

CHAPTER ONE

1.0 INTRODUCTION

This report is based on the practical attachment that was carried out at the Road Transport and Safety Agency (RTSA). The attachment was aimed at assessing the effectiveness of the communication strategies used by RTSA to raise road safety awareness amongst children below the age of sixteen.

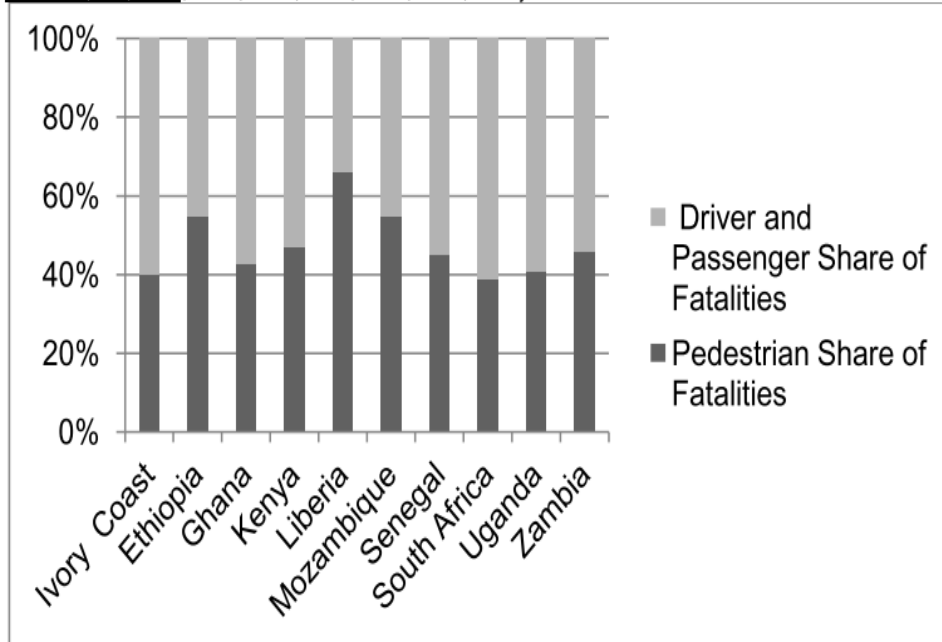
Road traffic fatalities are said to be the 9th leading cause of death and disability in the world. The World Health Organization (WHO) has described them as 'hidden epidemics' and has forecast that they will be the 5th leading cause of death worldwide and the second leading cause of disability-adjusted life year losses in many developing countries by 2030 (Murray and Lopez, 1996). These projections are expected to bring about 2.4 million fatalities annually. The International Federation of Red Cross and Red Crescent have also observed that the road traffic burden is a worsening global disaster destroying lives and livelihoods, hampering development and leaving millions in greater vulnerability (Cater and Walker, 1998).

Low-income and middle-income countries which only have 48% of the world's vehicles are reported to account for about 90% of these casualties. However, while the casualty rate is decreasing significantly in the developed world as a result of ambitious accident countermeasures put in place, in developing countries like Zambia, limited attention has been paid to this growing threat. While traffic crashes are predicted to further decrease by 27% in the developed countries, by 2020, they are estimated to increase by 83% in low income and middle income countries (WHO Report, 2004).

In Zambia, road traffic crashes and injuries are one of the significant causes of child morbidity and mortality. The Pedestrians in Zambia account for 45% of the fatal crashes per annum (WHO 2009:99), although the comparative levels of exposure to risk are not known with certainty. Below are the proportions of pedestrian statistics in Africa, Zambia inclusive.

Figure 1: Proportion of Pedestrian Fatalities in African Countries

Figure 1: Proportion of Pedestrian Fatalities in African Countries (WHO 2009,p99,191; 2013a,94,117,137,145,162,196,222,235)



Road Transport and Safety Agency

The Road Transport and Safety Agency was established by an Act of Parliament in 2002 to promote road safety through education, regulation and law enforcement. The Agency has since 2006 been promoting road safety through several activities aimed at reducing injuries and deaths related to road traffic crashes.

Road safety Campaigns

RTSA has been conducting road safety awareness campaigns in schools across the country. These campaigns are aimed at making children aware of their traffic environment and enlightening them on what to expect as they venture out on the road. RTSA helps equip children with skills to enable them survive the hostile traffic environment. The children are further availed with road safety manuals which contain lessons tailored around key safety such as walking safely, crossing safely and cycling safely.

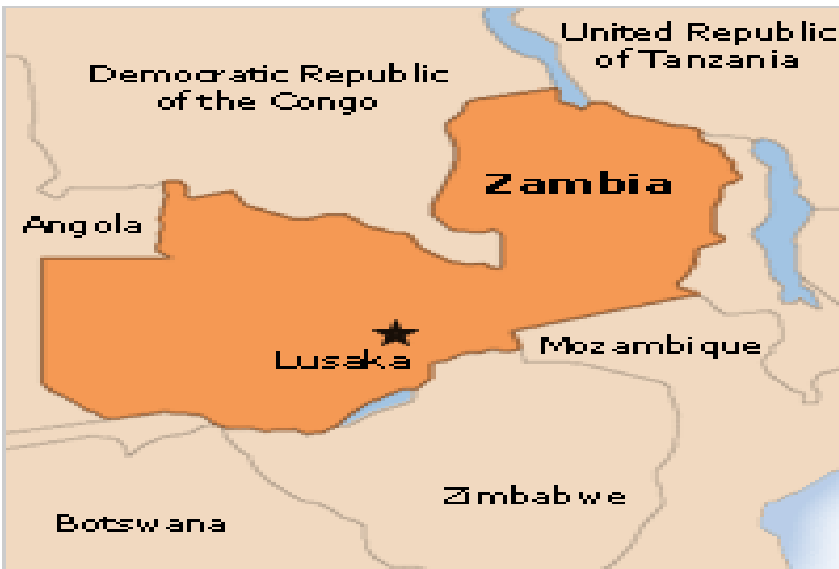
The ultimate aim of the awareness campaigns is to educate children on road safety so that correct behaviour can be taught and assimilated. The ultimate goal of these campaigns is to have a reduction in the number of pedestrian accidents amongst children.

However, despite the road safety awareness programme, the current number of children's fatalities and injuries from road crashes are still alarming. Communication has been identified as a crucial tool in the fight against road accidents. Without communication, children may not know what to do in order to avoid being involved in an accident. Parents and guardians may also not know how to protect their children from pedestrian accidents. Information that is communicated is essential to educate and raise people's awareness of road safety.

1.2 BACKGROUND

Located in south-central Africa, Zambia is a landlocked country surrounded by the Democratic Republic of the Congo and Tanzania to the north; Zimbabwe, Botswana, and the Caprivi Strip of Namibia to the south; Malawi to the east; and Angola to the west. It has an area of approximately 753,000 square kilometres and a population of about 13 million, for a total population density of approximately 13 persons per square kilometre. (CSO Bulletin, 2012) .Most of Zambia is high plateau with a flat or gently undulating terrain. Elevations average 1,000 meters to 1,400 meters; mountains in the northeast exceed 2,000 meters. This high elevation makes for a subtropical climate, and average temperatures range from 17°C in July to 22°C in January.

Figure 1.1 Map of Zambia



Source: Zambia National Tourism Board

The country is located on a high plateau between latitudes 8 and 18 degrees south of the equator and between longitudes 22 and 36 degrees East. Zambia has a tropical climate modified by the altitude of the country, thus it is seldom unpleasantly hot. The rainy season runs from October/November to March/April. The cool dry season is in May- August and a hot dry season in September to October. Zambia's natural resources include copper, cobalt, zinc, lead, coal, emeralds, hydroelectric power and fertile land.

Zambia is divided into nine provinces. Its capital and largest city is Lusaka, which is also a province. Lusaka has a population of almost 2 million, with population densities of up to 1,500 persons per hectare and an average population density of approximately 150 persons per hectare.

1.2.2 The Economic Background

Zambia's economy has experienced strong growth in recent years, with real GDP growth in 2005-13 more than 6% per year. Privatization of government-owned copper mines in the 1990s relieved the government from covering mammoth losses generated by the industry and greatly increased copper mining output and profitability to spur economic growth. Copper output has increased steadily since 2004, due to higher copper prices and foreign investment. Zambia's dependency on copper makes it vulnerable to depressed commodity prices, but record high copper prices and a bumper maize crop in 2010 helped Zambia rebound quickly from the world

economic slowdown that began in 2008. Zambia has made some strides to improve the ease of doing business. Despite a stronger economy, however, poverty remains a significant problem in Zambia, made worse by a high birth rate, relatively high HIV and AIDS burden, and by market distorting agricultural policies.

1.3 STATEMENT OF THE PROBLEM

In Zambia more than four people die as a result of road traffic crashes every single day. Zambia, with almost 2000 fatalities in road crashes per year, is one of the worst performing countries, as far as road safety is concerned. The recent unprecedented high levels and rates of motorization in Zambia have led to rapidly escalating road traffic injuries, often resulting in premature death and disability. Zambia has less than 0.02% of the world's registered vehicles, but almost 14 times the proportion of fatalities from road traffic crashes. (WHO Report, 2004).

Traffic accidents are the third highest cause of death after HIV/Aids and malaria in Zambia. 46% of the people killed or badly hurt in road traffic accidents are pedestrians and mostly children.

To address road safety, the Government of the Republic of Zambia established the Road Transport and Safety Agency through an Act of Parliament in 2002 to promote road safety through education, regulation and law enforcement. The Agency has since 2006 been promoting road safety through several activities aimed at reducing injuries and deaths related to road traffic crashes.

RTSA safety programmes include raising awareness on road safety, providing interactive road safety education and road safety campaigns on both radio and television. The target group for some of these road safety programmes include school going children. Despite the road safety awareness programme, the current number of children's fatalities and injuries from road crashes are alarming. Many inhabitants of Lusaka have become increasingly concerned about the likelihood of their children suffering traffic injuries and death.

However, despite the above strategies, the numbers of pedestrians accidents still on the increase. There is a growing concern about the number of lives especially children that are lost in road accidents. The current statistics from Zambia Police show that pedestrians make up between one

third and half of all accident fatalities in Zambia. A high proportion of these deaths are children and youths below 29 years. The Zambia Police Annual Report for the year 2013 reports that 623 pedestrians lost their lives on Zambia's roads accounting for 34% of the total 1,853 road traffic deaths. Pedestrians are among the most vulnerable road users. Studies indicate that males, both children and adults, make up a high proportion of pedestrian deaths and injuries in many low and middle income countries. The highest numbers of these deaths are children below the age of 16. This indicates that although all road users are at risk, pedestrians especially children bear the greatest risk.

A considerable effort is required to understand the unique features of road safety in Zambia and the communication strategies employed to address it. There seems to be very little known about effectiveness of road safety communication programmes for school children despite the fact that it has convincingly been demonstrated that communication is needed for successfully reducing the number of road crashes on pedestrians. The assumption is that the knowledge about the effectiveness and the characteristics of good road safety awareness programmes for children is still insufficient thus the need to carry out the research and assess RTSA's communication strategies used to address the problem of road safety amongst children.

1.4 RESEARCH OBJECTIVES

1.4.1 General Objective

The general objective was to assess the communication strategies put in place by the RTSA for road safety, and in particular road safety for children below the age of 16.

1.4.2 Specific Objectives

The following specific objectives were formulated.

1. To establish the communication strategies used by the RTSA and determine the extent to which they are utilized in reaching children
2. Examine the effectiveness of the communication strategies used by RTSA to bring about road safety awareness amongst children
3. To assess children's knowledge and attitudes on the road safety

4. To assess the parents/ guardian's knowledge and understanding of road safety

1.5 RATIONALE

Zambia has suffered and continues to suffer from too many road traffic accidents. The cost to the nation has been enormous and the degree of the consequent emotional distress is usually too deep for families. The economic and psychosocial consequences of these crashes for the rural and urban poor, majority of who make up the vulnerable road users such as young pedestrians, cyclists, and occupants of passenger-carrying vehicles, are devastating.

Accident statistics show that pedestrians make up between one third and half of all accident fatalities in Zambia and a high proportion of these deaths are children. Passenger deaths constituted 30% of the total number of accident victims while pedestrian deaths accounted for 48% of the total, (Zambia Police 2009). Children are at higher risk of road accidents due to a variety of factors, including lack of road safety awareness, inability to cope with change, difficulties putting theory into practice or specific difficulties with spatial awareness.

By illustrating the problem of pedestrian safety amongst children and analysing possible remedies, this research wants to contribute to form an opinion about the problem and come up with recommendations on how best to improve the communication strategies used by RTSA in order to reduce pedestrian accidents.

1.6 RESEARCH QUESTIONS

1. What communication strategies are used by the RTSA in the dissemination of road safety information?
2. What channels do they use for communicating messages?
3. How effective are the communication strategies and channels on their intended targets?
4. Which communication strategies are thought to yield positive results?
5. What channels of mass media communication are thought to be the most reliable by the target audience?

1.7 SCOPE OF THE STUDY

The study was carried out in Lusaka. Lusaka was chosen purposively because it is the largest urban area, convenient and accessible for the researcher. It is highly motorized and has high numbers of pedestrian accidents amongst children. The RTSA was also purposively selected for the study because it is the organization that is mandated to ensure road safety in the country. Specifically the Education and Publicity departments at the RTSA played a key role in this research.

