the matatu crew saw messages about alcohol and over speeding while they saw messages on mobile phone use while driving and seatbelt the least.

#### **4.10 Opinion regarding NTSA road safety advocacy messages**

The study sought to establish the opinion of NTSA officials, passengers, and matatu crew regarding the effectiveness of road safety advocacy messages.

##### **i. NTSA officials**

	<b>No.</b>	<b>Percentage</b>
<b>No</b>	28	93.3
<b>Yes</b>	2	6.7
<b>Total</b>	30	100

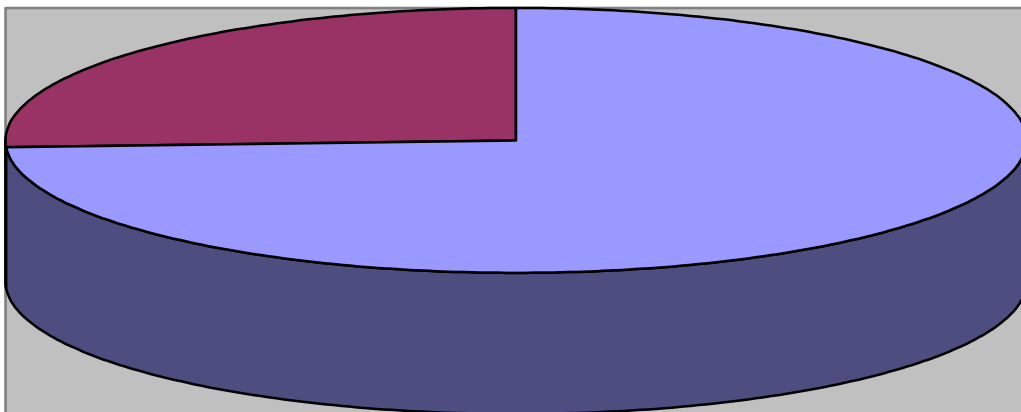


The study established that most NTSA officials think that the messages they have erected on billboards across different routes within Nairobi County are effective.

**ii. Passengers**

	No.	Percentage
<b>No</b>	20	74.1
<b>Yes</b>	7	25.9
<b>Total</b>	27	100



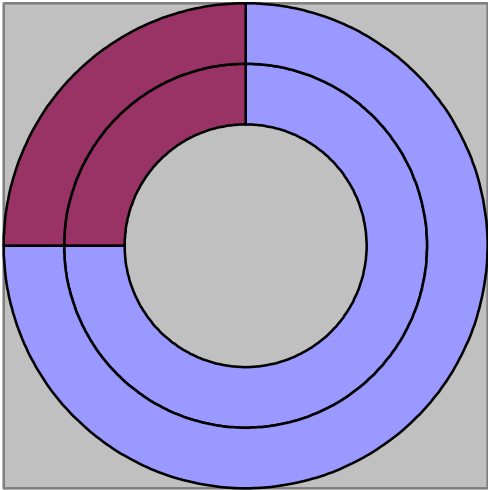


The study established that quite a number of passengers feel that the NTSA messages are effective while still a handful feel these messages have not been effective in curbing accidents cases in Kenya.

**iii. Matatu Crew**

Out of the 24-matatu crewmembers who took part in the study, it was established that 25% of the matatu crew feel that NTSA messages are effective while 75% felt that they are not.

	<b>No.</b>	<b>Percentage</b>
<b>No</b>	18	75
<b>Yes</b>	6	25
<b>Total</b>	24	100



## CHAPTER FIVE

### SUMMARY AND CONCLUSION

#### 5.0 Introduction

This chapter presents the summary of the assessment of road safety messaging by National Transport and Safety Authority. The key study findings and the conclusions made were based on the study findings in connection with the objectives, recommendations and suggested areas for further research in education.

#### 5.1 Summary

The findings of this study established that most road users have ever seen the road safety advocacy messages. In addition, it established that despite the fact that most of the NTSA road advocacy messages were strategically placed, the color used in designing them is not appealing to some road users.

It came out from the research that most of the NTSA road safety advocacy messages were attractive.

The study established that most people prefer Swahili as the language to be used in NTSA road safety advocacy messages.

From the study, it came out that Sheng is another language that can be used if at all in NTSA road safety advocacy messages need to reach a large audience.

The study found out that most road users see the in NTSA road safety advocacy messages often and regularly.

From the study, it was found that alcohol and over speeding are the common messages that NTSA has exposed the road users to.

The study found out that most road users felt that NTSA messages are not effective in curbing the number of road accidents in Nairobi County.

