

Addis Ababa
University
(Since 1950)



ADDIS ABABA UNIVERSITY
SCHOOL OF JOURNALISM AND COMMUNICATION

**THE USE OF COMMUNICATION TOOLS TO CREATE AWARENESS ABOUT
TRAFFIC SAFETY: THE CASE OF ADDIS ABABA TRAFFIC MANAGEMENT
AGENCY**

BY: - ALEMAYEHU MUNEYA

ADVISOR: YOHANNES SHIFERAW (PHD)

**A Thesis Submitted to the School of Journalism and Communication of Addis Ababa
University IN Partial Fulfillment of the Requirements for the Degree of Master of Arts in
Public Relation and Strategic Communication.**

Addis Ababa University

Addis Ababa, Ethiopia

February, 2023



Addis Ababa University

School of Journalism and communication

**The use of Communication Tools to Create Awareness
About Traffic Safety: Addis Ababa Traffic Management
Agency in focus.**

Advisor: Yohannes Shiferaw (PhD)

Addis Ababa University

Addis Ababa, Ethiopia

February, 2023



APPROVAL

Addis Ababa University

Graduate school of Journalism and communication

**The use of Communication Tools to Create Awareness about Traffic Safety: Addis
Ababa Traffic Management Agency in focus.**

Alemayehu Muneya

February, 2023

APPROVED BY BOARD OF EXAMINERS

_____	_____	_____
Advisor	Signature	Date
_____	_____	_____
Internal Examiner	Signature	Date
_____	_____	_____
External Examiner	Signature	Date
_____	_____	_____
Chairman	Signature	Date

DECLARATION

Addis Ababa University School of Graduate Studies

Graduate school of Journalism and communication

This is certified that the thesis prepared by Alemayehu Muneya, entitled; The practice of using communication tools to create awareness about traffic accidents; Addis Ababa Traffic management Agency in focus and submitted in partial fulfillment of the requirement for the degree of master of public relation and strategic communication complies with regulations of the university and meets the accepted standards with respect to originality and quality.

Name: Alemayehu Muneya

Signature: _____

Place: Addis Ababa University

Addis Ababa, Ethiopia

Date: February, 2023

ACKNOWLEDGMENTS

First of all, I would like to thank God for everything and I would like to express my grateful appreciation to my supportive adviser Dr. Yohannes who shared his vast knowledge with me and give me the confidence to accomplish this work, during the preparation of this thesis, you kindly guided me to develop critical thinking and research skills.

Then I would like to forward my deepest gratitude to all my family, my mother, brother and my sisters and my friends for your generous support without you the completion of this work would not have been possible.

Finally, I would like to express my thanks to all academic and professional staff in Addis Ababa Traffic Management Agency who gave their time for supporting me during this research works.

TABLE OF CONTENT

APPROVAL	i
DECLARATION	ii
ACKNOWLEDGMENTS	iii
TABLE OF CONTENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABSTRACT	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	3
1.3 Objective of the Study	6
1.3.1 General Objective	6
1.3.2 Specific Objectives of the Study	6
1.4 Research Questions	6
1.5 Significance of the Study	6
1.6 Scope of the Study	7
1.7 Limitation of the Study	7
CHAPTER TWO	8
REVIEW OF LITERATURE	8
2.1 Introduction	8
2.2 Traffic Communication Tools	8
2.2.1 Safety Feature	8
2.2.2 Goals of Road Safety Campaign	8
2.2.2.1 Process of Road Safety Awareness Creation Programs	9
2.2.2.2 The Implementation of Road Traffic Safety Awareness Programs	9
Campaign Modalities	9
2.2.2.3 Effectiveness of Road Safety Awareness Programs	10
2.2.2.4. Evaluation of Effectiveness of Road Traffic Safety Awareness Creation Programs	11
2.2.2.5 Effectiveness of Education	11

2.2.3 Choosing a Media Platform	12
2.2.3.1 The Role of the Mass Media in Creating Awareness.....	13
2.2.3.2 A Technology-Centric Notion of Awareness Creation.....	13
2.2.3.3 Towards a User-Centered Understanding of Awareness Creation	14
2.2.4 The Content of the Message	14
2.2.4.1 The Message Source	15
2.2.5 Road Traffic Safety and Operational Structure in Ethiopia	15
2.2.5.1 National Road Traffic Safety Council, Ethiopia.....	15
2.3 Theories of Learning	18
2.3.1 Theories of Road Safety Campaigns	18
2.4 Communication Tools	21
2.4.1 Traditional Communication Tools.....	21
2.4.2 Electronic Communication Tools.....	22
2.4.3 The Message Content, Form and Style.....	22
2.4.4 Safe Road Operations	25
2.4.5 Road Traffic Safety Awareness Programs in Developing Counters	25
2.4.5.1 Traffic Safety Education and Information Campaign Activities in China	25
2.5 Research Gaps	28
2.6 Empirical Literature Review	28
2.7 Conceptual Framework	29
CHAPTER THREE	31
METHODOLOGY OF THESTUDY	31
3.1 Research Design.....	31
3.2 Research Approach	31
3.3 Sampling Design	31
3.3.1 Population of the Study	31
3.3.2 Sampling Frame.....	32
3.3.3 Sample Size	32
3.4 Sampling Technique.....	33
3.5 Source of Data.....	34
3.5.1 Primary Sources.....	34

3.5.2 Secondary Sources.....	34
3.6 Methods of Data Collection	34
3.6.1 Questionnaire.....	34
3.6.2 Interview	35
3.7 Method of Data Analysis and Presentation.....	35
CHAPTER FOUR.....	36
DATA ANALYSIS AND PRESENTATION	36
4.1 Introduction	36
4.2 Response Rate	36
4.3 Demographic characteristics of Respondents	36
4.3.1 Age Distribution of Respondents	36
4.3.2 Sex of Respondents	37
4.3.3 Educational status of Respondents	38
4.3.4 Work Experiences of Officials	39
4.3.5 Owned Communication property	39
4.3.6 Incomes level of Pedestrians	40
4.3.7 Occupation of Respondents	41
4.2. The Preference of Communication Tools	41
4.3.8 The Main Content of the Road Traffic Safety Messages	43
4.3.9 The messages prepared to create awareness are easy to understand	44
4.3.10 The degree of coverage of actual road traffic awareness by the communication tools	45
4.3.11 The frequency of transmit road traffic safety messages to users.....	45
4.3.12 Officials involvement in road traffic awareness creation discussions in public forums	47
4.3.13 The communication tools to create awareness	48
4.3.14 The appropriateness of communication tools to audiences	48
4.3.15 The usage of communication tools to create awareness about traffic accidents	50
4.3.16 The Important of communication tools to create awareness about traffic accident issues.....	50
4.4 The Effect of Implementing Traffic Safety Awareness program on road user’s knowledge regarding the traffic accident.....	51
4.4.1 The awareness program changes the attitude of road users.....	51

4.4.2 The Implementation level of Traffic safety awareness program on road user's knowledge regarding traffic accident	52
4.4.3 The Main Victims of Traffic Regulation Violation.....	52
4.4.4 The Effects of the weak awareness program on road user's traffic accident	53
4.4.5 The Correlations Between communication strategy and their effectiveness.....	55
4.5 The challenges faced during the use of communication tools	57
4.6 Practices of Road Traffic Safety Awareness Creation Programs.....	59
4.7 Conclusions	60
CHAPTER FIVE	61
SUMMARY AND RECOMMENDATIONS.....	61
4.1 Introduction	61
4.2 Summary of Findings	61
4.3 Recommendations	63
References.....	64
Appendix I: questionnaire for officials	69
Annex I: Pedestrian questionnaires.....	74

LIST OF TABLES

Table 3.1: The sampling distribution	33
Table 4.1: Response rate	36
Table 4.2: Age distribution	37
Table 4.3: Sex of respondents	38
Table 4.4: Educational level	38
Table 4.5: Respondents' from official's preference of communication tools	41
Table 4.6: The preferred sources of information for pedestrians.....	43
Table 4.7: Main content of the road traffic safety message respondents get	44
Table 4.8: Messages clarity to easily understand.....	45
Table 4.9: Degree of coverage of actual road traffic	45
Table 4.10: The frequency of involvement in road traffic awareness creation discussions in public forums	47
Table 4.11: Discuss road traffic safety issues with family members or friends	47
Table 4.12: Interactive nature of the program	48
Table 4.13 Important of communication tools to create awareness about traffic accident issues	51
Table 4.14: The main victims of traffic regulation violation.....	53
Table 4.15: The effects of weak awareness program on road user's traffic accident.....	53
Table 4.16: Correlation between communication strategy and effectiveness.....	56
Table 4.17: The challenges faced during the use of communication tools.....	58

LIST OF FIGURES

Figure 2.1: The seven characteristics of an effective message	15
Figure: 2.2 Conceptual framework of the study	29
Figure 4.1: Work experience of respondents	39
Figure 4.2: Work experience of respondents	40
Figure 4.2: Work experience of respondents	40
Figure 4.3: Occupation of respondents	41
Figure 4.4: The frequency of transmit messages to users	46
Figure 4.5: The time get road traffic safety messages per a day.....	46
Figure 4.6: The Messages are appropriate to reach a good deal	49
Figure 4.7: The airtime of the messages is appropriate to reach a good deal of audiences	49
Figure 4.8: The usage of communication tools to create awareness about traffic accidents	50
Figure 4.9: The awareness program changes the attitude of road users	51
Figure 4.10: The implementation level of traffic safety awareness program on road user's knowledge	52

LIST OF ABBREVIATIONS AND ACRONYMS

AACG	Addis Ababa City Government
ACRA	Addis Ababa City Road Authority
AATB	Addis Ababa Transport Bureau
AATPO	Addis Ababa traffic police
AATMA	Addis Ababa Traffic Management Agency
CSA	Central Statistics Agency
ERSO	European Road Safety Observatory
ETSC	European transport Safety Council
FTA	Federal Transport Authority
GDP	Gross Domestic Product
MT	Motorized Transport
NMT	Non-Motorized Transport
NRTS	National Road Traffic Safety Council
OECD	Organization for Economic Co-operation and Development
PAC	Public Awareness Campaign
RTA	Road Traffic Accident
RTS	Road Traffic Safety
TPO	Traffic Police Office
UN-HABITAT	United Nation Human Settlement Program
WHO	World Health Organization

ABSTRACT

The main objective of the study was to assess the use of communication tools by the Addis Ababa Traffic Management Agency (AATMA) in creating awareness about traffic accidents. One of the main functions of AATMA is to raise awareness of the public on issues related to traffic accidents using various media. The study employed descriptive research design and mixed research approaches in order to look at in-depth and know how to use communication tools for awareness creation programs. It assembled and used both primary and secondary data sources. As primary data, semi-structured interviews and open-ended and closed-ended questionnaires were used to collect information from Addis Ababa Traffic Management Agency officials. While secondary data were gathered from Addis Ababa Traffic Management Agency and Addis Ababa Traffic Police reports, books, journals, and research papers on road safety issues were properly used. The quantitative data collected on the practice of using communication tools to create awareness about traffic accidents in Addis Ababa has been coded and analyzed using the SPSS (statistical package for social science). On the other hand, qualitative data was analyzed thematically. A mixed research method was used to address the research questions. In-depth interviews and questionnaires were used as instruments to collect data. The study found out that AATMA used multiple channels of communication, which included mass media, interpersonal communication, and publication, to reach the target. The challenges faced during the use of communication tools were: lack of feedback; language barriers; budget constraints; lack of motivation; using the wrong tool; and lack of adequate material. Thus, to overcome these problems, the agency should perform both on time and make a progressive impact assessment on road traffic safety awareness creation programs. Adequate budget allocation is needed to restart its mass media and publication to reach a large audience. It should evaluate its communication and training programs and have its own communication tools.

Key words: Communication tools, Road Safety Awareness.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Mobility is a basic human need. Since time immemorial, everyone has traveled, either for food or leisure. Transportation, the movement of people and products between locations, and the many methods used to carry out such transportation. Transportation systems are intended to move people and goods to where they need to go safely, quickly, and affordably (Sohail, Maunder, & Cavill, 2006). Road traffic accidents are a major but neglected public health challenge. A road traffic accident (RTA) is defined as a collision or incident involving at least one road vehicle in motion that can be on a public or private road to which the public has the right of access. Thus, RTA can be a collision among vehicles, between vehicles and pedestrians, between vehicles and animals, or between vehicles and geographical or architectural obstacles.