CHAPTER TWO

2.0 LITERATURE REVIEW

This Chapter looked at what had been published by other scholars that appeared relevant to the research topic of pedestrian road safety as well as communication strategies that had been used in pedestrian road safety awareness for children.

In Developing Countries (DC), the volumes of pedestrians are high because of low levels of motorisation, so most people use walking as a primary mode of transportation. In some places, where unemployment rates are high, people may spend most of their time near the road environment, including standing on roads to seek a temporary job, or just spending their time by walking along the roads, (Damsere-Derry, et al. 2010). These factors escalate the exposure to pedestrian crashes in DCs. However, with shortage of evidence, the magnitude of pedestrian crashes is not known in DCs.

Growth of motorized traffic leads to a rise in fatalities and injuries from road users due to the increment in exposure (Zegeer and Bushell 2012). China and India are good examples of rapidly rising population growth, urbanisation, per capita income, and ownership of motor vehicles. For instance, the total vehicle population increased from 0.2 million in 1960 to 207 million in 2010 in China, and India's vehicle population grew from 0.4 million in 1960 to 114.952 million in 2009 (WHO 2013). In 2009, 72% of India's registered vehicles were 2- and 3-wheelers which may not have had crashworthiness features, particularly for pedestrians. In 2010, China reported pedestrian fatalities of 16,307, and in the same year, India suffered 12,055 pedestrian fatalities (WHO 2013a). Motorised vehicles in poor countries accounted for 1% of the world vehicle population; however, they contributed 12% of road traffic deaths including pedestrians (WHO 2013a).

Evidence suggested that pedestrians in Developed Countries, (DC) have little knowledge of and an indifferent attitude towards traffic rules, (Jacobs and Sayer 1984). Improvements to road infrastructure and vehicle crashworthiness will have a limited impact if pedestrians and drivers do not know how they should behave and interact. Road Safety Education (RSE) for pedestrians would involve alerting them to road safety. This is only part of the answer, however, if there is insufficient infrastructure to enable pedestrians and drivers to comply with the law, road

accidents would continue. Aggressive promotional campaigns and road safety education could address the problem of noncompliance of pedestrians with crossing regulations, but absence of relevant data about illegal pedestrian crossing behaviour makes this difficult.

Most people in DCs use walking as a principal mode of transportation for short and long distance travel. Long distance walking may cause physical fatigue in pedestrians, who, as a consequence, may lack proper judgment in the traffic system and expose to crash risks. Pedestrian fatigue may also result when pedestrians are walking when exhausted from other activities (such as extended physical work), and walking after taking heavy medication, fasting or under the influence of alcohol or other drugs. However, there appears to be few studies addressing pedestrian fatigue in pedestrian crashes.

In Ethiopia, police records of crashes do not provide details about the causes of pedestrian crashes, such as fatigue or other pedestrian faults, and the same is true in Ghana and Zambia, (Damsere-Derry, et al. 2010). For DCs, this is a gap that needs in-depth assessment through well-designed studies. On the other hand, driver fatigue and its countermeasures are well investigated in a number of researches elsewhere.

Vehicle standards and crashworthiness have also been identified to have influence on pedestrian safety and thus could also be addressed to improve pedestrian safety. Most DCs import vehicles from high income countries, however as noted earlier, many are older vehicles that may no longer be roadworthy or have up-to-date safety features. In addition, while they have been manufactured to meet the safety standards of the originating country and its environmental conditions (Mohan 2002, p529); they may not be suitable in other geographic situations where altitude, climate, and road conditions differ

The International Road Assessment Programme (IRAP) pointed out that 84% of roads with pedestrians in DCs had no sidewalks (WHO 2013). Pedestrians often tend to walk along roads due to the absence of footpaths or shoulders. The lack of separation between vulnerable road users and motorised traffic leads to a considerably larger set of potential crash risk opportunities for pedestrians compared to separated facilities encountered in developed countries.

Unlike other means of transportation, walking as a principal mode of transportation is mostly used by people who have lower income. This can involve activities other than walking: observation in Addis Ababa City, Ethiopia reveals that young males play football on the roadways, and orphan street boys sleep on roadways or edges of roadways. By definition, low and middle income countries have a high proportion of low income people, are less motorised and therefore have more of their population exposed to risk of crashes.

2.1 Children and Communication Strategies

Literature studies reveal that many children receive no Road Safety Education (RSE). A survey of over 1000 schools in selected developing countries revealed that less than half taught road safety (Sayer and Downing, 1996). This problem can be addressed, in part, by raising the awareness levels key institutions such as the Ministry of Education, Ministry of Transport, teachers, and senior decision makers and within the general community. However, simply raising awareness of the need for improved road safety education is not enough. There is also need to provide teachers with effective materials and ways for teaching road safety. Alongside the provision of teaching materials, there is the need to train teachers in their use. To sustain these activities, senior administrators and curriculum development authorities must be aware of, and convinced about, the necessity of RSE and their role in delivering it.

2.2 Communication and Behavioural Change

If appropriate and realistic training methods are used, even quite young children's understanding and behaviour can improve (Thomson, et al 1996). Whitebread et al (1998) also support the delivery of road safety education to children aged five or younger, as their study showed children had extensive exposure to traffic at this age, and also that their road skills were already developing but not to the level of independent road use.

It cannot be assumed that any taught road safety knowledge can be then transferred to the many specific situations to be faced at the roadside. Learning, and in particular training, is best done in the actual roadside context, for example commentary walking. Once learning in a specific context is consolidated then it can progress to more generalised conceptions (OECD, 2004).

According to Siegler and Chen (1998), older children transfer problem solving schema under a broader range of conditions than do younger ones. They warn that if younger children are only

taught a vague understanding of 'rules' they do not take the next step' and look for deeper understanding or application of the problem they face. If children do not understand the problem they can't generalize the rule to a new problem. Hence it is important for children to not only learn rules for using the road, but also understand why the rule is applied. It should not be assumed that if children know and understand road rules then safe road use behaviour will follow.

When using the road system adolescents may be strongly affected by what they perceive the attitudes and values of their peers to be. Thus more risky decisions are likely to be made by those who believe that their peers consider such behaviour desirable, and fewer by those who think their behaviours as undesirable. It is not anticipated that, on the whole, young people will exhibit exceptionally positive attitudes towards road safety as such, or show particular approval of traffic behaviours that are dangerous.

2.3 Channels of Communication of Road Safety Awareness

Parents can play an enormous role because they can continue to provide reinforcement to their children until children are old enough to cross the street alone. By then, the habit and understanding of its importance should continue children's engagement in safe pedestrian behaviour. There are very few programs that have looked at the long-term effects of behaviour modification in pedestrian skills training, most programs done are solely based on short term effects of behaviour modification and these have normally shown dramatic increases in safe pedestrian behaviour adults. (Demetre, 2003).

In order for children to develop pedestrian skills, they must practice the actions enough for the behaviour to become automatic. Engaging in safe pedestrian behaviours is not intrinsically rewarding for children and so reinforcement must be coupled with the training process. Reinforcement can take the form of verbal praise, stickers, stars, tokens, or other small rewards.

The cognitive development of children is an important issue in discussing their safety and developing communication strategies for them. An important part of children's road safety education, however, takes place at home. According to Bandura (1977), most human behaviour is learned by creating a model of behaviour from observing others. One forms an idea of how new behaviours are performed and, on later occasions, this coded information serves as a guide

for action. This means children learn rules on how to behave in traffic from parents and accompanying persons whereas traffic education is often simply taught. Parents are role models and their attitudes, mobility and interactions influence their children's behaviour. Safe traffic behaviour from a respected authority figure will have an impact on the child's willingness to imitate safe behaviour (Baumgart, 1998).

Children generally stick to rules and like to apply and practice what they have just learned. In other words, good behaviour in traffic has to be practiced with children in real traffic. Everyday excursions like journeys to playschool or to a playground etc. give parents the possibility of exploring public spaces on foot, by bike or by public transport together with their children from early childhood onwards. Learning through experience is the most effective way of establishing risk and safety awareness which can lead to behavioural change.

Studies have shown that apart from parents and teachers, other important communication channels include videos or a lecture format to teach children about road safety. Normally in ineffective communication strategies, there is very little behavioural change even though there are knowledge gains. Indeed, in his review of the literature, Rothengatter (1981) found that, in general, video training improved children's knowledge of safety but did not change behaviour. There are a number of reasons for this phenomenon based on cognitive and developmental theory.

This dissociation between the recall of the information learned during different levels of processing may explain why children who participate in pedestrian safety education show increases in knowledge but very little concurrent changes in behaviour. Traditional child pedestrian safety education is often conducted in a classroom setting where children learn about the rules of the road and what to do when crossing the street. Occasionally, the program might involve children trying the behaviours a couple of times; but, for the most part, learning is expected to take place through conceptual understanding that will be applied to behaviours in traffic.

The problem is that this model of education assumes that learning will be a top down process, yet learning to behave in specific kinds of ways in specific situations is a bottom-up process. Therefore, in order to get children to increase their safe street-crossing behaviours, they need to

engage in the specific behaviours a number of times in locations similar to where they will actually be performing them. Another related issue is that information is better remembered if the physical situation at test and recall are the same, also known as encoding specificity (Tulving, 1975).

Thomson and Tomie (2000)-two authors of the DoT report argue that acknowledge and education have a distinctive and vital role to play in reducing child pedestrian accidents and that practical roadside training has been shown to raise an understanding of the nature of traffic environments, and in doing so instills improved behavioural decision making by child pedestrians.

2.4 The Importance of Learning in Context

Several researchers such as (Young & Lee, 1987) have argued that road safety skills should be taught and practiced in a behavioural context, namely, in realistic situations. The results of the present study provide evidence of a different sort that children's knowledge and beliefs about road safety are affected by the specific context in which they are learned. For example, children's awareness of 'stranger danger' was very apparent in their responses to questions about safe places to play.

2.6 CONCEPTUAL AND THEORETICAL FRAMEWORK

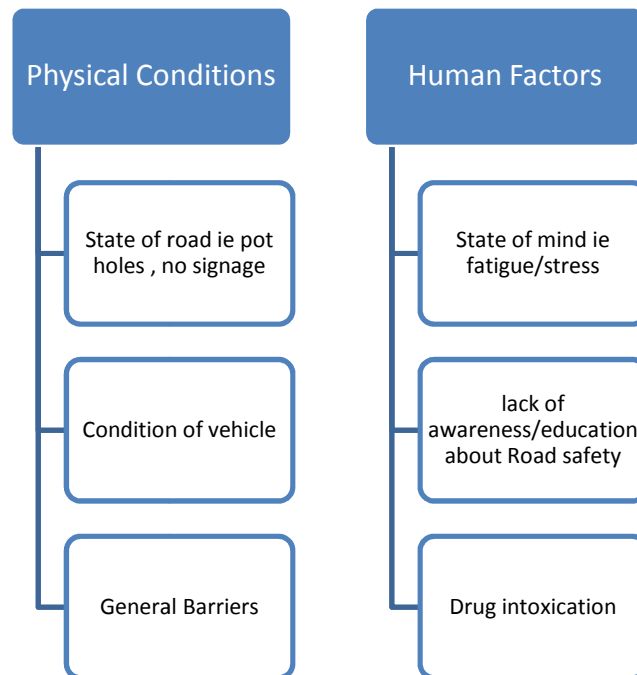
2.6.1 Conceptual Framework

A conceptual definition is the definition of a concept by a set of other concepts. Verbal communication among human beings would be impossible without the existence of words expressing concepts. Therefore, the main function of concepts is to facilitate communication among human beings and to aid in the classification of the elements of reality and their generalizations (Thomson and Tolmie, 1996)

Pedestrian accidents are influenced by many factors, most of which are difficult to control or completely uncontrollable. It is important to point out that some industrial psychologists have attributed accidents to error. Accidents are considered to be brought about by certain preceding circumstances and events, some of which may be associated with human beings. A lot of work on the concept and causes of accidents have been done in the western context. In 1931, H.W.

Heinrich noted that there are two basic factors, leading to accidents: ‘unsafe mechanical or physical conditions’ and ‘unsafe acts of persons’, or the human factor. These are summarized in the table below.

Figure 2.1 Factors contributing to Pedestrian Accidents



2.6.2 Operational Definitions

An operational definition is used to define something (e.g. a variable, term, or object). It can be considered as a process (or set of validation tests) needed to determine existence, duration, and quantity of something. For the purpose of this research, the following have been defined;

2.6.3 Pedestrian

The term pedestrian was described simply as a “walking person”. The American Heritage Dictionary of the English Language (Houghton Mifflin Company, 2004) defines pedestrian as a person travelling on foot.

2.6.4 Accident

An accident was defined as an unexpected usually sudden event that occurs without intent or volition although sometimes through carelessness, unawareness, ignorance, or a combination of causes that produces an unfortunate result, (Merriam-Webster, 1996).

2.6.5 Child

A child in this study will refer to a minor aged sixteen (16) years and below who is dependent on adults for so many things from love and affection to food and shelter and are developmentally immature.