## **5.2 Conclusions**

From the foregoing summary, it is clear that the NTSA messages are not effective in curbing the number of road accidents in Nairobi County. Therefore, before NTSA erects this messages, it should consider a number of factors like color, language, and the attractiveness of the messages.

Secondly, the study concluded that the NTSA messages used on a number of road within Nairobi County do not reach all the target audience. In addition, there is lack of attractiveness in these messages that makes it hard for them to reach their audience.

Thirdly, the study concluded that despite the messages used on the billboards reaching road users, it has not been effective in enlightening them on the need to avoid some activities that may lead to accidents.

## **5.3 Recommendation**

### **5.3.1 Recommendations for policy**

It is on the basis of the findings that the following recommendations have been made:

- i. NTSA need to use bright colors on the billboard messages if at all they want them to catch the eyes of road users
- ii. The NTSA road safety advocacy messages need to be placed strategically where every road user can see them.
- iii. The NTSA need to incorporate the use of sheng language in its messages since most road users prefer this language
- iv. NTSA needs to make the road safety advocacy messages more attractive so that they reach a wide audience.

- v. NTSA should come up with messages that deal with over speeding, alcohol use, use of mobile phones while driving, and the use of seatbelts.

### **5.3.2 Recommendation for further reading**

Based on the findings and conclusions of the study:

- i) There is need for an intensive study to be conducted to find ways through which NTSA can design road safety advocacy messages in order to reach their target audience.
- ii) A study should be conducted in any other part of the country to assess road safety messages by the NTSA and Ministry of Transport and Infrastructure.

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## **APPENDICES**

### **APPENDIX I : CONSENT LETTER**

Dear Respondent,

The purpose of the study is to assess road safety advocacy messages by the Ministry of Transport and Infrastructure: the case of Nairobi County. You are invited to participate in the study. All information you disclose will be kept confidential and used only for purposes of this study. The information collected either from the interviews or questionnaires will be reported anonymously in the study report. Do not write your name or any identity on the instruments of the study. Your privacy is absolutely confidential and participation in the study is entirely voluntary.

Thank you in advance.

Yours faithfully,

Moses Oburu



## APPENDIX II: QUESTIONNAIRE FOR DRIVERS AND PEDESTRIANS

1. What is your gender?  
Male ( )                      Female ( )
2. For how long have you been using this route/  
0-2 years ( )  
2-4 years ( )  
4-6 years ( )  
Over 6 years ( )
3. Have you ever seen road safety advocacy messages' billboards on the road?  
Yes ( )                              No ( )
4. Were the billboards containing the road safety advocacy messages strategically placed?  
Yes ( )                              No ( )
5. What colour was used in designing the road safety advocacy messages?  
Bright ( )                              Dull ( )
6. Were the road safety advocacy messages you have seen on the roads are attractive enough?  
Yes ( )                              No ( )
7. What language was used on the road safety advocacy messages that you saw?  
English ( )                              Kiswahili ( )                      Sheng ( )                      Others ( )
8. Are you familiar with the language used on road safety advocacy messages that you have ever come across?  
Yes ( )                              No ( )
9. How often do you see road safety advocacy messages while on the road?  
Often ( )                              Regularly ( )                              Occasionally ( )

10. What kind of message is contained on the road safety advocacy messages' billboard that you have seen?

Over speeding ( )

Alcohol ( )

Using mobile phones while driving ( )

Seatbelts ( )

11. In your opinion, do you think road safety advocacy messages have contributed to reduced accidents?

Yes ( )

No ( )

If yes,  
explain.....

.....

.....

12. What do you think needs to be done to make road safety advocacy messages effective in reducing road carnage on Kenyan roads?

.....

.....

.....

### APPENDIX III: BUDGET FOR THE STUDY

<b>ITEMS</b>	<b>COSTS</b>
Stationary	5,000
Travelling costs	60,000
Typing and printing	41, 245
Binding	12,250
Photocopying	7,000
Research assistant	20,000
Lunch allowance	20,000
Data Analysis and copy preparation	80,000
Miscellaneous	40,000
<b>TOTAL</b>	<b>278,295</b>

#### APPENDIX IV: WORK PLAN

<b>Time</b>	<b>Activity</b>	<b>Action</b>
	Coursework and concept paper development	Student /lecturer
	Coursework, proposal preparation	Student/Supervisor
	Proposal writing	Student/Supervisor
	Presentation, defence, approval and substantive registration by Graduate School	Student/supervisor
	Pilot survey	Student
	Data collection	Student
	Editing and writing of the first draft	Student
	Review and correction of first thesis draft	Student/supervisor
	Oral presentation, review and submission of the corrected copies	Student/supervisor
	Thesis editing and submission of the final thesis to Graduate School	Student
	Grading of the thesis and graduation	Graduate school/student.