Most risk minimization strategies contain a component of behavior change. Even some engineering solutions do not result in health improvements unless people are willing to, and know how to, change their behavior. Long-term behavioral change implies a voluntary change in behavior, and to do this, education is the key strategy. Education on awareness to road users about how it works, their role as a pedestrian, cyclist, motorcyclist, driver, or public transport user, and the skills and knowledge required to be safer (Gayle & Linda, 2002). The global crisis in road traffic injuries declared by the World Health Organization (WHO, 2018) World Report on Road Traffic Injury Prevention continues largely unchanged. Globally, road traffic is the cause of tremendous health losses. An estimated 1.35 million people die on the world's roads each year, and many millions more are temporarily or permanently disabled (WHO, 2018). The Global Status Report on Road Safety (2018) described how Africa is experiencing the highest per capita rate of road fatalities in the world currently.

Of the 100,000 individuals in Africa, 26.6 percent are thought to die in automobile accidents. This rate is 18.5 in Asia and 10.3 in Europe, by contrast. 2 percent of all automobiles, 12 percent of the world's population, and 16 percent of all fatalities are found in this region. RTAs are a problem that will only get worse, which will cause a catastrophe in worldwide public health,

according to current and predicted trends in motorization. According to reports, behind HIV/AIDS and TB, traffic accidents are predicted to be the third leading cause of death by the year 2020. (Peden, Scurfield, and Sleet, 2004).

According to FTA (2018), traffic safety is labeled the second most serious problem in Ethiopia, with over 20,000 crashes occurring annually. Approximately 30,000 vehicle crashes are reportedly caused annually, causing over 5118 fatalities and 15,529 minor and serious injuries. These figures translate to about 43 crashes and about 18 fatalities on a daily basis. It is a danger that has affected general health and morbidity. Due to these grim figures, the UN declared the years 2016–2020 as the "Decade of Action for Road Safety."

According to the African Road Safety Council's (2015) report, the majority of accidents are caused by the negligence and non-responsiveness of road and transportation users due to a lack of awareness about the issues at hand. To respond to these issues, the African government established different agencies. The legislative mandate, function, and funding of a lead agency in road safety in Benin, Nigeria, Ghana, and Ethiopia are described here, as they have in their own way made progress in performing the institutional management functions. They also face their own challenges, if one notes the time that has been taken to develop road safety management capacity—the National Road Safety Centre in Benin was established in 1987, the Nigerian Federal Road Safety Corps in 1988, and the Ghanaian National Road Safety Commission in 1999.

The National Road Traffic Safety Council (NRTSC) in Ethiopia is one of the most recent lead agencies in Africa, established by regulation in 2011 and replacing a coordination office in the Road Transport Authority (2020). Greater urgency is needed to boost road safety management capacity across all African countries. Small and Runji (2014) pointed out that there is a demanding need to raise awareness of the scale of the road safety problem at a national level throughout Africa, encourage effective interventions, and build support for decision-making to implement them. Promotional activities that provide information or educational materials are often treated in Africa as an effective intervention in themselves rather than effective support for direct interventions within the road environment.

In Ethiopia, an average of 12 people loses their lives every day in traffic accidents. According to the report, about 85 percent of traffic accidents occurred in three regions: It is located in the Southern Nations, Nationalities, and People's Region of Addis Ababa. Asphalt roads in Ethiopia cover 14% of the country's total road length, and 80% of traffic accidents occur on asphalt roads. Lack of awareness among drivers and pedestrians, poor vehicle technical inspection, older vehicles, and poor road quality are some of the major causes. (UN report, 2020). According to WHO (2018), Ethiopia is the country with the highest number of road deaths and injuries every year. Each year, on average, more than 4,000 people die in traffic accidents. Of these, 48% are pedestrians; 45% are passengers; and 7% are drivers. More than 12,000 people suffer from minor and serious injuries. According to the Federal Transport Authority (2018), Addis Ababa has 630,440 registered vehicles, which accounts for 52.5% of the country's total vehicles. As the capital city of the country, the number of vehicles coming in and out of the four corners of the country is enormous. On the streets of Addis Ababa, pedestrians are the main victims, accounting for an average of 84% of all deaths and 67% of injuries. Although most road safety solutions focus on pedestrians, four out of five road deaths are still attributed to pedestrians. According to Addis Ababa traffic police reports (2020), from 2018 up to 2020, 1372 death reports were registered. Of the 458 deaths in Addis Ababa in 2012, taxis and buses accounted for 26.42% and heavy and light trucks (24.66%), accounting for 51.08 percent of the total deaths. As a result, the types of mass transport services and trucks account for more than half of the total death toll in a year, and they cover more than half.

The effectiveness of road safety campaigns hinges on several factors, such as the types of tools used in the campaign (e.g., posters, TV, radio, and social media); program duration (e.g., weeks, months, years); social norms underlying the target audience (e.g., perceptions about the acceptability of a behavior); and the external influences and environment in which the issue takes place (e.g., barriers to the behavior, social control mechanisms, features of the road) (Robertson and Pashley, 2015). Mass media campaigns are extensively used as a means of promoting road safety issues. Given the relatively high cost of mass media advertising, it is essential to know what elements make a road safety mass media campaign effective and how future campaigns might be made more effective (Wundersitz, Hutchinson, and Woolley, 2010).

In Addis Ababa, the agency has put in place measures to ensure that the road is safe and that public transportation is not harmed. One of the ways is through road safety awareness programs. The goal is to ensure that citizens are informed about safe driving habits and that other motorists know what to do to stay safe on the road. This study aims to investigate the practice of using communication tools to create awareness about traffic accidents in Addis Ababa's traffic management agency. Thus, the study may examine the practice of using communication tools to create awareness about traffic accidents by the Addis Ababa Traffic Management Agency.

1.2 Statement of the Problem

Human error has been the leading cause of accidents, accounting for approximately 80-90% of road fatalities and including, among other things, reckless driving, over speeding, inconsiderate use of the road, incompetent drivers, and driving under the influence of alcohol or drugs (Derik, Benjamin, and Moses, 2012).

The analysis of the road crash data report from the Addis Ababa traffic police between 2013 and 2018 showed that 19,518 people sustained different levels of injury, while property damage as a result of the crashes (which did not include costs of injuries for road users) was estimated to be over 7.8 million US dollars.

According to Addis Ababa Road Transport Bureau AARTB (2018) statistical data, during the course of the five years, there were 2,537 fatal injury reports; 10,281 were serious injury reports; and 6,700 were minor injury reports. The achievement target during 2015 requires a 10% reduction in fatalities and serious injuries annually from the base line of 448 fatalities and 1912 serious injuries.

Some of the road users' behavioral problems stated by Addis Ababa traffic police (2019) annual report are: breaking rules and regulations by traversing the street randomly rather than following the behavior of crosswalk, making a dash across the red light, crossing a road masked by stationary or parked vehicles, being careless, reckless or in a hurry, failing to judge vehicle path or speed, failing to use walkway, dangerous action in a carriage way etc. Those will all cause traffic accidents. Accidents happen occasionally when driving after drinking, going over the speed limit, driving without a license, not wearing a helmet, rushing in the forbidden zone.

Road safety awareness has been approached in various ways in both developing and developed countries. However, the various awareness campaigns can use ICT support by taking advantage of the public's embracement of social media and the use of mobile devices to spread and pass on safety awareness information. In addition to the various safety awareness measures, RCTs can be efficient and effective towards road safety awareness information collection, sharing, and accessibility in the country (Lukyamuzi and Friday, 2014).

Road safety communication campaigns can be an effective method to use when trying to persuade road users to adopt safe behaviors. The campaign can reach a large audience through the use of mass media or a smaller group using a more informal approach. Road safety media campaigns are not always separate initiatives and are sometimes used together with police enforcement or when introducing new legislation (Forward, 2013).

In Addis Ababa city, different strategies have been employed in the fight against road traffic incidents. The main step has been the formation of the Addis Ababa Road Traffic Management Agency. It was established in 2016 under the control of the Addis Ababa Transport Bureau and has common specified roles and responsibilities. According to AATMA's (2018) annual report, awareness programs were performed using different means of communication tools like radio, panel discussion, real-time traffic information, training, newspaper articles, templates etc. In addition, the agency is also spreading messages through different communication means through the media using audio, video, print, and face-to-face training to reach road users.

On top of this, the agency has come up with messages warning drivers against speeding and driving recklessly while on the road. Despite the efforts by the Addis Ababa Road Traffic Management Agency, the number of accidents and traffic violations was still high. Based on this rationale, the study will evaluate the communication process, implementation challenges, and road users' perceptions of Addis Ababa Road Traffic Management Agency's road safety awareness programs. It is against this revelation that this inquiry seeks to make a contribution by questioning the effectiveness of road traffic safety awareness programs of the agency.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of the study was to assess the practices of using communication tools by Addis Ababa Traffic Management Agency (ATMA) in creating awareness about traffic accident.

1.3.2 Specific Objectives of the Study

The specific objectives of the study were:

- To explore the ways the agency used the communication tools to promote road safety.
- To examine the implementation of traffic safety awareness program on road users knowledge regarding traffic accident and
- To identify the challenges faced in the use of communication tools;

1.4 Research Questions

- How does the agency use the communication tools to promote road safety?
- How does the implementation of traffic safety awareness program enhance road user's knowledge regarding traffic safety?
- What are the challenges faced in the use of communication tools?

1.5 Significance of the Study

The findings of the study helps to indicate creating awareness related to traffic accident needs well executed communication strategies and also direct responsible bodies that, without the participation of the community, it is very difficult to protect and promote traffic accidents.

The researcher believes that this research may have the significances to motivate the agency to evaluate its activities and strategies. The study might help the agency to see whether their communication tools for creating awareness are efficient and appropriate to achieve its objectives and mission. It can be used as an initial point for other scholars and researchers who are interested to undertake the study in this area.

The main beneficiary of the study may the transport sectors and organizations, policy makers, road users like drivers, pedestrians, passengers, motorists, cyclists and the community in general through showing the communication tools adopted to create awareness concerning traffic accident and road users awareness on road safety measures at the study area.

1.6 Scope of the Study

Thematic scope: The scopes of this study delimited to the study on the assessment on the use of communication tools in creating awareness about traffic safety.

Spatial scope: this study was spatially limited in Addis Ababa City Administration Traffic Management Agency including five branches East, West, North, South and Central and pedestrians.

Time Scope of the Study: the study is cross-sectional; the time scope of this study from February 2021 to September 2021.

1.7 Limitation of the Study

This study can be part of a bigger study that the practices of communication tools to create awareness about traffic safety carried out by all road safety stakeholders in Addis Ababa. However, this paper only presented the perspectives of AATMA, as one of the main stakeholders, regarding the practice of communication tools to create awareness about traffic accident in Addis Ababa. However, other cities and towns can draw some lessons from this study. Despite all these limitations the study stated the findings by remaining research ethics.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This chapter presents a review of various issues related to the topic. Important ideas, views related with the research topics have raised and discussed. The researcher reviews the concepts around communication tools. The chapter also presents the theoretical frameworks used in the study.

2.2 Traffic Communication Tools

Road communication tools or traffic control device is a medium used for communicating between traffic engineer and road users, or mechanisms installed, placed or drawn on road or roadsides by the traffic engineers to communicate certain information to the road users (Mathew and Krishna, 2007).

Road communication tools are used to provide information to regulate, warn, and guide the road users in a traffic system. Some of these tools include; traffic signs, road marking, traffic signals, and parking controls (Ogunmola, 2013).

Communication tools are usually the combination of linguistic and non-linguistic elements and are very important in reducing conflict and collision between the road users and road mishap; thus, their use is not an option to ignore (Ibid).

2.2.1 Safety Feature

Traffic communication tools converse safety categorically in three main ways, which are; regulatory signs, warning signs, and informative signs (Adedeji, Abejide and Hassan, 2016).

2.2.2 Goals of Road Safety Campaign

In the Manual for Designing, Implementing and Evaluating Road Safety Communication Campaigns, the five main goals of road safety campaigns which include: providing information about new or modified laws (e.g., new penalties for provincial territorial offences with a blood alcohol concentration; improving knowledge and/or awareness of new in-vehicle systems, risk, and appropriate preventative behaviors (winter tires, crash risk, wearing a seatbelt); changing underlying factors known to influence road-user behavior (e.g., emphasizing that most people do

not drink and drive; perceptions about speeding); modifying problem behaviors or maintaining safety-conscious behaviors (e.g., challenging misperceptions that it is safe to use the phone while driving); and decreasing the frequency and severity of crashes (e.g., lower speeds reduce risk of injury) (Delhomme et al., 2009).

2.2.2.1 Process of Road Safety Awareness Creation Programs

Awareness campaigns are designed to educate the public on important issues that affect society. When knowledge is delivered with accessibility and entertainment in mind, audiences are more likely to shift their attitudes and change their behavior (Singhal, A. and Rogers, E.M. (2003).