2.6.7 Communication Strategy

This refers to a well-planned series of actions aimed at achieving certain objectives through the use of communication methods, techniques and approaches, (Nelson, and Gruendel, 1986). It involves an educational approach for a campaign, awareness raising, training, and community mobilization.

2.6.8 Communication Channels

This refers to the means through which the source conveys a message to the receiver. According to Severin and Tankard (1992), Communication channels may either be interpersonal or mass media in nature or play different roles in the diffusion process. Mass media channels such as television reach large audiences rapidly and spread information to change attitudes. Interpersonal channels provide a two- way exchange of information.

2.7 THEORETICAL FRAMEWORK

This involves examining several theoretical propositions of different theories and then picking one or more which are relevant to the topic under investigation. According to Severin and Tankard (1992), communication theory is aimed at improving our understanding of the process of mass communication.

It is vital that the right information is transmitted through the appropriate channels and communication theory may help or suggest an approach to the understanding of human communication and human behaviour. The theories try to explain why particular communication

strategies need to be used in particular situations to induce positive change. A variety of theories that underpin this study will be examined.

Pedestrian accidents are one of the most prominent causes of premature injury, handicap and death in the modern world. In children, the problem is so severe that pedestrian accidents are widely regarded as the most serious of all health risks facing children in developing countries. Not surprisingly, communication measures have long been advocated as a means of teaching children how to cope with traffic and substantial resources have been devoted to their development and provision. Unfortunately, there seems to be a widespread view at the present time that these communication strategies have not achieved as much as had been hoped.

Recent discussions in the literature on child pedestrian education have argued the effectiveness of some of the communication strategies such as education approaches versus other approaches for increasing child pedestrian safety. One of the main arguments against education is that children rarely show increases in safe street-crossing behaviour after education interventions. Often, these programs show an increase in children's road safety knowledge but do not show similar gains in increasing children's safety behaviours. One possible explanation for this consistent finding is that psychological theories of learning and more updated child development theories are not often used when developing programs. Interventions based on relevant learning theories and child development might be more effective in increasing safe pedestrian behaviours in young children (Boating and Thomson, 1991).

2.7.1 Theory of Cognitive Development

Jean Piaget (1896-1980) was one of the most influential researchers in the area of developmental Psychology during the 20th century. Piaget's theory of cognitive development is a comprehensive theory about the nature and development of human intelligence. It is primarily known as a developmental stage theory, but in fact, it deals with the nature of knowledge itself and how humans come gradually to acquire, construct and use it. To Piaget, cognitive development was a progressive re-organization of mental processes as a result of biological maturation and environmental experience.

Accordingly, the theory states that children construct an understanding of the world around them, and then experience discrepancies between what they already know and what they discover in their environment. Moreover, Piaget claimed the idea that cognitive development is at the centre of human organism. He postulates that children progress through a number of developmental stages between the ages of birth to sixteen years. Their skills develop at different rates and individual differences can be quite large; however some broad conclusion on children's developmental abilities and expectations about what they are capable of in the road environment have been prepared on the basis of empirical studies.

Children learn about the world not only through exploration but through speech, demonstration, and assistance from others. Development depends on what Vygotsky called the zone of proximal development where engagement in social behaviour facilitates developmental advances. Adult guidance helps children move to the next developmental stage by building on what children already know. Developmental attainment occurs with adult guidance or peer interaction and exceeds what can be achieved alone. Language for instance, cannot be learned if a child is isolated from society.

The behaviours, knowledge, attitudes and perceptions a child learns are firmly rooted in the surrounding society. Likewise, parents and caregivers act as mediators between the child and culture.

A psychological analysis of child development related to the aims of road safety education published by the Department of Transport (DoT), suggested that existing educational measures of instilling road safety in children had not been overly successful, and that such programmes make an unfounded assumption that changes in knowledge or attitudes will lead to changes in actual traffic behaviour. However, evidence suggests there is no link between knowledge and behaviour at all, and that practical training methods are successful because they begin at the correct point in a child's developmental sequence. Further, they consider that because current road safety programmes assume that children will spontaneously extend understanding gained in one context (e.g. the classroom) to behaviour in another (e.g. the roadside) they are poorly supported by theory as well as empirical evidence, (Thomson, Tolmie, Foot and McLaren, 1996)

2.7.2 Social Change Campaign Theory

This theory assists in the planning, designing and dissemination of social campaign messages. It looks at factors that may hinder messages in a social campaign to induce the desired effect, that is, behaviour change. Many social campaigns have accomplished little and post mortems of them have revealed a number of deficiencies that could have been corrected.

For example, the campaigns may not have targeted the appropriate audience, the reform message may not have been sufficiently motivating, the individuals and groups or populations that were targeted were not given a way to respond constructively, or a campaign may have been under funded (Kotler and Roberto, 1989).

The social campaign theory warns that the use of mass communication to change public attitudes and behaviours may be limited due to several factors that dilute mass media impact. They include;

1. Audience factors, such as apathy, defensiveness, and cognitive ineptness.
2. Message factors, such as messages that do not convey real motivating benefits to citizens in an attention getting way.
3. Media factors, such as failure to use appropriate media vehicles at the proper time or in effective ways or to reach target adopters with the type of media that they are most receptive to.
4. Response- mechanism factors, such as failure to provide receptive, motivated citizens with an easy and convenient way to respond positively to a campaign's objectives and to carry out the campaign's intentions, (Roberto and Kotler, 1989)

Therefore, this theory is of significance to this study because it guides in the planning and designing of messages that are used in road safety amongst children.

The social campaign theory is important because Road safety campaigns complement other activities aimed at improving road safety. Important tasks of road safety communication include raising the public acceptance for road safety measures (e.g. enforcement measures) and decreasing the public acceptance of risky behaviours. Media can influence attitudes e.g. by informing about rules, explaining consequences of risky behaviour, informing about police

enforcement and about possible punishments. Since the target of the campaigns are people or groups of people, their behaviour may differ from one country to another, the specific messages addressed to the target group chosen for a campaign may vary from country to country and even within a single country.

Research shows that awareness campaigns have proved to be successful in many other areas (e.g. health, agriculture, the environment). These campaigns have generated a great deal of information about the effectiveness of different approaches to informing communities and the channels of communication which are most suitable. Therefore, awareness campaigns are viewed as viable ways of promoting appropriate road safety in a targeted and sustainable way. Such an approach has already been tried in a small number of developing countries, but relatively little is currently known about how they should (and should not) be conducted and how effective they are in reducing pedestrian road accidents.

CHAPTER THREE

3.0 METHODOLOGY

The purposes of this chapter is to (1) describe the research methodology of this study, (2) explain the sample selection, (3) describe the procedure used in designing the instrument and collecting the data, and (4) provide an explanation of the statistical procedures that were used to analyse the data.

3.1 Research Design

The research employed Descriptive and Analytical Research Design which involves observing and describing the behavior of a subject without influencing it in any way but at the same time be asking why, when, what and how questions in the research.

3.1.2 Quantitative Survey

A quantitative survey was administered to a selected sample from a specific population. The term 'survey' is commonly applied to a research methodology designed to collect data from a specific population, or a sample from that population, and typically utilizes a questionnaire or an interview as the survey instrument (Robson, 1993).

The Researcher used Sample surveys as it was assumed that they are an important tool for collecting and analysing information from selected individuals. They are widely accepted as a key tool for conducting and applying basic social science research methodology (Rossi, Wright, and Anderson, 1983).

3.1.3 In - Depth Interviews

This was used to collect data from respondents from the organization. The respondents were purposively selected. Purposive selection is a non- probability sampling method based on the assumption that a researchers knowledge about the population can be used to handpick the subjects to be included in the sample. It may be used to select respondents who are judged to be typical of the population in question or particularly knowledgeable about the issues under study (Bless and Smith, 1995).

3.1.4 Observation

The researcher participated in the daily activities at the RTSA Education and Publicity Department. The department had several activities such as the Day of Remembrance where all the people who have lost their lives through road accidents were remembered during a church service. Sensitization on road safety was also done during the said service. The department also had road safety week where each day for seven days, an area was targeted to go and sensitize the public on road safety. All the sensitization material were carried and distributed. These materials included flyers, brochures, t-shirts, water bottles and any other relevant material that helped in promoting road safety. The researcher spent time observing and participating in these day to day activities of the organization. Direct observation helped in identifying the strategies used and messages conveyed.

3.1.4 Desktop Research

The researcher reviewed case records on pedestrian road safety and other literature including monthly reports, minutes from meetings, publications, brochures and posters that are available at the organization. The content of documents was examined to identify channels, strategies and other information on the communication process used by the RTSA.

3.2 SAMPLING PROCEDURE

The target population of this research constituted Parents/Guardians and school going children in Lusaka. A total of 97 respondents were interviewed in the quantitative survey. 49 adults in households who are parents or guardians were selected to take part in the survey using multi-stage cluster sampling. They were selected from Kabulonga, Kabwata and Kalingalinga to represent low, medium, and high density residential areas respectively. The research also constituted 49 children from three schools in Lusaka which were Rhodes Park School, Mumuni Basic School and Ngombe Basic School. These were chosen to represent the Low, medium and high density population areas respectively. 16 children from each school were selected by using systematic random sampling children.

The study also aimed at gauging the difference (if any) that might exist in terms of knowledge, attitudes and practices concerning child road safety among the adults and children from the different socio-economic groups. A proportionate number of respondents from each residential

area were included in the study in order to strike a balance. The total population in each of these residential areas was obtained from the Central Statistical Office and the information was used to calculate the number of participants in each area. The population of the areas that took part in the study is as follows:

Residential Area Population

Kabulonga 13, 166

Kabwata 12, 574

Kalingalinga 28,686

Source: 2000 Census of Population and Housing

In the three areas of study, the multistage cluster formula was used to determine how many questionnaires to administer in each area. 48 questionnaires were administered and were broken down as follows: Kabulonga 16 respondents, Kabwata - 24 respondents, and Kalingalinga- 16 respondents. The following formula was used to arrive at the breakdown;

$\frac{n \times \text{no. of questionnaires}}{N}$

n is the total population in a given residential area; N is the total population of the three residential areas selected for the study. The calculations were done as follows;

$$\text{Kabulonga} \quad (57,904 \times 48)/119,580 = 24$$

$$\text{Kalingalinga} \quad (39,139 \times 48)/119,580 = 16$$

$$\text{Kabwata} \quad (22, 537 \times 48)/119,580 = 9$$

For the Qualitative study 3 workers from the RTSA were picked purposively for the in-depth interview. These were the head of the publicity section, the head of public relations and lastly the road safety school club patron. Unstructured questionnaires were used to gather data in the in-depth interviews in order to collect more information that was not captured by the survey. This enabled the researcher to ask further questions beyond what had been planned.

3.2.1 Data Collection

Questionnaires were used to collect data. The researcher used the questionnaires as they were less expensive and easier to administer than personal interviews and were efficient at providing information in a relatively brief time period at low cost to the researcher.

The first questionnaire was for children and the second was for the parents. The two questionnaires' were pre-tested. The researcher collected the data personally but also worked in collaboration with research assistant that was trained to collect data from the field. It is important to note that the researcher triangulated the research methods.

3.2.3 Data Analysis

Qualitative and Quantitative methods of data analysis were used. Quantitative analysis was done using the SSPS. Descriptive statistics such as frequencies of variables, differences between variables and averages were mostly used to analyze the data. Content analysis was used for qualitative data.

CHAPTER FOUR

4.0 PRESENTATION OF FINDINGS

The main purpose of this chapter is to present the findings from the two questionnaires that were collected from the field; these are questionnaire for the children and questionnaire for the parents/guardians.

The chapter will further present findings from the in- depth interviews, direct observations and documents that were analysed.

The chapter will begin by giving the basic demographic statistics of the respondents. It will then present the findings on the parent's knowledge and understanding of road safety; Parents/guardians opinion on adequacy of messages disseminated and lastly present findings on road safety communication strategies and their effectiveness.

PARENTS/ GUARDIANS RESPONSES

DEMOGRAPHIC STATISTICS

Findings on sex indicate that the male respondents were the majority. Out of the 49 respondents that took part in the study 51 percent were male compared to 49 percent that were female respondents representing 49 percent. **Table 1** illustrates this information.

Table 1: Composition of sample by sex

What is your sex?

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	25	51.0	51.0	51.0
Female	24	49.0	49.0	100.0
Total	49	100.0	100.0	

Age Group

Findings from the data collected indicate that the majority of the respondents for the parents/guardians were in the age group 35- 39yrs representing 26.5 percent of the sample.

This was followed by the age groups 30-34yrs representing 22.4 percent. Those in the age group above 40-44 years represented 16.3 percent. There was also age group 25-29 representing 16.3 percent. 20-24 and those above 45 years both represented 8.2 percent.

The age group 15-19 was the least representing 2 percent of the total sample. **Table 5.2** below illustrates these findings.

Table 2: Composition of sample by age group

What is your age group?

	Frequency	Percent	Valid Percent	Cumulative Percent
15-19	1	2.0	2.0	2.0
20-24	4	8.2	8.2	10.2
25-29	8	16.3	16.3	26.5
30-34	11	22.4	22.4	49.0
35-39	13	26.5	26.5	75.5
40-44	8	16.3	16.3	91.8
45+	4	8.2	8.2	100.0
Total	49	100.0	100.0	

Marital Status

Findings on marital status reveal that, the majority of the respondents that is 61.2 percent of the sample were married. 28.6 percent of the respondents were single. 4.1 percent were divorced, another 4.1 percent were on separation and 2 percent of the total samples were widowed. **Table 3 below illustrates these findings.**

Table 3: Marital Status

What is your Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Married	30	61.2	61.2	61.2
Single	14	28.6	28.6	89.8
Divorced	2	4.1	4.1	93.9
Widowed	1	2.0	2.0	95.9
On Separation	2	4.1	4.1	100.0
Total	49	100.0	100.0	

Educational Level

Findings on the respondent's level of education reveals that 40.8 percent of the respondents had attained college education, followed by 26.5 percent of the parents who had attained senior secondary education, 24.5 percent of the respondents had attained university education. 4.1 percent had attained junior secondary and 2 percent had attained primary education. 2 percent of the respondents had never been to school. The above data is represented in **Table 4 below**

Table 4: Educational level

What is your education level

	Frequency	Percent	Valid Percent	Cumulative Percent
Primary	1	2.0	2.0	2.0
Junior Secondary	2	4.1	4.1	6.1
Senior Secondary	13	26.5	26.5	32.7
College	20	40.8	40.8	73.5
University	12	24.5	24.5	98.0
None of the above	1	2.0	2.0	100.0
Total	49	100.0	100.0	

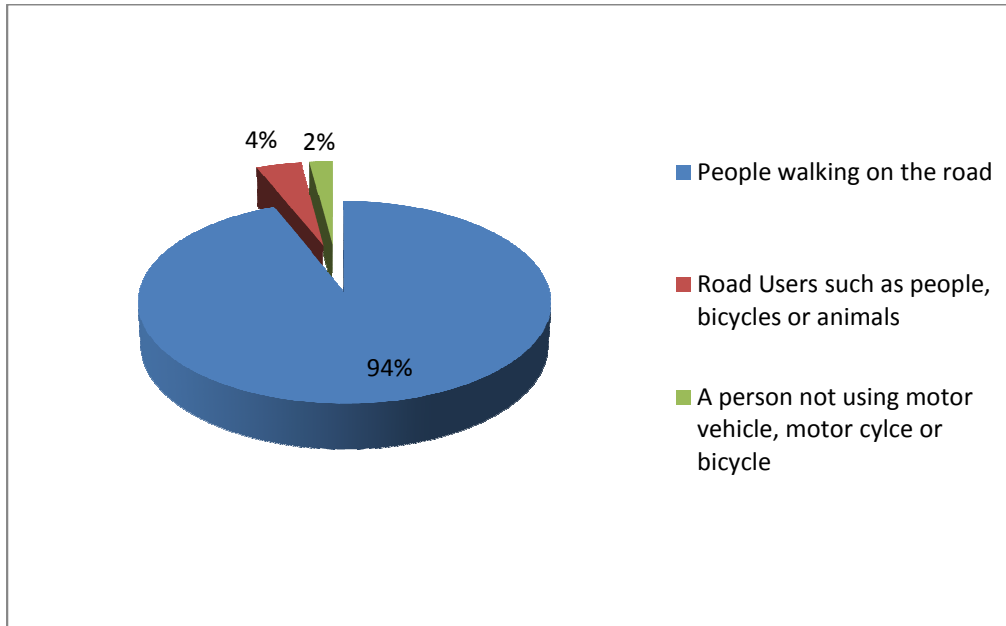
KNOWLEDGE AND UNDERSTANDING OF ROAD SAFETY

The respondents were asked on their understanding of who a pedestrian is. Findings reveal that the majority of the respondents had some understanding of who a pedestrian is. 94 percent of the respondents indicated road safety is people walking on the road using their feet. 4 percent indicated that a pedestrian were road users such as people, bicycles or animals. 2 percent said that a pedestrian was a person not using a motor vehicle, motor cycle or bicycle on the road.

Figure 4.1 below illustrates this information on the views of the parents/ guardians of a thought a pedestrian.

Figure 4.1 Understanding of Pedestrian

What do you understand by the term pedestrian?



The respondents were further asked what they understood by the term pedestrian accident and the findings are illustrated in the Table 5 below.

Table 5: Understanding of the term road safety

What do you understand by the term road safety?

Understanding of road safety	Frequency	Percentage
An accident where a person walking on the road is hit by a car	47	96
An accident which happens to school going children	1	2
I do not know	1	2
Total	49	100

PARENTS/ GUARDIANS OPINION ON ADEQUACY OF MESSAGES DISSEMINATED

Road Safety Attention

The respondents were further asked on what whether they thought children's road safety was being given enough attention. **Table 6** below reveals that 85.7 percent of the respondents indicated that children's road safety was not being given enough attention while 14.3 percent of the parents indicated that children's road safety was being given enough attention.

Table 6: Road safety attention

In your opinion, do you think children's road safety is being given enough attention?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	7	14.3	14.3	14.3
No	42	85.7	85.7	100.0
Total	49	100.0	100.0	

Knowledge and Understanding of Road Safety Matters

Findings reveal that 51 percent of the respondents indicated that they have enough knowledge and understandings of road safety matters. 49 percent said they have not received enough knowledge and understanding on road safety matters. The information is tabulated in **Table 7** below.

Table 7: Knowledge and understanding of road safety

Do you think you have received enough knowledge and understanding of road safety matters?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	25	51.0	51.0	51.0
No	24	49.0	49.0	100.0
Total	49	100.0	100.0	

Main Source of Information on Road Safety

Findings reveal that 57.1 percent of the respondents said that their main source of information on road safety is Television. This was followed by radio were 22.4 percent of the respondents indicated that Radio was their main source of information. The other sources are also outlined in **Table 8** below.

Table 8: Main source of information on road safety

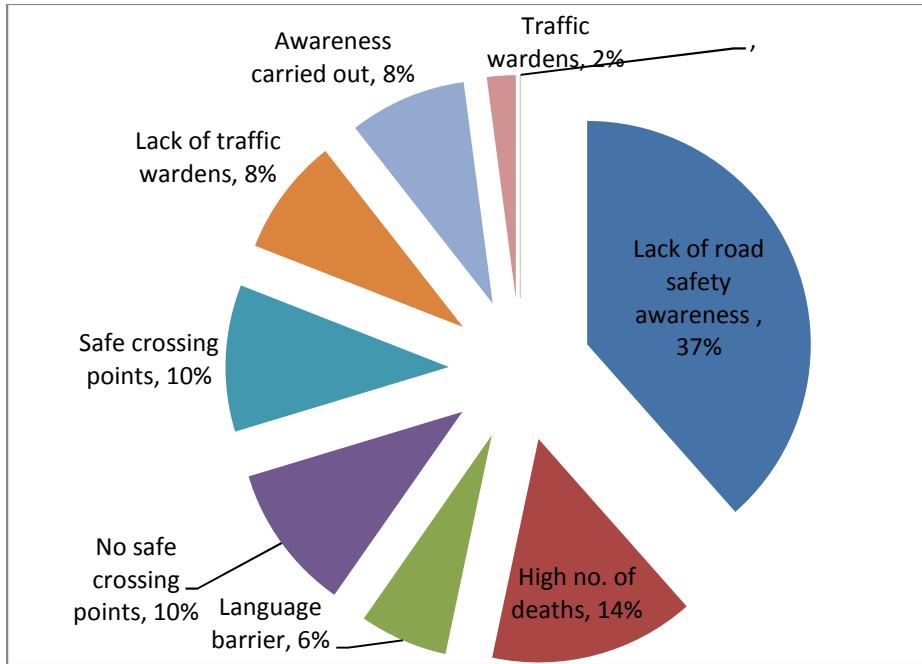
What is the Main source of information on road safety?

	Frequency	Percent	Valid Percent	Cumulative Percent
Friends	1	2.0	2.0	2.0
Radio	11	22.4	22.4	24.5
Television	28	57.1	57.1	81.6
Newspapers	4	8.2	8.2	89.8
Billboards	2	4.1	4.1	93.9
Pamphlets, Fliers	2	4.1	4.1	98.0
no response	1	2.0	2.0	100.0
Total	49	100.0	100.0	

Reasons for whether children’s road safety is /or not being given enough attention

Findings reveal that 37% of the respondents indicated that road safety was not being given enough attention because there was limited road safety campaigns. 14% of the respondents said it was not being given enough attention as they were still a high of children dying from road traffic accidents. 10% said there was not enough attention given as there were no safe crossing points. Another 8% said that that it was not given enough attention because of the language barrier that existed in communicating road safety messages. 8% indicated that there was no attention because of lack of traffic wardens. Other respondents however, said that enough attention was being given to road safety. 10 % said that that it was being given enough attention as there were traffic wardens to help children cross the road. 8% attributed the attention to the awareness that was being carried out. 2% to the traffic wardens that help children cross the road and 10% attributed said there was road safety attention as safe crossing point been put in place. The information is tabulated in **Figure 4.2** below.

Figure 4.2 Reasons for whether children’s road safety is/or is not being enough



Parents/ guardian’s Rating of Communication Strategies

Most of the respondents indicated that they identify a communication to be effective if it is easy to understand. The table below reveals that 59.2 % of the respondents indicated that a communication is effective if it is easy to understand. 24.5% said if it makes use of the local language. 14.3% said if it is readily available and 2% said if it is cheap. The information is tabulated in the **Table 9** below.

Table 9: Factors considered in identification of communication as effective

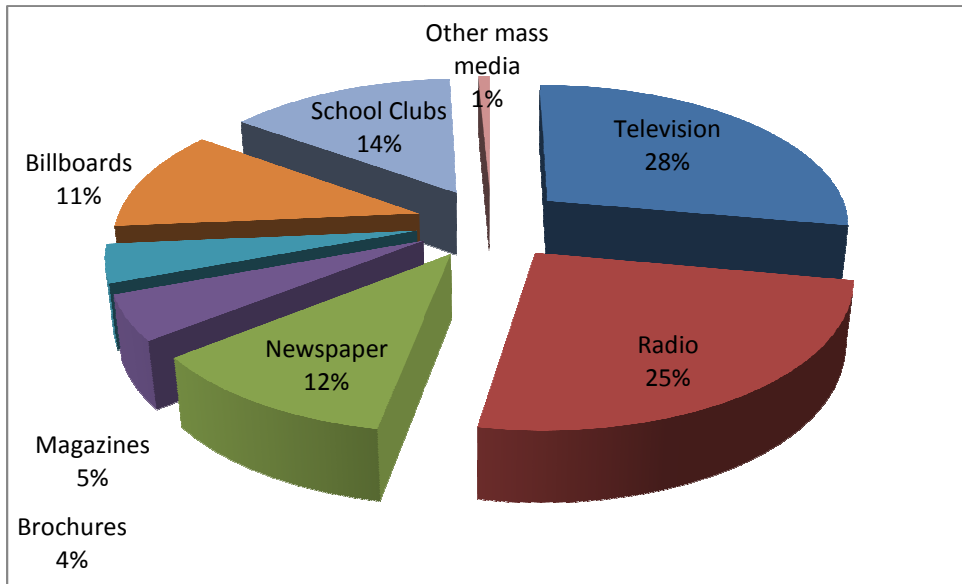
What factors do you look at to identify a communication as being effective?

	Frequency	Percent	Valid Percent	Cumulative Percent
Readily available	7	14.3	14.3	14.3
Cheap	1	2.0	2.0	16.3
Easy to understand	29	59.2	59.2	75.5
Use of local language	12	24.5	24.5	100.0
Total	49	100.0	100.0	

Mass communication channels thought to be effective

Respondents were asked which communication channel was thought to be effective in disseminating information on road safety. Findings reveal that 28 percent of the respondents sighted television as being the most effective, 25 percent said radio was effective, 14 percent said school clubs were effective, 12 percent said Newspapers, 11 percent said Billboards. The information is tabulated in **Figure 4.3** below.

Figure 4.3: Mass communication channels thought to be effective



Participation and Involvement of Communities in Road Safety

Findings reveal that 49 percent of the respondents indicated that there was inadequate involvement and participation of the communities in the development of communication messages to increase road safety while 10.2 percent said there was adequate participation. The rest of the information is tabulated in **Table 10** below.

Table 10: Perception on participation and involvement in road safety

Do you think there is adequate participation and involvement of the communities in the development of communication messages to increase road safety?

	Frequency	Percent	Valid Percent	Cumulative Percent
Very adequate	5	10.2	10.2	10.2
Adequate	1	2.0	2.0	12.2
Moderately adequate	11	22.4	22.4	34.7
Inadequate	24	49.0	49.0	83.7
Very inadequate	8	16.3	16.3	100.0
Total	49	100.0	100.0	

School Children Questionnaire- Findings

The sample for the school children was made up of 49 children from three schools; sixteen (16) children which represent 32.7 percent of the total sample respectively were randomly selected from Mumuni Basic School and Rhodes Primary Secondary School. 17 children representing 34.7 percent of the total sample were randomly selected from Ngombe Basic School. The data is illustrated in **Table 11** below.