The number of strategies can be employed with the collaboration between authorities. One of the measures that have been taken is training of drivers so that they are competent enough. This has been done through credible institutions that train drivers to enhance professionalism in the field. This authority has come up with messages that it spreads on media stressing on the need to have drivers undergo proper training so that they have the right skills. Media access and usage data can help determine what media strategy to use for a campaign.

2.2.2.2 The Implementation of Road Traffic Safety Awareness Programs

Campaign Modalities

PACs utilize many forms of media to promote their specific messages. Traditional modalities include TV, radio, magazines, newspapers, brochures, billboards, and posters (Wakefield, M. A., Loken, B., & Hornik, R. C.2010). Campaign organizers often use multiple modalities in attempting to reach as many people as possible. Beyond these traditional modalities, PACs are becoming more sophisticated and adding social media, such as Face book and Twitter, as well as Internet sources such as pop-up ads and YouTube channels to their campaign efforts. Furthermore, groups such as do something. Organizations have found that to engage young people, a website paired with personalized text messaging can be effective in promoting awareness and calls to action (Boyd, 2014).

As Boulder (2013) defined messaging as “a series of words and phrases that are most convincing to key audiences, based on specific research. Messaging is not utilizing words or phrases that sound good or that we think have been persuasive in the past”

PACs generally convey one or more of three types of knowledge, including impact, procedural, and normative knowledge. First, impact knowledge includes general information, facts, and figures about the topic. When a PAC disseminates impact knowledge, it is attempting to simply make people aware of the issue. Second, PACs that pair the dissemination of information with a call to action foster procedural knowledge by enhancing the message with a way to take action, the messaging is actively engaging the audience. An example of procedural knowledge in messaging is a website. In this way, the program developers are pairing facts with specific action strategies they hope website readers will consider. Third, normative knowledge focuses on the norms of groups rather than individuals, and some PACs target their information to this broader level. Using road traffic accidents as an example, rather than solely provide information about road traffic accident in general (Bolderdijk and Steg, 2013).

2.2.2.3 Effectiveness of Road Safety Awareness Programs

A public awareness campaign has been defined as organized communication activities which aim to create awareness on particular topics (health, environment, education), behavioral change among the general population and to improve the focus on better outcomes .They often take the form of mass media campaigns. Messages can be conveyed through many different channels, such as mass media (television, radio), social media, public relations, events, talks, demonstrations, tours and leaflets. Awareness raising campaigns are recognized as the most efficient and effective means of communicating information especially to the general public (Boulder, 2013).

Campaign evaluation is essential for understanding whether and how a campaign is associated with intended changes in behavior, policy, or norms. According to (Elliot, 2008) effective traffic safety education programs need to combine the following three elements:

- The development of behaviors, attitudes and decision-making skills to manage this environment in a responsible and safe way.
- knowledge and understanding of the road traffic, transport environment and the law the development of physical skills to manage such an environment safely

2.2.2.4. Evaluation of Effectiveness of Road Traffic Safety Awareness Creation Programs

The measures used to determine the effectiveness of Road Safety Education programs are not, (and should not be), the same as the measures for engineering or enforcement initiatives. Because of the nature of learning and application, the impact of an educational program can be immediate in some cases and long-term in others. Traditional measures of road safety interventions usually rely on qualitative measures, whereas contemporary measures of road safety education programs utilize a combination of qualitative and quantitative measures (Gayle and Linda, 2002).

Evaluation results provide important information about possible unintended effects, ways to improve the implementation process, and strategies to maximize effective use of resources. Evaluation is the systematic and objective assessment of an on-going or completed project or program, its design, implementation and results. The aim is to determine the relevance and fulfillment of objectives, development efficiency, effectiveness, impact and sustainability (OECD/DAC, 2018).

According to Rothengatter, (1986) SWOV publication, Institute for Road Safety Research - Leidschendam, the Netherlands discussed evaluation of road safety education programs, classified it in to formative and summative evaluation: Formative evaluation refers to the collection and analysis of data before and during the development or redevelopment of a program with the aim to optimize the program. Process evaluation aims to assess the educational process (e.g. acceptance and use of program materials and methods). Product evaluation aims to establish which factors in the educational process determine the possible effects of the program. Summative evaluation aims to establish the extent to which the program achieves its goals, i.e. meets its stated objectives. In order to achieve goals of summative evaluation, two requirements must be met: The first is road safety education program to be evaluated must be implemented on a sufficiently large scale and the second is evaluation must be carried out on a sufficiently large scale.

2.2.2.5 Effectiveness of Education

According to Hagere, (2014) education is viewed as a “soft” approach to promoting desirable (from a road safety perspective) road use because, rather than placing external constraints on the

individual (as is the case with enforcement and engineering interventions), it relies on persuading people to adopt appropriate behavior.

The process by which behavior changes through persuasive communication takes place. He said, for an educational campaign to be effective, the people whom it is aimed at must go through the following steps: exposure to the message, pay attention to the message, be interested in the message, understand the contents of the message, have the necessary skill to perform the required behavior, change attitude in accordance with the message, memorize the message, recall information from memory, decide to behave according to the recalled information, behave according to decision, confirmation of appropriate behavior, consolidation of behavior (Getachew, 2009).

2.2.3 Choosing a Media Platform

A side from accessibility considerations, different types of media platforms presents varying challenges pertaining to message presentation, durability, and cost. When it comes to presentation, some formats invite more opportunity to present detail and a narrative style of communication. For instance, a graphic novel format has the potential to overlay images and text in a way that visually captures the nuance of extended, multi-faceted conflicts. In the case of road traffic safety awareness programs, survivor testimony can be a powerful tool for advocacy. Radio dramas can foster engagement with realistic stories and sounds, while preserving survivor anonymity, as they contain no visuals. Posters can captivate an audience through the use of compelling images and concise text (Dan Archer, et.al, 2018).

In terms of durability, print media can be permanently left in target areas, do not require electricity to operate, and are always available to read. In comparison, television or radio are dependent on program schedules, signal reception and electricity. That said, they are easily disseminated and unaffected by literacy levels (Dan Archer, 2018).

In terms of cost, print media can be expensive to produce because it involves printing and shipping costs, and may be logistically challenging to distribute. Costs associated with creating radio and video campaigns can include expensive equipment, experts who know how to use that equipment, and actors to present the material in a compelling manner (Dan Archer, 2018).

The first phase of designing a good campaign is getting to know the models typically deployed in the target area, the next phase involves developing content for the campaign. Once the case studies review and interview processes are complete, the content can be collated to develop distinct narratives. And then Piloting the Campaign with Relevant Stakeholders and after incorporating feedback from the piloting process, scripts and drawings can be adapted to different media platforms (Dan Archer, 2018).

2.2.3.1 The Role of the Mass Media in Creating Awareness

There is wide agreement that awareness leads to knowledge and knowledge leads to behavior modification (Rimal, 2000). Various theories and models acknowledge the importance of the mass media in creating awareness in society. One such theory is the agenda-setting theory, which holds that the media have the ability to advise or tell audiences what issues are major and relevant, thus setting the agenda. They can achieve this by choosing what stories to consider newsworthy and how much prominence and space they give those stories (Folarin, 1998).

In other words, this theory explains that the mass media through their presentations of event(s) and other kinds of information selected for publication ascribe prominence to the stories selected. The underlying assumption is that the mass media force attention to certain issues; they build up public images of political figures, they constantly present objects, suggest what we should think about, know about, have feelings about, agitate about, and eventually call for legislation about (McCombs & Shaw, 1972 and Folarin, 1998).

The traditional mass media usually consist of radio, television, newspaper, and magazine. The radio has been regarded as the most pervasive and most effective medium in reaching the country's widely dispersed heterogeneous audience. It is reputed worldwide for being the cheapest, simplest and most portable medium of mass communication for reaching people. The author has reasoned that the radio is not limited by electricity, which is hardly available and epileptic in its supply when available. In addition, the radio is as extremely mobile: people could listen to a radio program in their car, home or office (Haines and Riemer, 2011).

2.2.3.2 A Technology-Centric Notion of Awareness Creation

In the technology design process, different types of awareness are distinguished according to the reference object to which the awareness is directed - for example, task-related awareness is in

relation to the activities of others, or social awareness is in relation to emotional states of others (Gross et al., 2005; Robertson, 2002 cited in Haines and Riemer, 2011). Mediated technology systems generally aim at creating virtual environments that simulate the real world and its ways of creating awareness through inscription in technology (Borning and Travers, 1991; Boyer et al., 1998; Gutwin and Greenberg, 1996; Gross et al., 2005 cited in Haines and Riemer, 2011).

2.2.3.3 Towards a User-Centered Understanding of Awareness Creation

The technology-centric view still dominates in the literature, with awareness being treated largely as an outcome of systems design, some authors have argued for a more practice-oriented, embedded view of awareness creation (Riemer, Klein and Flößler, 2007). They found that a surprising variety in both the types of awareness and the ways in which awareness were created across five mediated communication contexts in which the same IT artifact was used.

They argued that awareness, as created in a social context, goes “way beyond what can be expected from the tool and its ‘built in’ awareness capabilities” (Riemer, Klein and Flößler, 2007). Other scholars have similarly argued that awareness is a learned, embodied, skillful action, which is why awareness is neither the “product of passively acquired ‘information’” nor is it a property of technology (Schmidt, 2002 and Robertson, 2002 cited in Haines and Riemer, 2011).

2.2.4 The Content of the Message

The message needs to be appealing (attractive), easy to understand (clear) used repeatedly (consistent), believed by the audience (credible), able to generate change (persuasive), it needs to focus on an actual problem (relevant) and the alternative presented should be possible to achieve (trustworthy) (Forward, 2013).

For instance, if we want to increase traffic safety then a safe behavior needs to be regarded as positive and worthwhile. If contradictory and more appealing information are presented then the initial message will quickly lose its impact and it will be regarded as untrustworthy. Thus it becomes clear that the message needs to be based on a sound understanding of the target groups own beliefs and before the campaign is launched the message needs to be tested on a group similar to the target audience. This pre-test should be able to confirm or modify the message if it fails to achieve its goal (Ibid).

According to Delhomme et al. (2009) an effective message should fulfill the following criteria's

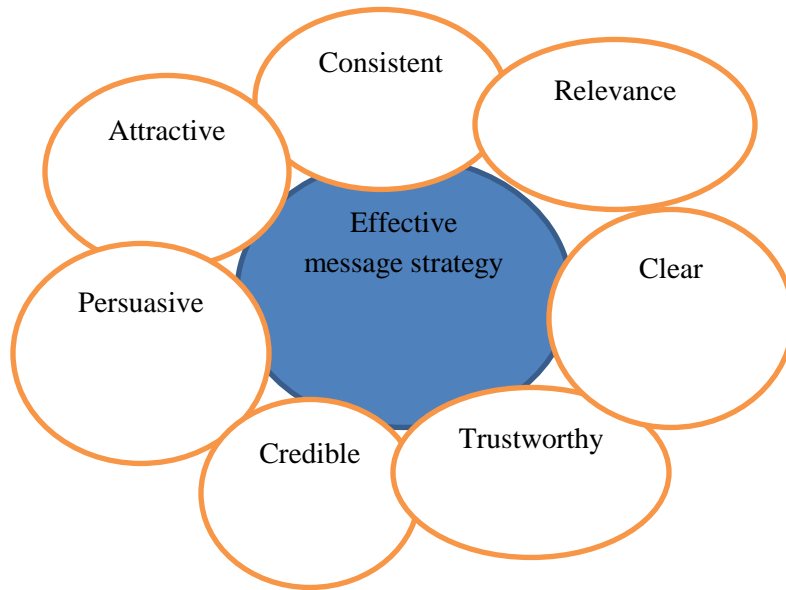


Figure 2.1: The seven characteristics of an effective message

2.2.4.1 The Message Source

Like the message itself the presenter of the message also needs to be credible and trustworthy. For instance when trying to change young drivers' behavior it might be more effective to use a person who is an important figure in their life, or at least somebody who they can identify with. Another alternative, is to allow somebody who themselves has changed their behavior, to put the message across. This would then show them that it is possible to change. Before and after the campaign is conducted an evaluation needs to be carried out which is the fourth step (Forward, 2013).

2.2.5 Road Traffic Safety and Operational Structure in Ethiopia

2.2.5.1 National Road Traffic Safety Council, Ethiopia

The National Road Traffic Safety Council (NRTSC) is one of the most recent lead agencies in Africa, established by regulation in 2011 and replacing a coordination office in the Road Transport Authority. There are currently 11 members individually appointed by the Office of the Prime Minister, with a mix of ministers and key chief executives. The council is accountable to the Ministry of Transport.