Table 11: Schools

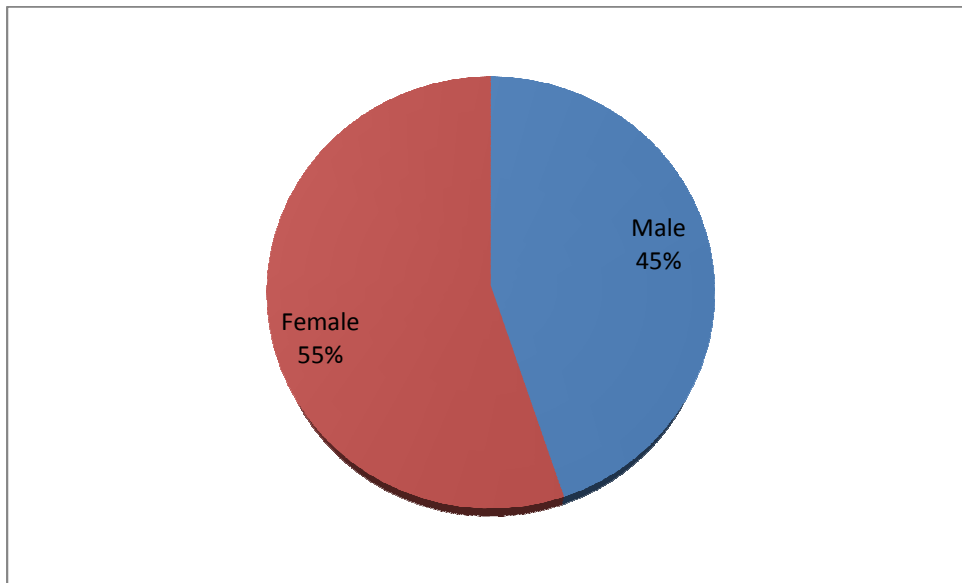
Name of school	Frequency	Percentage
Mumuni Basic School	16	32.7
Ngombe Basic School	17	34.7
Rhodes Park school	16	32.7
Total	49	100

Demographic Statistics

The majority of the respondents in this study were female. Out of the 49 respondents that took part in the study, 27 were female representing 55 percent compared to 22 male respondents representing 45 percent. **Figure 5.4** illustrates this information.

Figure 4.4: Composition of sample by sex

What is your sex?

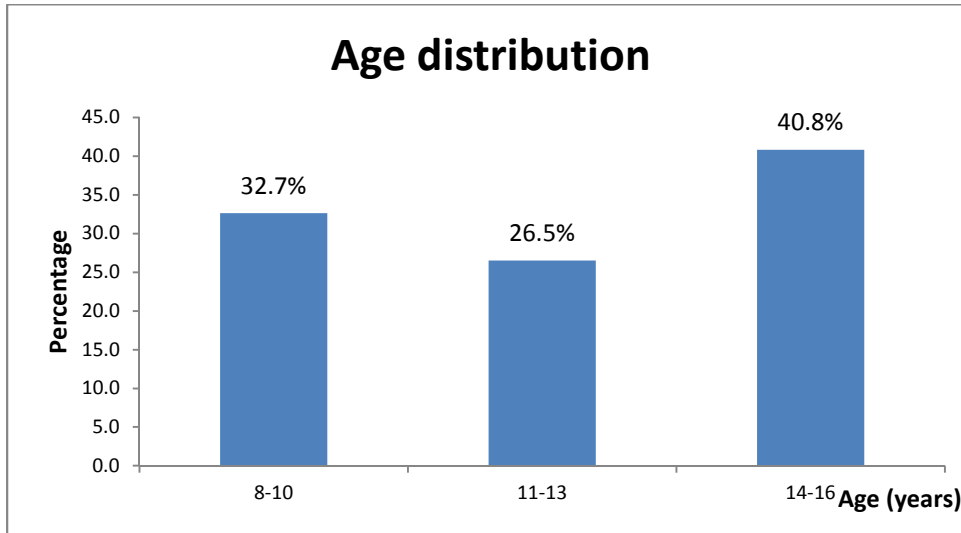


Age

Findings from the data collected indicate that the majority of the children who responded to the questionnaire were aged between 14 and 16 years, representing 40.8 percent of the total sample. This was followed by children aged between 8 and 10 years representing 32.7 percent of sample. The last group was 11-13 years representing 26.5 percent of the sample. **Figure 5.5** below illustrates these findings.

Figure 4.5: Age

What is your age?

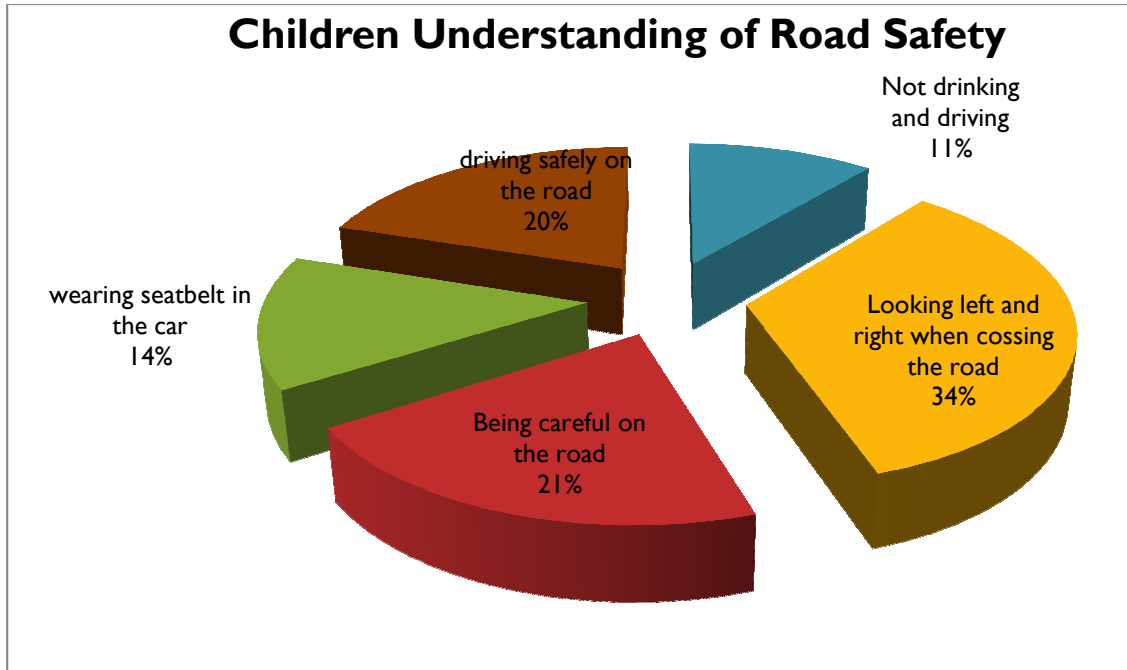


SCHOOL CHILDREN'S KNOWLEDGE AND UNDERSTANDING OF ROAD SAFETY

The school going children were asked what they understood by the term road safety.

Findings indicate that 34 percent of the children understood road safety as looking left and right whenever one was crossing the road. 21 percent understood road safety as being careful on the road. 20 percent understood it as driving safety on the road. 11 percent of the respondents said it was not drinking whilst driving and 14 percent understand as wearing seatbelt in the car. **Figure 4.6** below illustrates these findings.

Figure 4.6: Knowledge and understanding of road safety



PERCEPTION OF COMMUNICATION STRATEGIES AND THEIR EFFECT

The respondents were asked as to whether they had received any information on road safety. Findings indicate that 81.6 percent of children had received information on road safety representing the total sample. 9 and of the 49 said that they had not received any information on road safety. These represented 18 percent of the total sample.

Table 12 below illustrates these findings.

Figure 12: Receipt of information on road safety

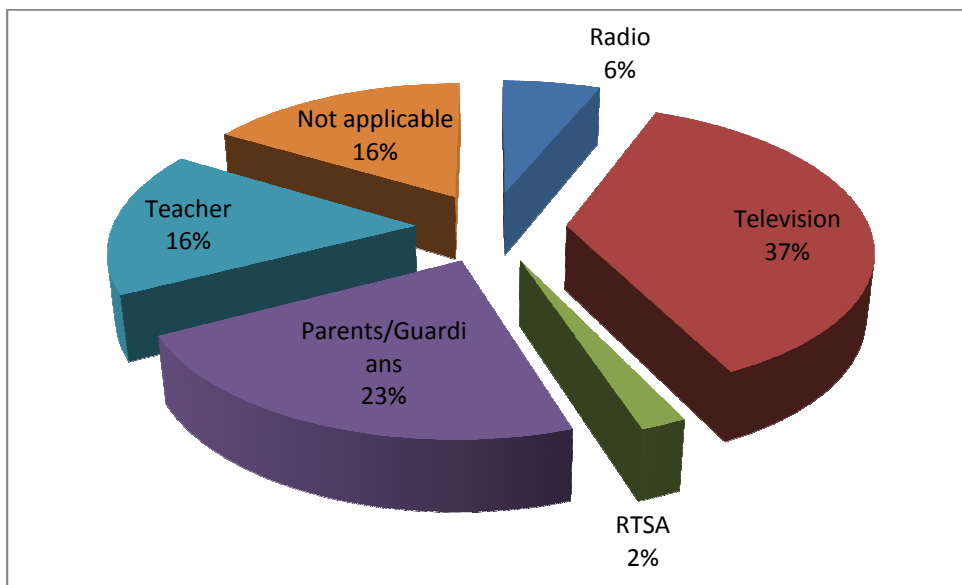
Have you ever received any information on road safety?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	40	81.6	81.6	81.6
No	9	18.4	18.4	100.0
Total	49	100.0	100.0	

Children’s Main Source of Information

Those respondents that said they had received information on road safety were further asked who their main source of information on road safety was. Findings indicate that 38 percent of the total sample had received their road safety information through Television. 23 percent said that they had received road safety information from their parents/guardians. 16 percent indicated that they had received their information from their teachers. 6 percent of the sample indicated that they received their information from radio. The results are tabulated in **Figure 4.7** below

FIGURE 4.7: Children’s main source of information on road safety



Time of day for Road Safety Programmes

The respondents were asked what time of the day they mostly listen or watch road safety programs. 28.6 percent of the respondents indicated that they either watched or listened to road safety programs in the afternoon. Another 28.6 respondents indicated that they that they either watched or listened to road safety programs in the evening. 6.1 percent indicated that they that they either watched or listened to road safety programs during in the morning. 4 percent indicated that they either watched or listened to road safety programs during mid-morning. 4 percent indicated that they that they either watched or listened to road safety programs in the evening. Another 4.1 percent indicated that they either watched or listened to road safety programs during the evening. 6.1 percent indicated that they neither watched nor listened to road

safety programs. The question was not applicable to 16.3 percent of the respondents. The information is illustrated in the table below.

Table 13: Time of day for road safety programmes

What time of the day do you mostly watch or listen to programs on road safety?

	Frequency	Percent	Valid Percent	Cumulative Percent
Morning	3	6.1	6.1	6.1
Midmorning	2	4.1	4.1	10.2
Afternoon	14	28.6	28.6	38.8
Evening	14	28.6	28.6	67.3
Night	2	4.1	4.1	71.4
None of the above	6	12.2	12.2	83.7
Not applicable	8	16.3	16.3	100.0
Total	49	100.0	100.0	

Clarity of Road Safety Information

The respondents were asked as to whether the information they had received on road safety was clear for them to understand. Findings indicate that 69.4 percent of the total sample said that the messages on road safety were clear enough for them to understand. 8.2 percent of the total sample said that the messages on road safety were not clear enough for them to understand. 6.1 percent of the total sample indicated they don't know whether the messages were clear. The question did not apply to 16.3 of the total sample. The information is tabulated in **Table 11** below.

Table 14: Clarity of Road Safety Information

Are the messages that you have received about safety clear enough for you to understand?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	34	69.4	69.4	69.4
No	4	8.2	8.2	77.6
I do not know	3	6.1	6.1	83.7
Not applicable	8	16.3	16.3	100.0
Total	49	100.0	100.0	

The respondents were further asked as to whether they would like to be involved in the making of road safety messages targeted at children. The findings indicate that 95.9 percent of the students said that they would like to be involved in the making of road safety messages targeted at children. 4.1 percent of the respondents said they would not like to be involved in the making of road safety messages targeted at children.

Table 14: Involvement in the development of road safety communication messages

Would you like to be involved in the making of communication messages about road safety that are targeted at children?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	47	95.9	95.9	95.9
No	2	4.1	4.1	100.0
Total	49	100.0	100.0	

QUALITATIVE RESEARCH FINDINGS

One of the functions of RTSA is to conduct road safety education and through publicity campaigns undertake and assist in the dissemination of information on road safety for the benefit of all sections of the community. The department mandated to do this is the Education and Publicity Unit. The Unit recognizes that regular campaigns on road safety are needed to make the general public aware about matters of road safety. It has been proven through research that law enforcement without education and publicity may not yield very good results.

Road Transport and Safety Agency

The Road Transport and Safety Agency was established by an Act of Parliament in 2002 to promote road safety through education, regulation and law enforcement. The Agency has since 2006 been promoting road safety through several activities aimed at reducing injuries and deaths related to road traffic crashes. The Agency further has been implementing the road transport policy in order to provide an efficient and effective road transport system.

Communication Strategies and Channels used in the Delivery of Messages

Communication has been identified as a crucial tool in the fight against pedestrian road accidents. Without communication, children may not know what to do in order to avoid being involved in an accident. Parents and guardians may also not know how to protect their children from road accidents.

The research has established that RTSA has initiated number of road safety programmes which include raising awareness on road safety, providing interactive road safety education and road safety campaigns. Amongst the target group for of the road safety communication strategies is school going children. The road safety communication strategies are aimed at making children aware of their traffic environment and enlightening them on what to expect as they venture out on the road.

RTSA has employed a combination of different communication strategies to try and bring about necessary road safety awareness in children and the country at large. These include the use of mass media such as television, radio, newspapers. Other channels of road safety communication include the use of posters, brochures, billboards workshops, drama, t-shirts, banners, newsletters

and musical concerts. All these carry different messages aimed at increasing public awareness of road safety.

The combination of the different communication strategies in any social change campaign is crucial because each strategy has a different effect on the audience. According to Rogers (1983), mass media channels are often the most rapid and efficient means to create awareness and knowledge of an innovation, whereas interpersonal channels are more effective in persuading an individual to adopt a new idea. The use of mass media in road safety promotion presents an opportunity to communicate to large numbers of people and to target particular groups of people.

As observed by Gamble (1999), mass communication is significantly different from other forms of communication. He notes that mass communication has the capacity to reach 'simultaneously' many thousands of people who are not related to the sender. It depends on 'technical devices' or 'machines' to quickly distribute messages to diverse audiences often unknown to each other. It is also accessible to many people.

1. Radio

The research was able to establish that the widest mass media that RTSA uses to disseminate road safety information is National and Community Radio Stations. The radio programmes include discussions and adverts about road safety. In Zambia, radio is the channel of communication that is most accessible to the majority of the Zambians, including those in remote areas. RTSA produces and airs road safety programs on the following stations;

Radio Phoenix- which produces Road Safety Programme

Radio QFM-which produces Road Safety Advert

Radio Lyambai –which Produces Road Safety Programme

Radio Mano- Producing road safety Programme

Radio Ichengelo- Radio Advert

Radio Sky FM- Producing road safety Programme

2. Television

Apart from radio, RTSA also uses Television programmes and runs a television programme on ZNBC that discusses matters of road safety. It also runs a children's road safety Television Quiz and Debate. The organization also runs adverts on Road Safety.

4. Print Media

RTSA develops and conducts road safety campaigns through print media and use of IEC Materials. The organization has developed IEC and BCC materials such as pamphlets, brochures and posters to increase public awareness. It also uses Billboards to disseminate information on road safety. Below is an example of road safety messages found on some billboards.

“Be Road Safe' in Zambia”

5. Drama and Musical Concerts

Drama and musical concerts are used to sensitize the communities. These are very popular with the communities because they are also entertaining. The role plays are performed in the local language that the community understands. The sketches that are performed bring out different messages targeted at all road users including pedestrian. The messages teach road users on how to protect themselves on the road. After the performance the audience is given an opportunity to ask questions and discussions are also encouraged. RTSA believes that, drama is one of the most successful channels of reaching out to the communities because it is entertaining, informative and educative. It is thought to yield positive results in changing people's attitudes perceptions and behaviours towards road.

6. Road Safety Week

The other communication strategies include road shows in different areas where information is disseminated through brochures and posters. RTSA also uses artists that perform and give talks on road safety to the members of the public. It also puts up information road blocks along the road.

7. Community Publicity Campaigns at Traditional Ceremonies

RTSA takes advantage of traditional ceremonies and conducts out road safety campaigns to the people attending the ceremonies. These ceremonies are held every year for the different tribes in Zambia.

8. Road Safety School Clubs

The Road Safety School Clubs in schools are aimed at making children aware of their traffic environment and enlightening them on what to expect as they venture out on the road. RTSA works in conjunction with the school patrons in schools to ensure that road safety information is disseminated.

9. Day of Remembrance

First National Day of Remembrance for Road Crash Victims was held on Saturday, 7th February 2015 at the Anglican Cathedral of the Holy Cross, in Lusaka. The day coincided with February 7, 2013 Chibombo road accident which resulted in the death of 51 people. The accident victims, relatives of those who were killed and injured victims, stakeholders from the transport industry, corporate community and interested members of the public attended the event. The objective of the day was to raise awareness in Zambia and specifically among those with high-risk driving behaviours as to the impact of road crashes on their communities.

Observation Findings

The research established that there is a lack of zebra lines and pedestrian crossings especially in schools found in high density areas. In some locations there are pedestrian crossings in the form of wide, raised areas above the street level that are built in front of schools. Most children did not know how this kind of infrastructure is to be used. This may indicate a need to teach children about these additional types of crossings.

Furthermore, it was established that crossing behaviour of pedestrians in Lusaka is rarely in compliance with the pedestrian regulations, though drivers contribute to this as they do not yield at pedestrian crossings. The pedestrian behaviour is mainly due to relatively few legal crossing points and centre medians being difficult or impossible for pedestrians to negotiate. The children that were interviewed always blamed the driver for bad driving but very few knew they also had a responsibility and a role to play on the road as pedestrians.

It was observed that most of the road safety clubs in the schools under study were not as active as they are supposed to be. The patrons complained of lack of regular visitation from RTSA. A number of months would elapse without RTSA visiting the school clubs and this would negatively impact on the performance of the school clubs.

Apart from this, the school clubs were not availed with road safety manuals that can be used as teaching aids to the children. The lack of manuals hindered the children's comprehension of road safety. The road safety manuals contain lessons tailored around key safety such as walking safely, crossing safely and cycling safely. The ultimate purpose of the road safety school clubs is to educate children on road safety so that correct behaviour can be taught and assimilated but this cannot be done without the necessary material available.

CHAPTER FIVE

5.0 DISCUSSIONS OF FINDINGS

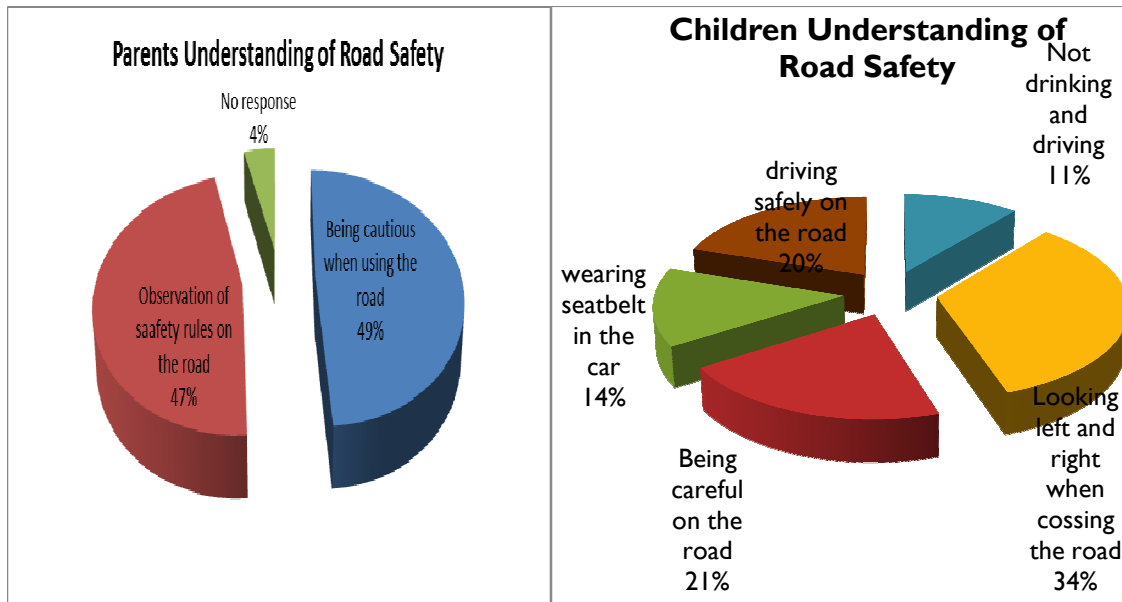
The chapter aims at discussing the findings that were presented in chapter four. The main objective of this research was to assess the communication strategies put in place by the RTSA's for road safety, and in particular road safety for children.

The tendency to err is a pervading human trait. Evidence shows that the road traffic crashes and injuries are one of the significant causes of childhood morbidity and mortality even in Zambia. The bulk of the crashes amongst children are said to be predictable and preventable based on the amount of awareness that children receive on road safety. An accident cannot possibly occur unless there has been a personal unsafe act / or exposure to an unsafe mechanical condition. To minimize accidents, then systematic efforts will have to depend initially upon the availability of knowledge regarding unsafe act and unsafe mechanical conditions.

Parents and Children's Knowledge and Understanding of Road Safety

The research sought to establish parents and children's knowledge and understanding of road safety. It was observed that the majority of both parents and children had significant knowledge and understanding of road safety. **Figure 5.1 below makes** a comparison of parent's and children's understanding and knowledge of road safety.

Figure 5.1 Parent’s and children’s understanding and knowledge of road safety.



Children’s understanding of road safety Versus Parent understands of road safety

The research established that both the children and the parents had significant knowledge and understanding of what road safety was all about. However, the knowledge for the children was more on the safety of motorist and passengers than pedestrians. This finding is constant with (Dreyer et al: 1999) who argues that children have little knowledge on pedestrian road safety. As observed in the literature review, children have to possess qualities like knowledge of traffic rules, observation of speed limits, personality factors, knowledge of vehicles as well as knowledge on pedestrians safety as this is the category that the children mostly fall into.

Children’s Knowledge of road safety is also influenced by several factors such as his development level, previous experience, cognitive level, social orientation, as well as attitudes toward obeying or disobeying of the traffic rules, (Dreyer et al: 1999).It is important to understand that road safety education involves more than teaching people to cross the road, ride a bike, or pass a driving license test - although these are all very important. Safe road usage places demands on such things as problem solving, decision-making, attitudes and values in addition to the knowledge of traffic laws, consequences of one's actions and an understanding of technical matters related to safe vehicle operation. Traditionally, road safety education programs have

focused on knowledge and attitudes derived from remote learning, rather than skills required to function in traffic environments and lack good ability to foster the transfer of knowledge to safer performance or improved behaviour. They also generally treat each child the same, and are rarely based on understanding of the developmental and behavioural characteristics that may put young children at increased risk for pedestrian injuries. While there are a number of road design solutions which provide barriers to separate pedestrians from traffic and signalised or safe crossing zones, the reality is that there are many more roads where pedestrians remain vulnerable.

RTSA has in conjunction with the Ministry of Education introduced road safety in the school curriculum. The challenge has however been that most of the schools have not yet begun teaching it due to lack of teaching manuals. It is important to note that teaching children road safety as part of their normal school timetable can be an effective way to provide them with knowledge and understanding on road safety. This together with practice and exercises outside school can help them to apply their knowledge and develop skills.

This type of education both helps children avoid road accidents when they are young and makes them safer when they become adults. While formal road safety education in schools should be incorporated into the national school curriculum, there is considerable merit in promoting informal community-based education for adults and children to avoid neglecting those outside the school environment; such as pre-school children, non-attendees and school leavers.

Parent's Road Safety Knowledge and the Main Source of their Knowledge

The research also sought to establish the connection between the knowledge and understanding of road safety and the main source of knowledge on road safety. To this effect, the parents were asked whether they had received knowledge and understanding on road safety matters and from whom. It was established that the majority of the parents had received enough knowledge and understandings of road safety and their main source of this knowledge was television.

A cross tabulation of knowledge and understanding of road safety and the sources of the knowledge is illustrated in **Table 15** below.

Table 15: Enough knowledge and understanding of road safety matters?* what is the main source of information on road safety? Cross tabulation

Do you think you have received enough knowledge and understanding of road safety matters? * What is the main source of information on road safety? Cross tabulation									
Count									
	What is the main source of information on road safety?								Total
		Friends	Radio	TV	Newspapers	Billboards	Pamphlets, Fliers	no response	
Do you think you have received enough knowledge and understanding of road safety matters?	Yes	0	5	13	3	1	2	1	25
	No	1	6	15	1	1	0	0	24
Total		1	11	28	4	2	2	1	49

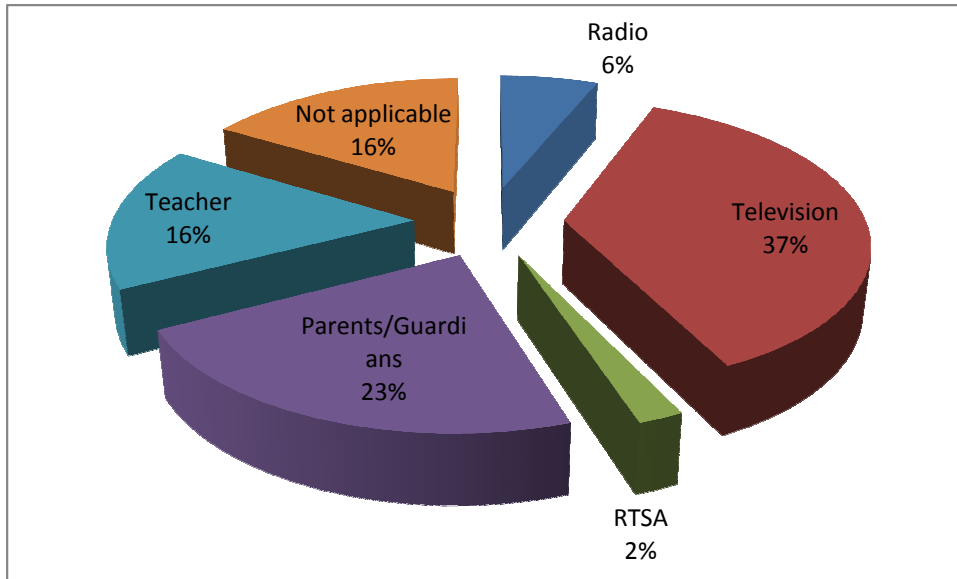
Television is used in disseminating road safety information because it permits you to reach large numbers of people on a national or regional level in a short period of time. It also being image-building and visual medium, offers the ability to convey messages with sight, sound and motion. The idea seems to be that almost everyone either watches television. Therefore, the greater the reach of the media channel you use to put your message out there, the greater number of people who will receive that message. However, research consistently shows that any type of campaign, including mass media types, is more effective when it is focused on specific groups.