In case of Addis Ababa situation, there are a number of strategies that have been employed by Addis Ababa traffic management agency with the aim of fighting road accidents. Some of the measures that have been taken were training for drivers especially public (mass transport) like Anbesa , Sheger Blue Bus, Alliance, Haiger and Mini Bus Taxi. This has been done through credible institutions that train drivers to enhance professionalism in the field. This agency has come up with messages that it spreads on media stressing on the need to have drivers undergo proper training so that they have the right skills.

According to AATMA (2018) annual report some of the reasons why there are many accidents on the Addis Ababa roads it's in case of drivers, it accounts for 85% of all causes of accident. This is the reason why Addis Ababa road traffic management agency has come up with requiring all drivers to exercise caution. In addition, this agency is also spreading messages through different media like audio, video, print, and face to face training required to reach drivers. On top of this, the agency has come up with messages warning drivers against speeding and driving recklessly while on road. There are also adverts that require all vehicles to be fitted with speed regulators so that they are able to operate within the set speed limit on different roads.

According to Addis Ababa Traffic Management Agency (2018) annual report in creating these awareness programs the agency has encountered a number of challenges. To start with, there is lack of enough funds to design appealing awareness programs and to design attractive messages that can catch the attention of many people needs money, which the agency does not have. This has limited the quality and continuity of awareness programs. For this reason, few drivers and road users get to spot the programs. If the programs were designed using standards and producers, it could have been easy for them to be spotted.

Getachew (2009) studies on Communication Strategies to Influence Audience Behavior: The Case of Road Traffic Safety Radio Programs in Addis Ababa By Addis Ababa focusing onto general objectives of examining the extent of effect of road traffic safety programs on their target audiences (drivers and pedestrians) and investigating communication strategies (if any) the media are using in their preventive programs.

Some of his conclusions and recommendations include:

- Almost all the respondents seem to recognize education and enforcement as effective tools to curbing causes of road traffic fatalities and injuries.

- Efforts are underway by concerned parties to raising awareness of the public to minimize the losses of lives and resources due to road traffic accidents. To this effect, media, especially the radio, is mainly used; interpersonal communication is also being employed, especially at schools and in the regions.
- Road traffic safety intervention programs need to be strengthened, to the extent the issue becomes a chief agenda of the public.
- Road traffic safety communication efforts need to employ different approaches in order for their effects be stronger. Hence social networks, intermediary organizations and media need to work together.

According to Hagere, (2014) assesses the Challenges and Prospects of Traffic Management Practices of Addis Ababa City Administration aiming to answer these objectives like review the existing road and traffic condition of Addis Ababa, evaluate the existing traffic management arrangements being practiced in the city, identify the factors that hinder the efficient and effective management of traffic in the city; and identify the prospect of traffic management practice of the city.

The researcher generally point out these conclusions and recommendations:

The major internal challenges that hamper the traffic management practice of the city are: undefined organization structure, lack of sufficient and competent manpower, weak human resource management, lack of training and development program, lack of operational and implementation resources and not supported by the modern technology to practice the traffic management effectively and efficiently.

Similarly the study identified poor integration among stakeholders, not giving recognition for strong professional traffic management by the higher government officials, poor enforcement capability, poor integration between transport and land use plan, poor data base system are the major challenges identified as an external factors that hinder the traffic management practice of the city.

In general traffic management strategies need a high and continuing degree of political, institutional and human resource commitment to ensure that their benefits are sustained and for this the establishment of traffic management units with appropriate authority and ability to plan and implement traffic management measures is essential.

2.3 Theories of Learning

The field of education hosts a plethora of different theories about how individuals learn and adapt. Similarly, there are many variations of learning and it is generally agreed that most people respond best to a combination of approaches. It is for this reason that campaigns should attempt to appeal to as many types of learners as possible. The three learning styles are based on Neil Fleming's VAK (visual, auditory, kinesthetic) model (Robertson and Pashley, 2015).

Visual learners learn best through imagery and visual presentation of information. Additionally, visual learners are able to remember information more easily when it is associated with an image or written word. To appeal to the visual learner, campaign messages and branding should be associated with distinct and specific imagery in order to instill a memorable impact on the audience (Robertson and Pashley, 2015).

Auditory learners, on the other hand, learn and retain information through hearing and speaking. Auditory learners are often identified as needing to repeat words and phrases out loud as a means of reinforcing new knowledge and information recall. Creating easily identifiable and catchy slogans or theme songs/ jingles, increases the likelihood that a campaign message will be remembered by this type of learner (Robertson and Pashley, 2015).

The last style of learning in the VAK model is kinesthetic learning. According to the theory, kinesthetic learner's best acquire knowledge through hands-on learning and exploration. Individuals are better at demonstrating and applying information acquisition than explaining it. For instance, one may often find that these individuals struggle to verbalize an idea, but have no trouble showing how it can be done. This last learning style is very important to address within a mass media communication campaign because it requires that the desired behavior be demonstrated in some way (Robertson and Pashley, 2015).

2.3.1 Theories of Road Safety Campaigns

There is consensus among experts in the field of road safety that the best road safety campaigns are based on research-driven, psycho-social theories of behavior. Some of the leading theories that have been used in this regard include behavior change theories, theories of social persuasion, and fear-based campaigns (Robertson. and Pashley, 2015).

1. Behavior change theories

Theory of Planned Behavior (TPB). This theory predicts that personal decisions (i.e., intentions) to carry out certain behaviors are based on a combination of: attitudes toward the behavior; subjective norms; and perceived behavioral control. According to this theory, these three major factors influence a person to either engage in a specific behavior, or to choose not to do so. For example, individuals who believe that speeding is a fun activity that most people engage in, and can do it easily without endangering others, are more likely to make decisions to engage in speeding behaviors compared to individuals with a different set of beliefs (Robertson. and Pashley, 2015).

Health Belief Model (HBM). This theory has been widely adopted to explain human behavior. Its underlying premise is that the main motivator for people to preserve or protect their health is to avoid negative health behaviors. Key factors include susceptibility to the consequences of action, perceived seriousness of the consequences of action, perceived barriers that decrease the likelihood of action; perceived benefits that increase the likelihood of action; confidence in the ability to take action (i.e., self-efficacy); and, internal and external cues/motivators to affect the likelihood of action. Although other motivational factors might contribute to the adoption of the specific health behavior, HBM proposes that avoiding a negative health outcome is the most influential factor (Delhomme et al. 2009)

Protective Motivation Theory (PMT). This theory is similar to HBM in that it targets an individual's motivation to avoid actions that would be detrimental to their health. However, it more closely highlights the possible threats and vulnerability a person may feel from the idea of engaging in a negative behavior. The concept of protection motivation stems from one's desire to protect or defend themselves against negative consequences of a behavior based on fear and coping appraisal. In this model, self-efficacy also plays a very significant role in a person's decision to adopt the behavior; it is the determining factor that results in change or resistance to change (Robertson. and Pashley, 2015).

Trans-theoretical Model of Change (TMC). This model acknowledges that behavioral modification is a process that must be accounted for during the development of any campaign that aims to alter road user behavior. It addresses this process and suggests that people may be in different stages of change and must pass through the five stages of change (i.e., pre-contemplation, contemplation, preparation, action, and maintenance) before permanent behavior

change can occur. The model suggests that these stages are fluid and that it is possible for an individual to move forward and backwards between the stages (Robertson. and Pashley, 2015).

2. Theories of social persuasion

Social Norms Theory. This theory suggests behavior is influenced by (often inaccurate) perceptions of how other members of their social group think and behave. This phenomenon is similar to the ‘bandwagon effect’ described by McAllister and Studlar (1991) which predicted that personal beliefs are strengthened if it is believed that others share the same attitudes and perceptions towards the behavior. It suggests that a person’s social perceptions may have a more powerful effect on behavior than the risks to health or safety.

Elaboration-Likelihood Model. According to this model, developed by Petty and Cacioppo (1986), the likelihood that a person will elaborate or change their attitude is dependent on a person’s motivations and their ability to elaborate on the situation. In other words, individuals are motivated to process a message if it is viewed as personally relevant or if they feel a high level of personal or social responsibility regarding the behavior (Wundersitz et al. 2010). This means that audiences that have prior knowledge of the issue, and possess the ability to understand the message, are more likely to use this route.

3. Fear-based campaigns

This approach to road safety campaigns confronts people with depictions or associations of negative consequences of risky behaviors by capitalizing on their fears (SWOV, 2009). It takes advantage of the emotions of a target audience, and may rely on graphic imagery (e.g., crash footage, injuries) to scare and shock individuals, or use messages that attempt to invoke shame or guilt. The effectiveness of such approaches is unclear and what is known is that individuals react differently to fear-based campaigns depending on their characteristics, as well as how the fear appeals are used.

There is evidence that shows that fear-based approaches can work under specific circumstances. Campaigns that describe or demonstrate coping mechanisms (i.e., strategies that tell individuals how to avoid or cease a negative behavior safely) invoke greater change than those that only use fear and shock (Wundersitz et al., 2010). Ultimately, research points to the fact that behavior change likely occurs from the willingness of individuals to adopt the recommended change and the available coping mechanisms, rather than the strength of the fear appeal itself (SWOV, 2009)

2.4 Communication Tools

Materials include all products developed as part of a campaign to convey messages to your audience. To increase the likelihood that your message is heard, campaign materials should appear where your audience will see them – in newspapers, magazines, outdoor signs and displays, social media channels, websites, and popular and entertainment media (Lee and Kotler, 2011).

In addition, billboards, outdoor advertising, print media advertising, television adverts, public service announcements, television shows, radio spots and programs all fit the category of mass media. Mass media is particularly effective and cost effective in raising awareness, improving knowledge, and prompting audiences to seek health information and change attitudes. In addition, mass media has been used in road safety strategies in most countries that have managed to significantly reduce the number of injuries and fatalities, such as Australia and the United Kingdom (World Health Organization, 2016).

The number of media choices available continues to expand. One consideration that is particularly relevant for road safety communications is that advertising needs to be close to the point of impulse. Radio and outdoor advertising provides an ideal opportunity to deliver road safety messages at a time when the target driver behavior might be expected. These types of media are also useful for reaching mobile young people when they are ‘out and about’. Different types of media can have synergistic affects, for example, newspapers are used to prime people to watch TV campaigns, TV campaigns might promote visiting a website and vice versa (Crimmins and Callahan, 2003 cited in Wundersitz, Hutchinson and Woolley,2010).

The increasing use of websites to deliver road safety messages, particularly to reach younger target audiences; Websites are often central in campaigns that focus on ‘edutainment’, incorporating information, games and videos in a way that is not possible through other media. Billboards, posters and television are then used to promote the website. Many of the reviewed campaigns used multiple forms of media to promote their message amongst the target group (Phillips and Torquato, 2009).

2.4.1 Traditional Communication Tools

Studies show that there are various tools to communicate with employees within organizations. Accordingly, Krishan (2010) stated that even though information communication technology has

brought remarkable changes in the 21st century, there are still traditional communication tools that remained in use such as telephone, fax, noticeboard, internal newsletters, meetings, television, radio, handbooks, manuals, magazines, newspapers, bulletin boards, notices, posters, reports, and memos. Şeitan(2010) also demonstrated that companies could address their multiple audiences such as “customers, employees, and investors in so many ways through annual reports, websites, organizational newsletters, press releases, brochures, general presentations, advertisements.” Zvingowanisei (2018) indicated that traditional communication tools are composed of all forms of written communication (handbook, brochures, and posters), face-to-face communication (meetings, conferences, seminars, and ceremonies), and telephone calls. These traditional communication tools are used to communicate with employees within the organization as well as external audiences (mainly stakeholders).

2.4.2 Electronic Communication Tools

Electronics as the medium of information exchange is the most dominant form of communication in organizations. Robbins and Judge(2013) found out that about 71 percent of organizations` medium of communication is electronics. Electronic communication tools include email, instant, and text messaging, and social networking. Krishan (2010) articulated that social networking platforms are playing a significant role in organizations-they can be used both formally and informally for communication purposes. As per the statement of Krishan(2010) “LinkedIn, Facebook, Twitter, Blog sites and so many others” are becoming the dominant platforms of communication for organizations because they are cost-effective, efficient, and easily accessible.

Currently, there are about 4.2 billion social media users around the world. Facebook has remained the dominant social media platform with above 2.74 billion monthly active users followed by YouTube whose potentials advertising has reached over 2.29 Billion. WhatsApp`s and Instagram`s users in their turn have reached over 2 Billion and 1.2 Billion respectively. The Twitter social media platform potential`s advertising has surpassed 253 million (<https://datareportal.com>, browsed on 29 January 2021).

2.4.3 The Message Content, Form and Style

Moreover, the message is more likely to be persuasive if the individual feels motivated to process it, and the cognitive processing will be more effective if the message is comprehensible.

There is increasing evidence that the style of message may interact with certain characteristics of audience such that one style of advertising might work for one audience but not another.

I. Message Execution strategy

Thus, message execution strategy consists of defining: the structure of the message, the framing of the argument, the approach or appeal (emotional versus rational), and the style of the message (Wundersitz, Hutchinson and Woolley, 2010).

Message structure

A message can be structured so that it presents either a one-sided or two-sided argument. One-sided messages can be effective when the target audience is sympathetic to the message, the message is the only one on the given topic, or an immediate or short-term opinion change is desired. A recent meta-analysis indicated that one-sided messages increase attitude stability and therefore the link with the behavior (Glasman and Albarracin, 2006). However, the link is dependent on direct experience with the problem behavior. Two-sided messages are effective when the target audience initially disagrees with the message and when the target audience is likely to be exposed to contradictory messages. They can also be effective in changing opinions when there is an awareness of the negative aspects of the problem behavior and it can be successfully argued against (Wundersitz, Hutchinson and Woolley, 2010).

Framing

The main argument of a message can be constructed in a way that the target audience evaluates the information regarding risk as either a gain or a loss. A message might focus on the advantages of adopting a safe behavior (positive, gain framing) or the negative consequences of not adopting it (negative, loss framing). For instance, in a campaign against drunk driving, a positively framed message could be “Don’t drink and drive, your life is important” while a negatively framed argument might be “If you drink and drive, you could lose your life”. Fear appeals are an extreme version of loss framing (Wundersitz, Hutchinson and Woolley, 2010).

Delhomme et al. (2009) asserted that, the type of framing can influence the effectiveness of the message in terms of how the audience receives the message and assesses the problem. Reports that the findings from non-road safety studies on the effects of message framing are far from unanimous although meta-analyses on the effects of message framing have reported that gain framed messages are more important when the goal is prevention.

Rational and emotional appeals

Delhomme et al, (2009) indicated that, a campaign might be designed with a rational and/or an emotional appeal. Rational appeals provide objective information about the issue and emphasize deductive logic and cognitive processing (e.g. state the benefits of adopting a safe behavior). Emotional appeals emphasize feelings and images and can be positive, negative or a combination of both. Appeals do not necessarily have to be either emotional or rational as they may contain elements of both. Emotional appeals can be useful when the target audience already has a strong intention to adopt the safe behavior.

It is not the type of appeal that is important, but what emotion is relevant to the motivation underlying the decision making for a specific issue. There is a need to obtain a better understanding of the relationship between the extent to which an emotion is evoked and the strength of subsequent attitudinal and behavioral effects (Donovan et al., 1995).

II. Threat appeals and fear

Fear and threat appeals are not identical. A threat appeal refers to the undesirable consequences of certain behaviors that are contained in a message while fear refers to the emotional reaction from the audience in response to a threat. Consequently, it is important to distinguish between the stimulus of a threat, the emotion of fear and the cognitive awareness of danger. Threat appeals have been used widely in road safety advertising to provoke fear, anxiety or apprehension in the target audience. While there is much interest in the use of threat appeals, after many years of scientific research its effects are far from clear and unequivocal (Cauberghe et al., 2009 & Woolley, 2001 cited in Wundersitz, Hutchinson and Woolley, 2010).

In addition, threat appeals have been used widely in road safety advertising to provoke fear, anxiety or apprehension in the target audience. While there is much interest in the use of threat appeals, after many years of scientific research its effects are far from clear and unequivocal.

III. Alternatives to threat appeals and fear

Positive emotional messages aim to evoke humor, excitement, hope or 'good' feelings in contrast to negative emotional or threatening messages that aim to evoke fear, anger, or guilt. Despite calls for more positive emotion based appeals in road safety campaigns few campaigns have adopted such an approach. This may be partly due to a lack of knowledge about factors that influence the effectiveness of such appeals, relative to the abundance of literature concentrating on fear appeals. Nevertheless recent evidence suggests positive emotional approaches can be

more effective than negative fear based approaches for males. Political advertising research suggests that positive emotional (or reward) appeals may work better with people who are less authoritarian (Lewis, 2008b and Wan et al., 2000 cited in Wundersitz, Hutchinson and Woolley, 2010).

2.4.4 Safe Road Operations

According to Kapila, Prabhakar and Bhattacharjee (2013) views, in general, it can be said that the 5Es of Safe Road Operations are:

Engineering – Defining the Built Environment including the road design and vehicle design.

Enforcement – Strict application of law.

Education – Teaching good road behavior through awareness campaigns.

Encouragement – Rewarding people for good road behavior.

Emergency Care – Road side medical care and access to Para-medics in the “Golden Hour”, or the hour immediately following a road accident during which the provision of first aid can greatly enhance the prospects of the accident victim’s survival.

2.4.5 Road Traffic Safety Awareness Programs in Developing Counters

2.4.5.1 Traffic Safety Education and Information Campaign Activities in China

According to Wanqiu, (2014) report on traffic safety education and information campaign activities in china. The high frequency of traffic accidents has seriously restricted the development of the economy in China. In a short period of time, the mode of government conducting and local departments of all levels working together for traffic safety has slowed the rapidly increasing trend of traffic accidents. However, traffic safety is a long term and complex task. It needs the attention and participation of the whole society. The weak in understanding traffic safety laws and lack of modern traffic safety awareness have been recognized as one of the direct and most importation reasons for the high accident rate in China. To improve the road traffic environment, enhancing the education and propagation of traffic safety and improving the consciousness of traffic participants on obeying the traffic rules and regulations are very important other than the increase of the transportation infrastructure construction The 2014 report on traffic safety education and information campaign activities in china has reviewed the history of road traffic safety education and information campaign activities in China. The current

status of traffic safety education and publicity and people's traffic safety awareness have been analyzed. Major traffic safety education and information campaign activities have been summarized under the classification of traffic safety education and propaganda to children, driver's training and education, law publicity campaign, special concern on rural area, traffic safety propagation with special theme, and travel information service. It can be seen that China government has spent a lot of human and material resources on the relative works of road traffic safety education and information campaign activities. Different social organizations and individuals have been actively organizing and participating in these activities.

Kenya

Moses, (2015) tried to assess road safety messages by the ministry of transport and infrastructure in Kenya. The study focused on National Transport and Safety Authority's road safety billboard advocacy messages. It seeks to analyses if a relationship exists between the design of road safety advocacy messages and its effectiveness on the fight against road accidents. Finally his recommendations have been made: need to use bright colors on the billboard messages, road safety advocacy messages need to be placed strategically, need to incorporate the use of sheng language in its messages since most road users prefer this language and needs to make the road safety advocacy messages more attractive so that they reach a wide audience.

Namibia

Sakaria and Petrina (2014) tried to assess the Effectiveness of Road Safety Programs in Namibia: Learners' Perspective. Given the serious nature of road traffic injuries, various stakeholders on road safety had conducted road safety campaigns in the country. However, there was no study done to determine whether road safety programs implemented achieve the desired results. Finally, most learners agreed during the focus group discussions that they had heard of some road safety campaigns and organizations that conduct such campaigns on radio, in newspapers and through road shows (public relations). The school learners stressed that the public should be informed mostly through road shows because people tend to be more careful after seeing the shows. Learners were also of the opinion that radios should mostly be used for the campaigns because most people have time to listen to the radio and it reaches a lot of people, including those who cannot read and/or write, or understand other languages, such as English. In addition, other media to be used should include fun shows, public meetings and community meetings to be

carried out by village headmen/women, newspapers, television, posters and billboards erected in towns or public places to ensure that as many people as possible are reached with road safety messages.

Egypt

Amina, Neama and Ahlam,(2018) tried to assess the effect of Implementing Traffic Safety Awareness Program On Driver's Knowledge Regarding Traffic Safety Practices In Alexandria - Traffic drivers who receive traffic safety awareness program will exhibit higher knowledge score post the program implementation than before based on the results of the study, the following recommendations were suggested. The findings of the study revealed that, the implementation of the educational program related to RTA awareness leads to improved total knowledge score among the studied drivers. Where, the total knowledge score was affected by level of education, years of experience in driving that confirmed by a statistical significant relation. Whereas, there is no statistical significant relation between the driver's knowledge and their age, marital status, health complains, smoking habits and the use of stimulants. Finally, one of the important findings of the study revealed that the previous exposure to RTA was affected by use of stimulants.

- Developing comprehensive coordination and cooperation protocol between Alexandria Health Directorate, Alexandria University, Ministry of Interior Affairs and General Directorate of Traffic Police, NGOs, and other different sectors of the community to raise community awareness about traffic accidents and its consequences.
- Encouraging the mass media to highlight road traffic accidents among youth.
- Put legislation for obligatory first aid training for every driver who looking for driving license issue.
- Provide accurate and timely information about the status of the weather, in addition to enhancing the use of safety warning signs in slippery places. Observing speed limits by drivers on the road during bad and rainy weather.
- Coordination and continuous communication between the police Meteorological Organization, Egyptian Red Crescent, Emergency Transportation for crisis situations and establish rescue centers.

2.5 Research Gaps

The study by Mohamed, Mohammed & Mohamed (2018) on the Effect of Implementing Traffic Safety Awareness Program On Driver's Knowledge Regarding Traffic Safety Practices In Alexandria – Egypt. Road traffic accidents (RTA) have become an important public health concern over the past decades; it is one of the main causes of mortality and disability in the world. Driver's awareness regarding RTA is essential in decreasing accidents. Aims: this study aims to assess the knowledge regarding traffic safety and first aid measures among the traffic drivers in Alexandria and measure the effect of implementing traffic safety awareness program on driver's knowledge regarding traffic safety practices in Alexandria - Egypt. However, this study tries to assess communication tools to create awareness about traffic accident to road users which was not seen by these authors.

2.6 Empirical Literature Review

One of the most prominent studies involves a European meta-analysis of 437 effects extracted from 228 international studies conducted in 14 countries during the past 30 years. The study revealed that, road safety campaigns generally reduced the number of road incidents by approximately 9%; increased seatbelt use by 25%; reduced speeding by 16%; increased yielding behavior by 37%; and increased risk comprehension by about 16% (Phillips et al. 2009 cited in Robertson and Pashley, 2015).

Materials include all products developed as part of a campaign to convey messages to your audience. To increase the likelihood that your message is heard, campaign materials should appear where your audience will see them – in newspapers, magazines, outdoor signs and displays, social media channels, websites, and popular and entertainment media (Wundersitz, Hutchinson and Woolley, 2010).

Baldock and McLean (2005) estimated the annual cost of road crashes in South Australia to be about 1200 million dollars. That figure is still usable, as since the report, the number of crashes has fallen by about 16 per cent and there has been inflation of about 16 per cent. Thus a reduction of 1 per cent that lasted for 1 year would be worth about 12 million dollars. A reduction of 0.1 per cent that lasted forever would be worth about 12 million dollars (if the cost of money is 10 per cent per annum). Consequently, a media campaign that cost 12 million dollars

and caused a reduction of either 1 per cent for 1 year or 0.1 per cent permanently would be said to have broken even.

Public awareness communication strategy is one of the preconditions for public road use good practices for safety standards to curb Uganda’s alarming but preventable RTAs. In addition, lack of effective evaluation of road traffic carnage advocacy campaigns by agencies is partly responsible for the national heavy health burden, death tolls, disabilities, and poverty (Okaka and Rwothumio, 2018).

Evidence based studies suggest that novice drivers, those who have been driving for less than two years, are at the highest risk of being involved in traffic accidents. Therefore, training courses have been put in place to improve road user skills and behaviors on the road by making them more aware and cautious (Morley et al, 2017).

2.7 Conceptual Framework

Road safety issue is one of the most critical issues needs concern of each and every citizen. Awareness program is one of the strategies (Education, Engineering, Enforcement, and Encouragement) to minimize risk, accidents and maximize road safety.