Therefore, given the wide media choice, decisions on what media to use should be made based on the target audience and the characteristics of the media itself such as reach and selectiveness, information capacity, lifespan, ability to gain attention and costs, Delhomme et al, (2009).

Children's Main Source of Information

The research further thought to establish children's main source of information. The majority of the children said they had received information on road safety through television and from their parents. **Figure 5.2** shows the children's sources of information.

Figure 5:2 Children's main source of information on road safety



Findings are consistent with Bandura (1977), who argues that most human behaviour is learned by creating a model of behaviour from observing others. One forms an idea of how new behaviours are performed and, on later occasions, this coded information serves as a guide for action. This means children learn rules on how to behave in traffic from parents and accompanying persons whereas traffic education is often simply taught. Parents are role models and their attitudes, mobility and interactions influence their children's behaviour. Safe traffic behaviour from a respected authority figure will have an impact on the child's willingness to imitate safe behaviour).

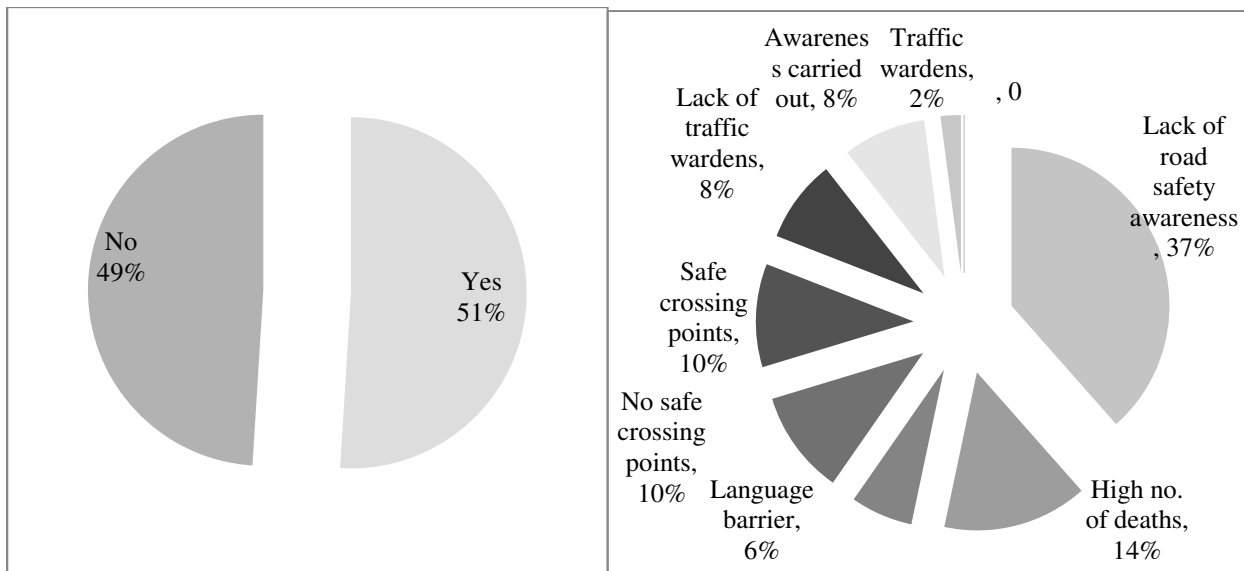
Rothengatter, (1981) observes that researchers recognize that parental involvement is critical to children's behaviour change as children consider their mothers and fathers as significant safety role models. Both children and parents reported engaging in safe behaviours more often when they were in each other's presence. Unfortunately, there are limitations in getting parents to participate in safety programs. The biggest limitation is the time factor on the part of parents.

However, parents can play an enormous role because they can continue to provide reinforcement to their children until children are old enough to cross the street alone. By then, the habit and understanding of its importance should continue children’s engagement in safe pedestrian behaviour.

Attention to Children’s Road Safety

The research further sought to find out whether children’s road safety was being given enough attention or not and the reasons why. Therefore respondents were asked whether they thought children’s road safety was being given adequate attention or not and the reasons. Figure illustrates the findings.

Figure 5.3 Road safety attention and its reasons for the attention/or the lack of it



It was established that the larger percentage of the respondents felt that road safety for children was not being given enough attention; and the major reason being the lack of adequate road safety awareness. Little awareness is done on road safety for children as focus is mainly on improving the safety of motorists rather than pedestrians in particular children.

It is a well-known fact that a major contributory factor in many of these children’s pedestrian accidents is a lack of road safety knowledge which causes unsafe behavior by the children. If children are to be safe when near traffic, they must have adequate knowledge, understanding and skills to cope with the dangers of traffic.

The research established that children's road safety awareness, messages mainly focus on how the children can keep themselves safe on the road by looking right, looking left and looking right again. This is not enough to instill safety road safety behaviour in the children. The problem is that young children need a much clearer idea of what they are supposed to look for in traffic. It is not just a question of ensuring they point their heads in the right direction. It is a question of being attuned to the information required to make appropriate judgments. Sometimes they seem to be merely going through a kind of ritual that involves turning their heads from side to side. Such behaviour illustrates a common tendency of children to apply rules they have been taught in a rather blind and rigid manner without proper comprehension of the purpose underlying the rule. One can tend to agree with

Apart from lack of awareness, the other concern was the lack of safe crossing infrastructure that contributes to pedestrian accidents. As long as infrastructure is not provided, awareness campaigns will not have any effect. The Social Campaign Theory outlines the importance of providing ways and means for people to carry out the actions stipulated in the awareness campaigns. In this case, road safety is being advocated for but the target audience lacks the necessary infrastructure to fully practice road safety. Furthermore, the road environment seems to also have negative effects on the safety of some categories of road users, especially pedestrians and cyclists. Most of the road designs are made in favour of motor vehicles and their drivers, but unfortunately, most of the other road users are not always catered for and they are at risk as they use such roads. There is need for reinforcement and this could be done by introducing road safety infrastructure. One of the respondents had this to say.

“Zebra crossings are only marked when the road is constructed for the very first time and from that when it fades away no one does anything about it. If you like go and walk on the roadway and see”

In essence, road safety campaigns complement other activities aimed at improving road safety. Important tasks of road safety communication include raising the public acceptance of road safety measures (e.g. enforcement measures) and decreasing the public acceptance of risky behaviours.

Effectiveness of Mass Communication Strategies

The research further sought to find out what respondents consider in determining whether a communication strategy is effective and which communication strategy they thought was more effective in disseminating information on road safety.

The research established that the majority of the respondents considered a communication strategy to be effective if it was easy to understand. For a road safety campaign to be effective, the messages must be specific, clear and instructional, avoiding anything vague that can be misunderstood or dismissed as irrelevant. It is common for people to under-estimate the dangers on roads and believe they are safe, and in particular for drivers to be overconfident, so messages need to make clear what they are asking people to do and that this applies to everyone. For example, simply telling drivers to 'slow down' may be dismissed by many drivers who believe they already drive slowly enough. Telling drivers to 'stay under speed limits' or 'slow down to 20mph/30kmh in towns' is harder to misinterpret or dismiss.

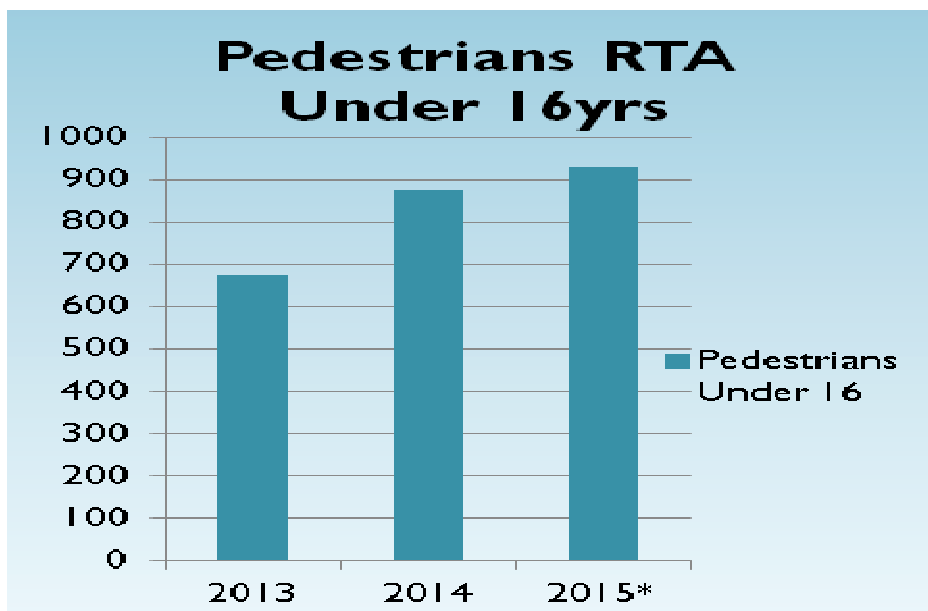
Another factor to consider in road safety messages is the cognitive abilities of the target audience. Cognitive and developmental theories suggest that it is possible for young children to learn safe street crossing behaviours; however, any instruction has to reflect the various cognitive and developmental theories that underlie pedestrian skills. This simply means that communication strategies have to take into account the cognitive abilities of those being communicated to. The awareness messages have to be understood for them to lead to behavioural change.

According to Siegler and Chen (1998), older children transfer problem solving schema under a broader range of conditions than do younger ones. They warn that if younger children are only taught a vague understanding of 'rules' they do not take the next step' and look for deeper understanding or application of the problem they face. If children do not understand the problem, they can't generalize the rule to a new problem. Hence it is important for children to not only learn rules for using the road, but also understand why the rule is applied. It should not be assumed that if children know and understand road rules then safe road use behaviour will follow. Therefore cognitive change is the expected outcome in Road Safety campaigns, accompanied by behaviour change.

In addition, it cannot be assumed that any taught road safety knowledge can be then transferred to the many specific situations to be faced at the roadside. Learning, and in particular training, is best done in the actual roadside context, for example commentary walking. Once learning in a specific context is consolidated then it can progress to more generalised conceptions (OECD, 2004).

The research established that that in terms of overall effectiveness of the communication strategies, the trend showed that there was an increase in the number of pedestrian accident, however, there was a reduction in the rate of percentage increase from 29% percent in 2013 to a projected 6% in 2015 by Zambia Police assuming all factors remain the same. However, it would be important to note that there are other factors such as pedestrian infrastructure that significantly contribute to an increase in pedestrian accidents.

Figure 5.4 Pedestrian Road Traffic Accidents



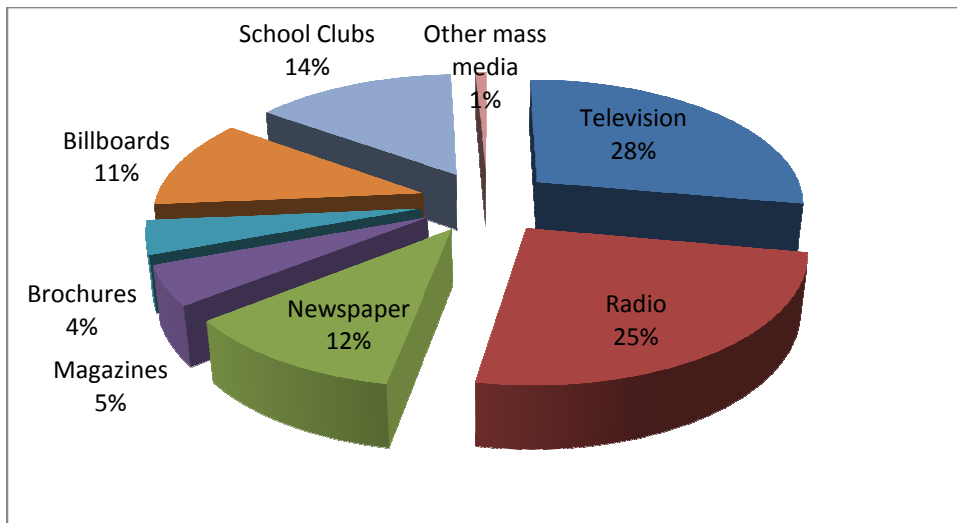
The findings are in agreement with the evaluations of mass media Campaigns conducted in Australia and New Zealand which indicated that road safety campaigns coupled with enforcement and legislation lead to significant reductions in the frequency and severity of casualty crashes. This result is also supported by research conducted in North America and Europe. However, a key limitation of this research is that it does not isolate the effects of road safety campaigns on the relevant measure of effect from the effect of other

supporting activities. Nevertheless, it is apparent that the extent to which any individual campaign affects crash frequency is determined by the characteristics of the individual campaign.

Channels of Communication Suitable for Information Dissemination

The research also sought to establish which mass media communication channel was thought to be effective. The research established that Television was considered to be the most effective. Television was seconded by radio. The figure below shows the respondents results of which communication channel they thought was effective in disseminating information on road safety.

Figure 5.4: Channels of Communication



It was established that RTSA uses more of radio programmes to inform and educate the public on road safety compared to the other forms of mass media. A number of safety programmes are broadcast in the local languages and the listeners are given a chance to call in and participate. Radio is one of the mass media that has more penetration and reach. However, the utilization of a combination of communication strategies to reach out to the target audience is one of the conditions that favour successful mass media-oriented information campaigns. Furthermore, road safety campaigns are very often combined with other actions (enforcement, education,

legislation, commitment, rewards, etc.), or as Elliott (1993: 2) quote “mass media campaigns need to be viewed as an integral support element for other countermeasures.

According to Kotler and Roberto (1989), mass communication messages alone are typically insufficient to bring about behavioural changes; they have to be supplemented by interpersonal interventions and personal communications and other forms of strategies. A major advantage of the interpersonal relationships is that the influencer can customize the messages to the unique needs and values of individuals in a more precise and context relevant manner than most media messages.

Social campaigns work best when mass media- oriented communication is supplemented by face-to-face communication to the extent that people are able to discuss what they hear with others, they will process information better and are more likely to accept changes. According to Kunczik (1984), an effective communication programme will combine some or all the tools of communication to communicate the intended message to the target audience.

Applicability of Road Safety Information

The research sought to find out the correlation between clarity of road safety messages and applicability of road safety knowledge. To this effect, the respondents were asked whether the messages on road safety were clear enough for them to understand and whether they were able to apply the knowledge they have on road safety when crossing the road. **Table 16** Shows the cross- tabulation of clarity of road safety messages and applicability of road safety information.

Table 16: Cross-tabulation of clarity of information and applicability of road safety knowledge

Are the messages that you have received about safety clear enough for you to understand? * When crossing the road, are you able to apply the knowledge that you have on road safety? Crosstabulation				
Count		When crossing		Total
		Yes	Not applicable	
Are the messages that you have received about safety clear enough for you to understand?	Yes	34	0	34
	No	4	0	4
	I do not know	3	0	3
	Not applicable	0	8	8
Total		41	8	49

It was established that most people had clarity of road safety messages and were able to apply the knowledge on road safety when crossing the road. Therefore, one can assume that changes in knowledge or attitudes will lead to changes in actual traffic behaviour. The evidence suggests there is link between knowledge and behaviour contrary to what some scholars say that children cannot apply road safety knowledge on the road.

Adequate participation and involvement in road safety

The research established that the majority of the respondents think that there is inadequate participation in the formulation and development of road safety communication strategies by consumers. Respondents felt that there is a top-down type of approach instead of bottom up. A frequent problem in campaigns is that rigid, top-down communication methods are used. With such methods there is little scope for participation by the receiver. In this case, communication is rather an inflexible, one-sided process with little possibility for the receiver to reply to the transmitter. For example, if the transmitter -- a traffic safety body -- has an information brochure

distributed or pays for a TV advertisement, communication is a one-way, top-down process. When campaigns to promote safety awareness are being worked out, the aim should to have top-down approaches to communication. The advantage in this is that general living conditions and personal circumstances can be taken into account much more easily and safety messages are not isolated from their context.

It is important that consumers of road safety are not viewed as passive recipients, but should be involved as active stakeholders. Participation in service delivery should include all aspects, from planning and decision making to the management of the implementation, and should eventually lead to the empowerment of the road users.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The research established that RTSA has employed a combination of different communication strategies to bring about necessary road safety awareness in children and the country at large. The mass media channels that are used are television and radio. RTSA further uses posters, brochures, billboards, workshops, drama, t-shirts, banners, newsletters and musical concerts to disseminate road safety information. However, the widest mass media that RTSA uses is National and Community Radio Stations where road safety information is disseminated.

It was established that the majority of the respondents both parents and children had significant knowledge and understanding of road safety. However, parents from low and medium densely populated areas seemed to have slightly more knowledge on road safety compared to parents from high densely populated areas.

Findings from the research revealed that most of the children that were interviewed depend on television for road safety information followed by interpersonal communication such as parents/guardians. Children consider their mothers and fathers as significant road safety role models. The adults also depend on mass communication such as television and radio as their main source of information. This finding is critical for communicators when deciding which communication strategy to use for which target group in order to achieve the objectives of the campaign.

It was also established that children from high density areas were more likely prone to road traffic accidents. This was so because they were less likely to own a car and walking was a major means of transport. Safe pedestrian crossings are lacking. Many interviewed children further mentioned that they would like to use pedestrian facilities if available.

It was established that that Pedestrian road safety is not being given enough attention because there was limited road safety awareness. It was observed that despite the pedestrian road safety campaigns, the pedestrian road accidents have increased.

The conclusion is that RTSA's road safety communication strategies by themselves have modest impact on road accidents. The strategies work best when combined with other intervention such as enforcement of traffic laws and regulations and provision of safety infrastructure. According to the research results, it is well known that influencing road users' behaviour through the forms of enforcement has its limits. On the other hand, communication alone has its limits as well. The only solution of the problem is to combine those two basic tools together.

If people have little or no road safety knowledge and have an indifferent attitude towards traffic rules, improvements to road infrastructure and vehicle crashworthiness will have a limited impact if pedestrians and drivers do not know how they should behave and interact. Road safety communication strategies for pedestrians would involve alerting them to road traffic rules and there is a similar need for drivers to understand their legal requirements, such as when pedestrians right of way. This is only part of the answer, however, if there is insufficient infrastructure to enable pedestrians and drivers to comply with the law. Moreover, aggressive road safety communication strategies could address the problem of noncompliance of pedestrians with crossing regulations.

Whatever approach is taken to addressing pedestrian safety in Zambia, it should rely on evidence and best practice. While the discussion above has identified some measures that have potential, there is clearly a need to undertake further research into pedestrian exposure in Zambia. Similarly, there is also a need to understand the potential and limitations that apply to engineering, education and enforcement measures within the country. It is intended that these considerations will guide research in the near future.

6.2 Recommendations

1. It is recommended that RTSA continues to consider mass-media methods for delivery because they have a clear advantage over personal communication in terms of audience reach, and their effects. However, for target audience like children personal communication should also be encouraged so that the children can fully comprehend the road safety programs.
2. RTSA needs to come up with road safety awareness programs that will solely target the pedestrian children and not combine the road safety campaigns with those targeted at various groups. This will help provide the children with comprehensive pedestrian road safety knowledge as opposed to simply knowledge on motorist and passengers.
3. Parents are currently one of the main sources of information for their children. RTSA should also focus on the education and training of parents in children's road safety so that they relay the right message to their children.
4. The school also plays a cardinal role in road safety, therefore the Road Safety Clubs in schools should be revived and focus should not only be on schools in low densely populated areas but also in high densely populated areas. There is also need to fast track the inclusion of road safety education into the school curriculum because schools play a cardinal role in children's road safety. Comprehensive road safety manual should be availed to teachers too.
5. In order to increase the acceptance of a road safety measure by the public and thereby render it more successful, road safety campaigns should be launched simultaneously with enforcement programmes. The public should be extensively informed about the road safety problem that is addressed.
6. Infrastructure for pedestrian road safety must be provided by the Government if the country is to see significant reduction in the number of pedestrian accidents. Road safety

campaigns without infrastructure will not be effective. RTSA should provide the target audience with ways and means of carrying out the campaign messages.

7. Special attention should be given to other disciplines studying human behaviour such as social psychology and economics. These could offer interesting insights into human behaviour and behavioural modification which may prove to be of use within the practice of road safety campaigns. Theory can provide a conceptual foundation for a campaign; assist in determining where message in campaigns might focus, and accommodate evaluation of the campaign. These theories help in predicting behaviour change and explaining social persuasion which can be vital in road safety communication strategies.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR PARENTS/ GUARDIANS

Dear respondent,

You have been randomly sampled to take part in this research study focused on Communication Strategies of RTSA for reducing pedestrian accidents amongst children. Your contributions in answering the questions in this questionnaire will help in coming up with the appropriate ways of making the communication strategies for road safety effective. You are therefore, kindly being asked to answer each question truthfully and honestly. Your answers will be confidential. Do not write your name anywhere on this paper.

Specific Instruction:

Tick [] in the appropriate bracket [] provided for you next to the answer of your choice, and/or write in the space underlined where your opinion or comment is required.

SECTION A: BACKGROUND

1. Sex 1. Male []
2. Female []
2. Age -----
3. Marital Status 1. Married []
2. Single []
3. Divorced []
4. Widowed []
5. On separation []

4. Name of the School -----

SECTION B

Knowledge and Understanding road safety

5. Who do you think a Pedestrian is?

6. What do you understand by the term road safety?

7. What do you understand by the term pedestrian accident?

8. In your opinion, do you think children's road safety is being given enough attention?

1. Yes []

2. No []

9. Give reasons for your answer to question 7.

10. Do you think the messages being disseminated by the media are adequate to reduce on pedestrian accidents amongst the children?

1. Yes []

2. No []

11. Do you think you have received enough knowledge and understanding of road safety matters?

1. Yes []

2. No []

Perceptions of Parents/ guardians of Communication strategies and their effectiveness

12. What is your main source of information on road safety? (Please tick one only).

1. Friends []

2. School []

3. Radio []

4. Television []

5. Newspapers []

6. Workshops []

7. Billboards []

8. Pamphlets, Fliers []

9. Other Please specify _____

13. What mass media would you consider to be effective in the dissemination of pedestrian road safety messages? (You can pick more than one)

1. Television []
2. Radio []
3. Newspapers []
4. Magazines []
5. Brochures []
6. Billboards []
7. School Clubs
8. Other please specify []

14. What medium would you consider to be effective in the dissemination of Children's road safety messages? E.g. Television -----

15. Why do you consider the above medium that you have picked in question 14 effective?

16. Do you think that there is adequate participation and involvement of the communities in the development of communication messages to increase road safety?

1. Very adequate
2. Adequate
3. Moderately adequate
4. Inadequate
5. Very inadequate

APPENDIX II: QUESTIONNAIRE FOR CHILDREN

1. Age _____

2. School _____

3. What do you understand by the term road safety?

4. What do you understand by the term pedestrian accident?

5. Have you ever received any information on road safety?

1. Yes

2. No

If yes go to the question 6 if No, go to question 9

6 .Who did you receive this information on road safety from?

1. Radio

2. Television

3. RTSA

4. Parents/Guardians

5. Teacher

7. Are the messages that you have received about road safety clear enough for you to understand?

1. Yes []

2. No []

8. Are you able to apply the knowledge that you have on road safety when crossing the road?

1. Yes []

2. No

Give a reason for your answer in 12

9. Would you like to be involved in the making of communication messages about road safety that are that are targeted at children?

1. Yes []

2. No []

10. Give reasons for your answer to Question 9.

APPENDIX III: INTERVIEW GUIDE FOR THE HEAD OF EDUCATION AND PUBLICITY AND PUBLIC RELATIONS DEPARTMENTS

Date and time_____

1. According to your own experience, which groups of people are most vulnerable to pedestrian road accidents and why.
2. What communication strategies do you use in the dissemination of information to the public on road safety?
3. To what extent does RTSA use the following mass media channels: Television, radio, pamphlets, booklets, leaflets and books in communicating with the communities on road safety matters?
4. To what extent are Interpersonal communication, group communication and Public address system effective in the dissemination of information on road safety?
5. What are the challenges and barriers that hinder effective communication of messages on road safety?
6. What communication strategy has been the most effective in reaching out to the communities and why?
7. Which strategy used for communication is thought to yield positive results in changing people's attitudes, perceptions and behaviour towards road safety
8. What further improvements do you think can be made in the dissemination of information on road safety?

APPENDIX IV: INTERVIEW GUIDE FOR THE ROAD SAFETY PATRONS IN SCHOOLS

Date and Time _____

1. What is your perception of road safety in particular road safety for children?
2. What communication strategy/is RTSA using in reaching communities about matters of road safety and what has been their impact?
3. In your assessment do you think RTSA is disseminating road safety information among Zambian communities satisfactorily? Give reasons.
4. Which channels of communication does RTSA utilize most in the dissemination of messages and why do you think they use that channel?
5. What advocacy method is RTSA using in the road safety?
7. What is RTSA doing to ensure that children are empowered more in road safety matters?
8. What Information, Education and Communication (IEC) materials are produced by the RTSA to educate and disseminate information to the communities on road safety? Are the IEC materials children friendly?