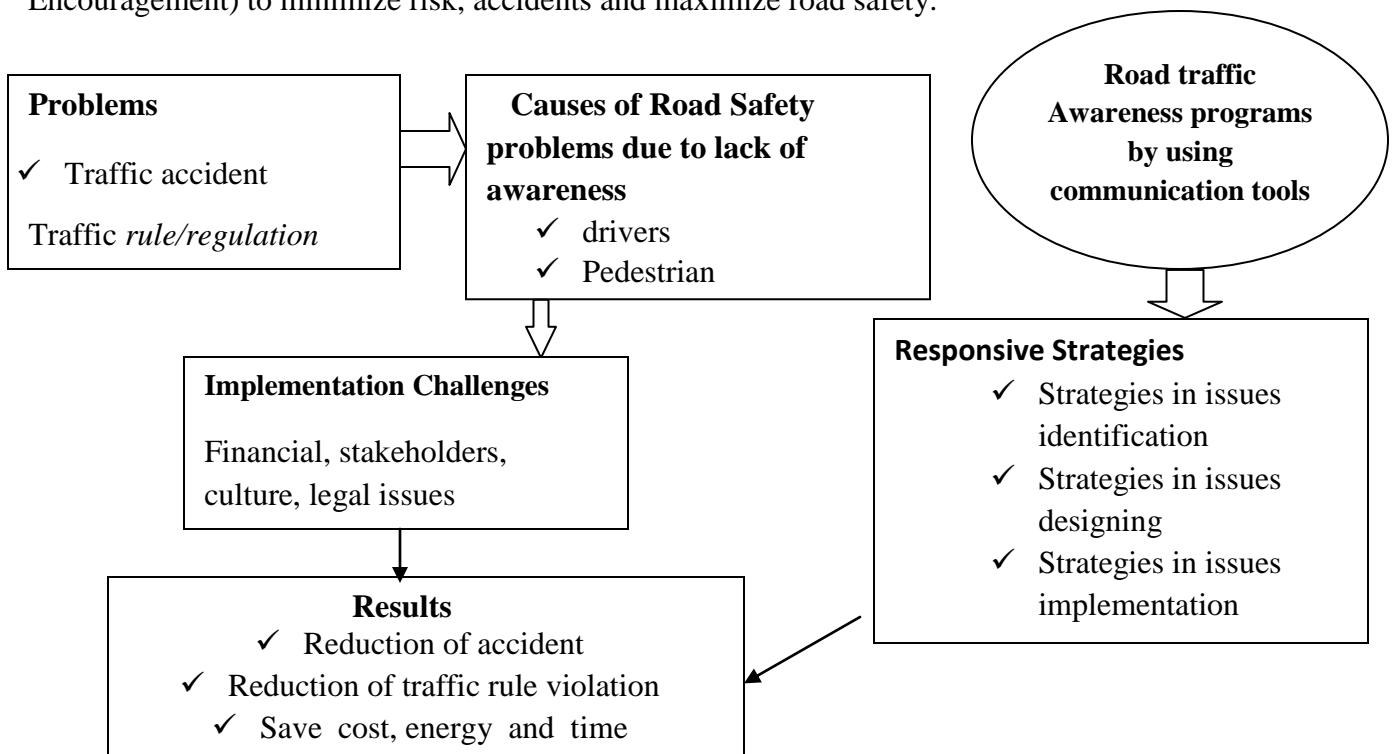


Figure: 2.2 Conceptual framework of the study

Conclusions

Transportation systems are intended to move people and goods to where they need to go safely, quickly and affordably. However urban traffic faces many challenges which are mainly caused by rapid urbanization and an increase in car ownership which then influence both the flow of traffic and the environment. The main challenges are traffic congestion, pollution and road accidents. According to (WHO, 2018) report some 1.35 million people are killed each year in road crashes and a further 20 up to 50 million people are injured. Addis Ababa traffic police office 2018 data indicates that human factors such as ignoring traffic rules, aggressive, reckless and inconsiderate behavior of drivers are major contributors to accidents. Engineering, Education and Enforcement – a combined solution traffic engineering is to provide for the safe, rapid, comfortable efficient, convenient, and environmentally compatible movement of people, goods, and services. The federal Road safety corps should acquire modern Information and Communication technology (ICT) that can capture data on traffic movement in major cities and highways for efficient enforcement of traffic laws. Finally Road traffic safety education is mandatory because no-one is born knowing how to use the system, the transport system and road environment that children inherit will still be complex and inherently dangerous.

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1 Research Design

This study employee's descriptive research design, descriptive research design includes survey and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present (Kothari, 2004). Since the study concerns on the practice of using communication tools by Addis Ababa traffic management Agency (AATMA) in creating awareness about traffic accident, the researcher use descriptive research designs.

3.2 Research Approach

The researcher uses both qualitative and quantitative approach which is a mixed research approach. According to Kothari, (2004), quantitative approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion. In addition, it is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.

While, qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is a function of researcher's insights and impressions. Such an approach to research generates results either in non-quantitative form or in the form which are not subjected to rigorous quantitative analysis. On the other hand, the study is concerned with qualitative phenomenon, i.e. phenomena relating to or involving quality or kind (Kothari, 2004).

Hence, the researcher assesses the practice of using communication tools to create awareness about traffic accident through questionnaires, and non-structured interview. This means, the researcher uses both qualitative and quantitative (mixed) research approach.

3.3 Sampling Design

3.3.1 Population of the Study

Population is a universe from which the sample frames and unit of analysis are extracted. The study was conducted at Addis Ababa Traffic Management Agency. The target populations of this

study were traffic management agency officials and pedestrians used to assess communication tools used by Addis Ababa traffic management agency. Thus, populations of the study were 1110 employees of Addis Ababa traffic management agency and pedestrians of Addis Ababa that are listen communications delivered by varied means.

3.3.2 Sampling Frame

It is list of samples from which sample is to be drawn. Such a list should be comprehensive, correct, reliable and appropriate and it is extremely important for the source list to be as representative of the population as possible (Kothari, 2004).

Sampling frame is the population frame from which a sample is drawn. In Addis Ababa Traffic Management Agency there were about 1110 employees and the unknown pedestrians. The lists of employees of Addis Ababa traffic management agency and pedestrians of Addis Ababa were sample frames.

3.3.3 Sample Size

The target populations of the study were experts of Addis Ababa traffic management agency and pedestrians of Addis Ababa city. As indicated there are 1110 employees in Addis Ababa traffic management agency while the number pedestrians of Addis Ababa and from which samples were taken by proportional means of calculation.

- Where Nr = required sample size, p = proportion of the population having the characteristic, $q = 1-p$ and d = the degree of precision.
- The proportion of the population (p) may be known from prior research or other sources; if it is unknown use $p = 0.5$ which assumes maximum heterogeneity (i.e. a 50/50 split) because no data are available on the proportion currently using their mobile phones you take the worst case scenario and set $p = 0.5$ (and therefore $q = 1-0.5 = 0.5$)
- The degree of precision (d) is the margin of error that is acceptable, say the researcher is prepared to accept a margin of error of $\pm 5\%$ so you
- Given the confidence level of 95.5%
- $z = 2.05$ the given confidence level (the value of the standard variate at a given confidence level)

- p = sample proportion, $q = 1 - p$;
- n = size of sample
- To determine the minimum sample size, apply the formula:

$$n = \frac{z^2 p \cdot q}{e^2}$$

$$n = \frac{2.05^2 0.5 \cdot 0.5}{0.05^2}$$

$$n = \frac{2.05^2 0.5 \cdot 0.5}{0.05^2}$$

$$n = \frac{1.050625}{0.0025}$$

$$n = 384$$

The sample taken for these studies are **384** and it was divided proportionality as below.

Table 3.1: The sampling distribution

No	Name of authority/agency	Total Number	Taken sample size	Means of sampling	purpose
1	Pedestrians	65%	250	proportion	questionnaire
2	Employees	35%	134	proportion	questionnaire
	Total	100%	384		

Source (Addis Ababa traffic management agency)

3.4 Sampling Technique

For undertaking this study, the researcher employed systematic sampling to address the problem. To attain good result and assure reliability, among probability techniques for this particular study, the researcher used simple random sampling, because a simple random sample is free from sampling bias, obtained by choosing elementary units in search a way that each unit in the population has an equal chance of being selected.

Hence, Addis Ababa traffic management agency was selected purposively because the agency was the main role player to create awareness concerning traffic accident and the agency designs strategy to reduce traffic accident and enhance road users safety, as the result, the researcher believed that he would get accurate data from the agency, more over Addis Ababa is a city where majority of the vehicles are found.

In addition, for interview purpose, non-probability sampling method was used, because the interviewee persons were selected purposively with the aim who gives adequate and appropriate information for researcher.

3.5 Source of Data

There are two major approaches to gathering information about a situation, person, problem or phenomenon. The sources of data were primary and secondary sources.

3.5.1 Primary Sources

For this study, the source of primary data was agencies, institutions, offices, Addis Ababa Traffic Management Agency Specifically Awareness Creation Directorate, case team at branch level and relevant experts and pedestrians were used as primary source.

3.5.2 Secondary Sources

According to Kothari, (2004), secondary data means data that are already available i.e., the data which have already been collected and analyzed by someone else. When the researcher utilizes secondary data, then he has to look into various sources from where he can obtain them. Therefore, secondary data could be either published data or unpublished data. For this study, the researcher employed, published data include articles and journals; books, and other sources of published information.

3.6 Methods of Data Collection

3.6.1 Questionnaire

This method was one of data collection methods, which adopt by the researcher and distributed to the persons concerned with a request to answer the questions and return the questionnaire with in specified period or as soon as possible to reduce its collectability. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. The

questionnaires collected from Addis Ababa road traffic management agency and its five branches and pedestrians.

3.6.2 Interview

Interview was undertaken with management officials who are selected purposively. Interview method of collecting data was usually carried out in a structured way where output depends upon the ability of the interviewer to a large extent and probing has done to strength the collected data. Lindlof and Taylor (2011) listed major purposes of qualitative interviewing.

- Understanding the social actor's experience and perspective through stories, accounts and explanations, Gathering information about things or processes that cannot be observed effectively by other means, Inquiring about the past,

- Verifying, validating or commenting on information obtained from other source. In-depth

interview were conducted with awareness creation and capacity building directorate and public relation, communication directorates with the aim of getting information on the communication tools used by the agency to create awareness, the effect of implementing traffic safety awareness program on road users' knowledge regarding traffic accident and the challenges in the use of communication tools in Addis Ababa.

3.7 Method of Data Analysis and Presentation

The data, after collection, has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. The processing implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis (Kothari, 2004). For this study, in analyzing the collected data, both qualitative and quantitative data analysis were used depending on the nature of the data. Data collected through closed ended questions were edited, coded and entered in to Statistical Package for Social Science (SPSS) software version 25 program. Afterward, the data were analyzed by using descriptive statistics. Percentage, graph, charts and frequency tables' were employed to explain characteristics of respondents and present the collected data. As far as the qualitative data are concerned, data are categorized and summarized.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The main objective of this study was to explore the communication tools used by Addis Ababa traffic management agency for creating awareness on traffic accidents. This chapter presented and discussed the data obtained using document analysis and in depth interviews. Accordingly, the data was discussed and analyzed based on the research questions prepared for the study.

4.2 Response Rate

For undertaking this study, open and close ended questionnaires are distributed for Addis Ababa traffic management agency officers' specifically employee's works at public relation, capacity building and enforcement directorates and for pedestrians. The questionnaires were distributed at the agency through asking their voluntary to fill the questionnaires. From the distributed 384 questionnaires 340 questionnaires were collected with having 88.5% ($340/384 * 100 = 88.5\%$) response rate. The compared data was shown at the table below

Table 4.1: Response rate

No	Respondents	Distributed	Collected	Response rate
1	Pedestrians	250	215	86%
2	Employees	134	125	93.2%
	Total	384	340	88.5%

Source: Field Survey, 2022

4.3 Demographic characteristics of Respondents

Under this section the demographic characteristics of officials and pedestrians such as age distribution, sex, educational level, and other common variables can be described as follows.

4.3.1 Age Distribution of Respondents

As shown at Table 4.2 below, respondents from officials are divided into four age groups as 18 to 29, which comprise of 58 (46.4%) respondents, followed by 44(35.2%) respondents whose

age is between 30 to 39 years at the early adult, and late adult age, 41 to 50 years takes 18 (14.4%) and the last old age group is 51 and above comprises 5 (4.0%) respondents were included for this study.

On the sides of pedestrians, greater 73(34%) were ranged with the age of 18-29 years, which follows 64(29.8%) pedestrians were ranged 30 to 40 years, and 53(24.7%) pedestrians have an age between 41 to 50 years; the remaining smaller proportion 16(7.4%) have an age above 51 years and 9(4.2%) pedestrians were less than 18 years of age.

In total, higher number of respondents such as 131(38.5%) have an age between 18 to 29 years, the other 108(31.8%) informants have between 30 to 40 years; while other proportions like 71(20.9%) lies at the range 41 to 50 years, 21(6.2%) have 51 and above years and the remaining informants have less than 18 years at the study area.

Table 4.2: Age distribution

Age	Officials		Pedestrians		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Less than 18	0	0	9	4.2	9	2.6
18-29	58	46.4	73	34.0	131	38.5
30-40	44	35.2	64	29.8	108	31.8
41-50	18	14.4	53	24.7	71	20.9
51 and above	5	4.0	16	7.4	21	6.2
Total	125	100.0	215	100%	340	100

Source: Field Survey, 2022

4.3.2 Sex of Respondents

As shown at table 4.3 below, the sex distribution of officer respondents, 87 (69.6%) were male and 38 (30.4%) were female informants from the total groups included for this study. From pedestrians, more than half 148(68.8%) from respondents were male while, 67(31.2%) pedestrians were female at the study area. Thus, greater 235(69.1%) respondents were male when to compare from the lower 105(30.9%) female sampled respondents at the study area.

Table 4.3: Sex of respondents

Sex	Officials		Pedestrians		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	87	69.6	148	68.8	235	69.1%
Female	38	30.4	67	31.2	105	30.9
Total	125	100.0	215	100%	340	100

Source: Field Survey, 2022

4.3.3 Educational status of Respondents

As shown at Table 4.4 below, the majority from official respondent's educational level is degree 97(77.6%), masters 23(18.4%) and diploma 5(4%) educational level, these indicates, significant numbers 97(77.6%) have adequate educational preparation which helps the officials to assess the best communication tools and disseminate for users. From pedestrians 84(39.1%) have certificate educational level, 81(37.7%) were diploma holders, 27(12.6%) have degree educational preparation, 20(9.3%) from the pedestrians have grade 9 to 12 educational level and very smaller 3(1.4%) were masters holders for this study.

In general, respondents from officials and pedestrians have degree educational level 124(36.5%), diploma 86(25.3%) educational level, certificate 84(24.7%) educational level, master and 9-12 grades with 26(7.6%) and 20(5.9%) response rate respectively.

Table 4.4: Educational level

Educational level	Officials		Pedestrians		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
9-12	0	0	20	9.3	20	5.9
Certificate	0	0	84	39.1	84	24.7
Diploma	5	4.0	81	37.7	86	25.3
Degree	97	77.6	27	12.6	124	36.5
Master	23	18.4	3	1.4	26	7.6
Total	125	100.0	215	100%	340	100

Source: Field Survey, 2022

4.3.4 Work Experiences of Officials

As shown at figure 4.1 below, regarding official respondents work experience, the results is indicated that majority of the respondents, 64(51.2%) have less than 3 years’ work experience and 30(24%) have above 9 years’ of work experience. The reaming 19(15.2%) have between 3 to 6 years of work experiences and 12(9.6%) have adequate which is about 6 to 9 years of work experiences. This shows that the respondents have highest exposure to road traffic safety awareness creation programs.

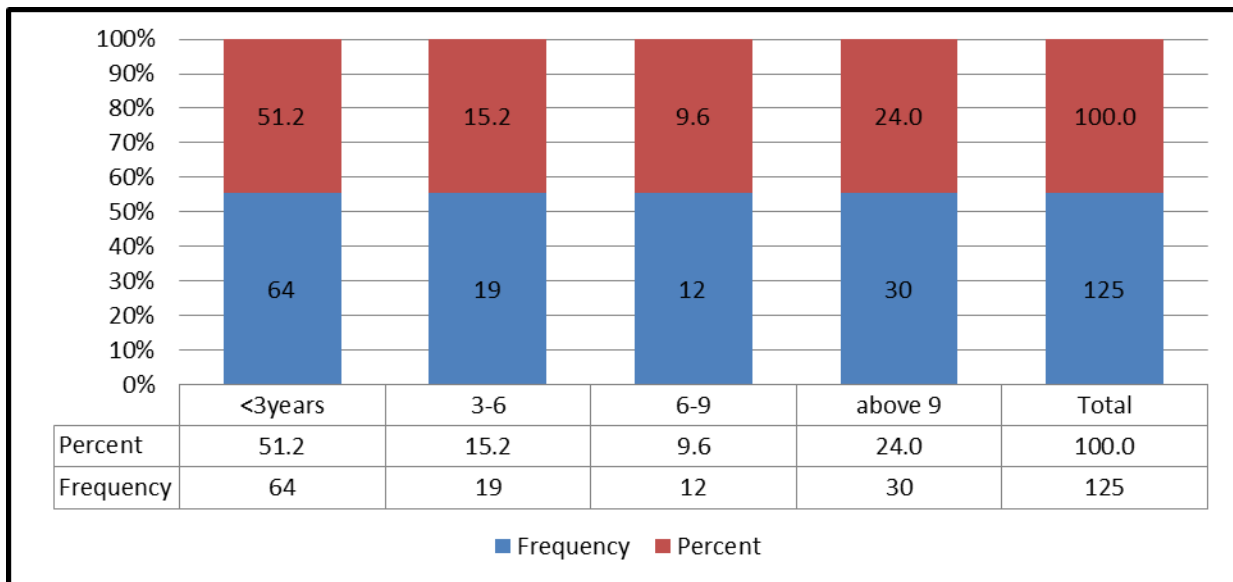


Figure 4.1: Work experience of respondents

Sources: field survey, 2022

4.3.5 Owned Communication property

As shown at Figure 4.2 below, pedestrians replied to express the owned communication items and the most owned was telephone for 111(51.6%), television 34(15.8%), radio 29(13.5%), internet services 19(8.8%) pedestrians while the remaining 22(10.2%) were owners of telephone, television, radio and internet at the study area. The availability of such tools helps pedestrians to easily assess and get the news, events, and reports of road traffic safety information easily from different sources with support of such equipment’s at the study area. The figurative data was shown at Figure 4.2 below.

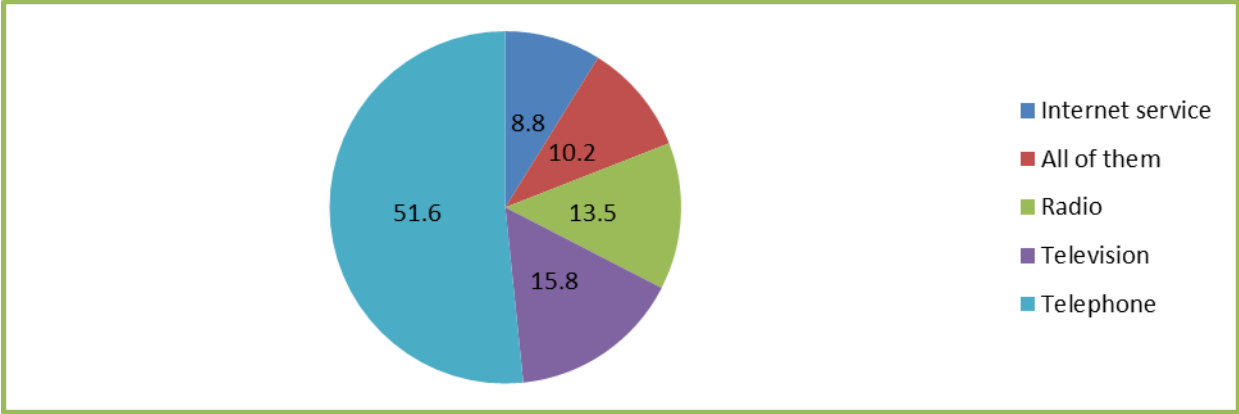


Figure 4.2: Work experience of respondents

Sources: field survey, 2022

4.3.6 Incomes level of Pedestrians

In the monthly income segment as shown at Figure 4.3 below, the majorities of the respondents have an income 1,001 – 5,000 birr which includes 136 respondents (63.3%); followed by the income group of 5,001 – 10,000 birr, with 62 respondents (28.8%). Ranked third is less than 1000 birr, with 10 respondents (4.7%); and the fourth income range is above 10000 birr which includes 7 respondents (3.3%) from the sampled pedestrians at the study area. The result of the study indicates that, majority 63.3% of the sample respondents have 1,001 – 5,000 birr incomes at the study area.

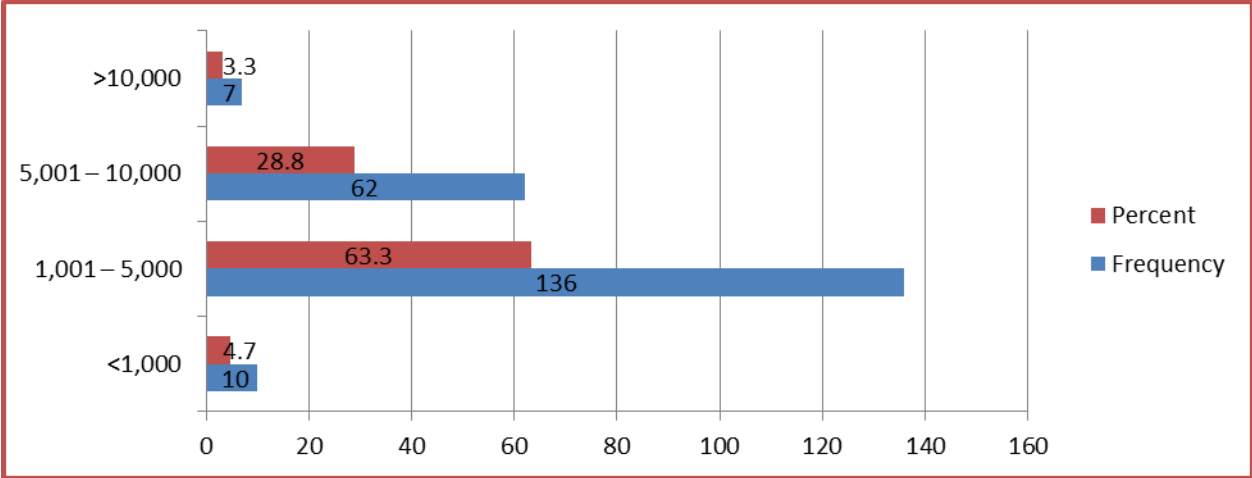


Figure 4.2: Work experience of respondents

Sources: field survey, 2022

4.3.7 Occupation of Respondents

In relation to occupation of pedestrians included for this study, 100(46.5%) were private employs; while others have an occupation like NGO employee 69(32.1%), government employee 37(17.2%), and unemployed 9(4.2%) were some of the sectors at which sampled pedestrian were involved at the study area.

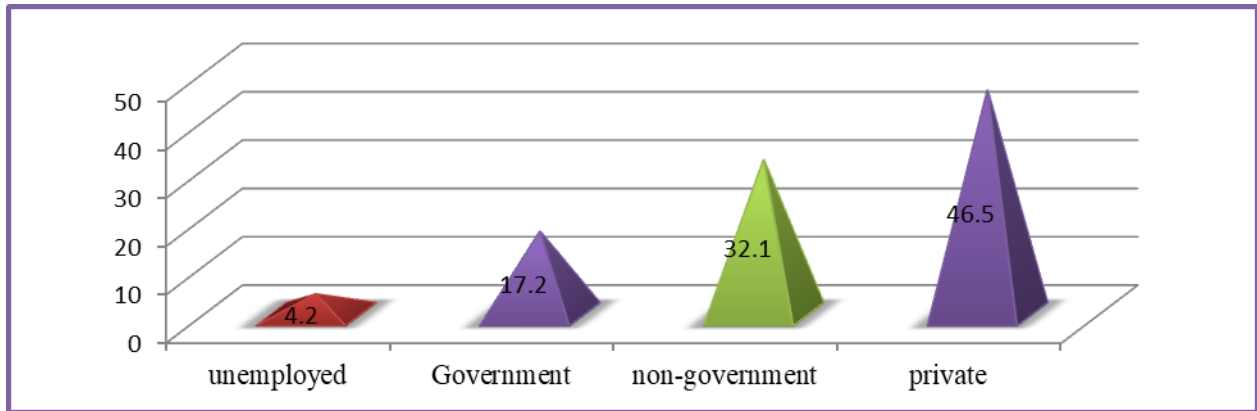


Figure 4.3: Occupation of respondents

Sources: Field survey, 2022

4.2. The Preference of Communication Tools

Table 4.5: Respondents' from official's preference of communication tools

Media of communication	Response frequency and rank						
	1st rank	2nd rank	3rd rank	4th rank	5th rank	6th rank	Total
Brochure	20	85	11	5	4	-	125
Newspaper	15	30	42	34	2	2	125
Radio and television	69	45	8	3	-	-	125
Billboard	3	8	15	56	30	13	125
Banner	8	75	34	6	2	-	125
Leaflet	4	35	73	7	4	2	125
Other (Public campaigns, Panel discussion, Events and Training) are listed by the respondent.							

Sources: field survey, 2022

According to sampled informants reply on official communication preference in table 4.5 above, some variation observed with regard to medium preference between television, radio, internet, newspaper and billboard as a source of information for road traffic safety awareness programs. The majority of respondent put radio and television as their most preferred source of information, the rest medium like newspaper, billboard, and people takes the 4th, 5th and 6th rank respectively. The other respondent said:-

Training: - A lot of trainings have been given for supportive traffic students, young volunteers, and drivers from different institutes, health stations, religious leaders, disabilities, motorists, media forums and so on. Some of the main issues frequently raised and given training were traffic accident, traffic regulation, defensive driving and first aid provision.

Curricular Activity:- An ongoing activity have been made for instance the number of school clubs shows increment in all sub cities of Addis Ababa both by the number of traffic club members and training provided. In addition the agency is dealing with minster of education to include traffic safety issue from grade 1-8 in different five (5) books. Those institutes providing education for driving license have been given road safety education and tried to make check and regulate about 20 schools.

Public campaigns:-Public campaigns have been done on issues like opportunities to decrease road traffic accident and enhance road traffic safety of the community. In addition road traffic accident victims day, opposite direction drive, car free roads day etc...issues have been raised and participated the community, believers, drivers, pedestrians, religious leaders, government officials, and so on. In public campaign it's estimated by participating 1.5 million people each year beginning from 2016/17 E.C.

Panel discussion: - Panel discussion performed on issues like road safety, road traffic best experience, regulation 395/09, and traffic accident with different stakeholders like high government officials, experts, traffic police, media officers and so on.

Events :- Events were one opportunity for the agency to get much more road users (community) and participated on events like exhibition programs, world traffic victims day, blood donation day, girls day and so on.

On the other hand for pedestrians, as shown at Table 4.6 below, the most preferred source of information was set as first television, second preferred sources is internet; the third is radio, the fourth gives for billboard and the final preference sources was newspaper, this, the preferences form officials and pedestrians, thus, the agency have to bear the preference application for undertaking the campaign at the study area.

Table 4.6: The preferred sources of information for pedestrians

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. D
Television	215	1.00	5.00	1.5	.80
Newspaper	215	1.00	5.00	5.1	.34
Radio	215	2.00	5.00	3.3	.18
Billboard	215	1.00	5.00	4.0	.52
Internet	215	1.00	5.00	2.0	.40
Valid N (listwise)	215				

Sources: Field survey, 2022

4.3.8 The Main Content of the Road Traffic Safety Messages

An attempt was made in table 4.7 above, to evaluate what themes/contents of RTS messages the respondents selected two and above so most of the respondents respond that they listen to news about road traffic casualties and resource damages 93 (27.3 %). The other 77 (22.6%) listen information about which way is safe and which is full of traffic and 67 (19.7%) respondents respond pieces of advice for pedestrians; 58(17%) hears on contents such as discussions on road traffic safety problems, their causes and solutions and 45 (13.2%) listen the contents relating to pieces of communication tools talk to road safety at the study area.

Table 4.7: Main content of the road traffic safety message respondents get

Respondents	Main contents of the road users					Total
	News about road traffic casualties and resource damages	Pieces of communication tools talk to road safety	Pieces of advice for pedestrians and drivers on using roads carefully	Information about which way is safe and which is full of traffic	Discussions on road traffic safety problems, their causes and solutions	
Official	16	22	38	30	19	125
Pedestrians	77	23	29	47	39	215
Total	93	45	67	77	58	340

Sources: Field survey, 2022

In addition according to interview response, the basic topics that were raised for discussions, through (audio, video, displays, training, campaign etc...) each of the issues was undertaken by different means of communication like print media, electronic, social Medias, billboards. However, most of the time, these topics were not always respected. The majority of the programs focused on and covered raising issues related with the incident, even if the topic of discussion for the date is quite different. A variety of road traffic safety messages dispatched in a variety ways of printing medias like brusher, banner, poster, magazine, flyer, sticker, news later and newspaper. In addition to multiplicity of content and means of communication, the frequency and the numbers of copies dispatched were increased from time to time.

4.3.9 The messages prepared to create awareness are easy to understand

According to Table 4.8 below, about 145(42.6 %) of the respondents were agree on the messages were easy to understand, 63(18.5%) from the informants were strongly agreed on the prepared messages clarity to understand; while the rest 53(15.6%) becomes undecided, 38(11.1%) disagreed and 41(12%) strongly disagree on the messages understandability and clarity from them at the study area.

Table 4.8: Messages clarity to easily understand

Respondents	Level of agreement					Total
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Official	36	74	13	2	0	125
Pedestrians	27	71	40	36	41	215
Total	63	145	53	38	41	340

Sources: Field survey, 2022

4.3.10 The degree of coverage of actual road traffic awareness by the communication tools

According to Table 4.9, about 4142(41.8%) of the respondents said the degree of coverage to actual road traffic awareness by the tools were mildly covered, 93(27.4%) and 55(16.2%) of respondent revealed that the degree of coverage were truly covered and uncertain respectively, while the remaining 25(7.4%) with equal response rate indicated that, the degree of coverage was exaggerated and undermined with the statements.

Table 4.9: Degree of coverage of actual road traffic

Respondents	degree of coverage of actual road traffic					Total
	Exaggerated	Truly covered	uncertain	Mildly covered	Undermined	
Official	2	42	21	50	10	125
Pedestrians	23	51	34	92	15	125
Total	25	93	55	142	25	340
%	7.4	27.4	16.2	41.8	7.4	100%

Sources: Field survey, 2022

4.3.11 The frequency of transmit road traffic safety messages to users

As per figure 4.4 below, about 64(51.2 %) of the respondents transmit messages at sometimes by using communication tools for road traffic safety, the other 32(25.6%) transmit messages at always, 18(14.4%) transmit at rarely and the remaining 11(8.8%) never provide any message through using any communication tools.

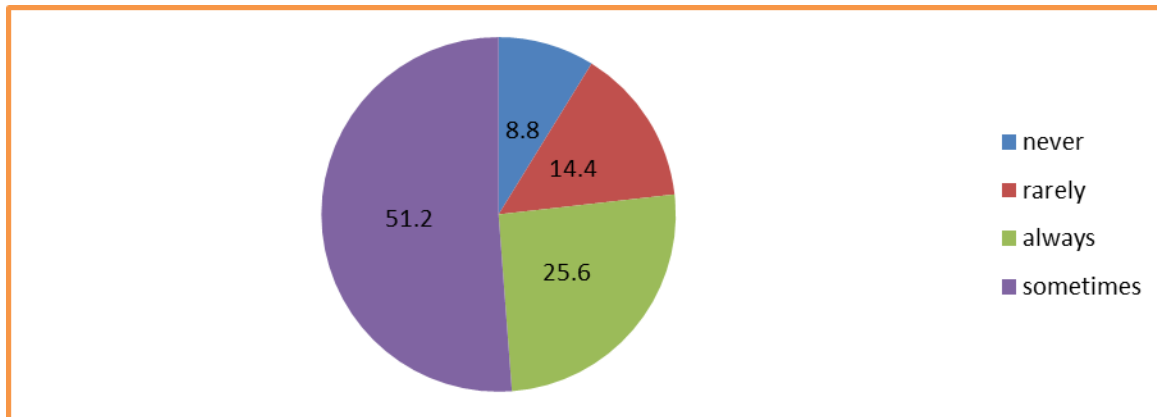


Figure 4.4: The frequency of transmit messages to users

Sources: Field survey, 2022

On the other side pedestrians were, pedestrians were requested to express their experiences on which they get road traffic safety messages per a day, as per their reply, majority 100(46.5%) gets a the message for less than a hour per day, while the other proportions such as 68(31.6%) get from 1 to 2 hour messages per hour, 31(14.4%) gets from 3 to 4 hours and the remaining 16(7.4%) pedestrians have an access to get traffic safety messages for more than 4 hours per day, thus, the response rate implies pedestrians have the accessibility to get road safety messages for less than an hour per day in Addis Ababa city. The response rate was shown at Figure 4.5 below.

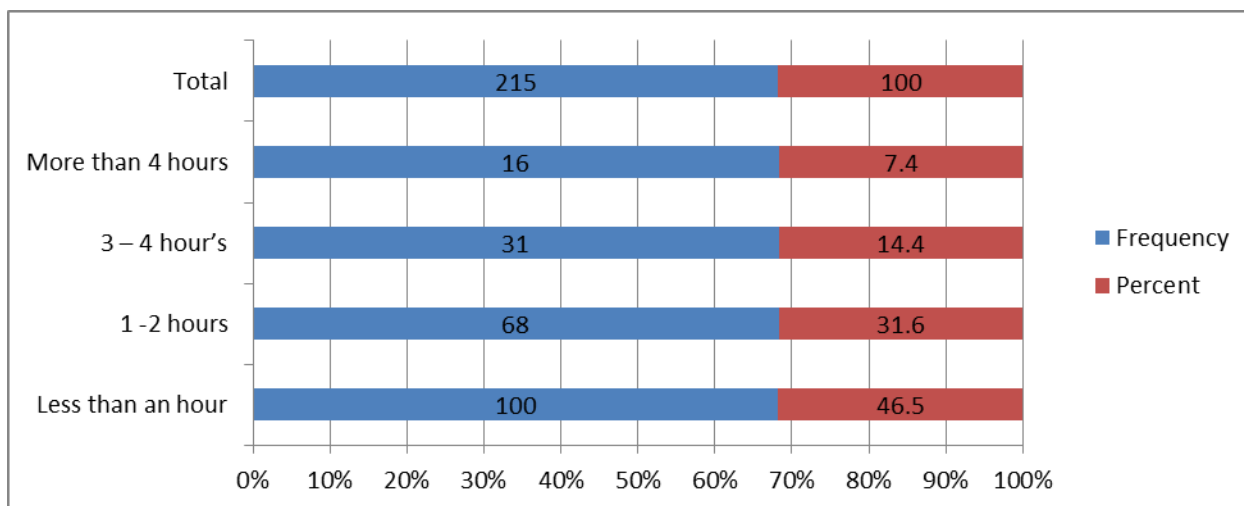


Figure 4.5: The time get road traffic safety messages per a day

Sources: Field survey, 2022

4.3.12 Officials involvement in road traffic awareness creation discussions in public forums

Table 4.10 above shows respondents' reaction on traffic awareness creation discussions in public forums. Accordingly, the majority respondents 60(48%) involves at sometimes, 47(37.6%) involves at rarely basis and 18(14.4%) involves at participation at very often times at traffic awareness creation discussions in public forums. This indicates that majority of the respondents' state that they had sometimes discussed about traffic accidents in the public forums.

Table 4.10: The frequency of involvement in road traffic awareness creation discussions in public forums

Frequency of involvement	public forums	
	Frequency	Percent
Very often	18	14.4
Sometimes	60	48.0
Rarely	47	37.6
Total	125	100.0

Sources: Field survey, 2022

Similarly, pedestrian's tendency to discuss road traffic safety issues with family members or friends, pedestrians have the tendency to discuss road traffic safety issues with family members or friends at rarely 100(46.5%), and 77(35.8%) sampled pedestrians were does not have discuss road traffic safety issues with family members or friends at the study area.

The others with relatively lower response proportion such as 18(8.4%), 14(6.5%) and 6(2.8) from pedestrians have the habit to discuss sometimes, very often and always to discuss road traffic safety issues with family members or friends respectively.

Table 4.11: Discuss road traffic safety issues with family members or friends

variables	Frequency	Percent
Always	6	2.8
Very often	14	6.5
Sometimes	18	8.4
Rarely	100	46.5
Never	77	35.8
Total	215	100.0

Sources: Field survey, 2022

4.3.13 The communication tools to create awareness

According to table 4.12 below, 108(31.8%) of the respondents were agreed that the communication tools used to create awareness in terms of their interactive nature of the program are interesting whereas, 84(24.7%) of the respondent strongly agree, 67(19.7%) of the respondent are not sure (uncertain) of the program. On the other side, sampled pedestrians were disagreed with 53(15.3%) and strongly disagreed at 29(8.5%) response rate about the communication tools used to create awareness are interested and interactive at the study area, this shows that the communication tools used to create awareness are interested and interactive for pedestrians and officials at the study area.

Table 4.12: Interactive nature of the program

Respondents	interactive nature of the program					Total
	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	
Official	32	52	25	10	6	125
Pedestrian	52	56	42	42	23	215
Total	84	108	67	52	29	340
Percentage	24.7	31.8	19.7	15.3	8.5	100%

Sources: Field survey, 2022

4.3.14 The appropriateness of communication tools to audiences

According to Figure 4.6 below, 71(56.8%) of respondents were agreed that the communication tools of the messages are appropriate to reach a good deal of audiences and 21(16.8%) of respondents strongly agreed that the communication tools of the messages are appropriate to reach a good deal of audiences. On the other hand, 18(14.4%) of respondents were uncertain (undefined) whether the communication tools of the messages is appropriate to reach a good deal of audiences or not, others 10(8%) of respondents were strongly disagreed and 5(4%) respondents were strongly disagreed on the communication tools of the messages are appropriate to reach a good deal of audience. This shows that the communication tools of the messages are appropriate to reach a good deal of audiences. In general, 92(73.6%) of the respondents said that the communication tools of the messages are appropriate to reach a good deal of audiences.

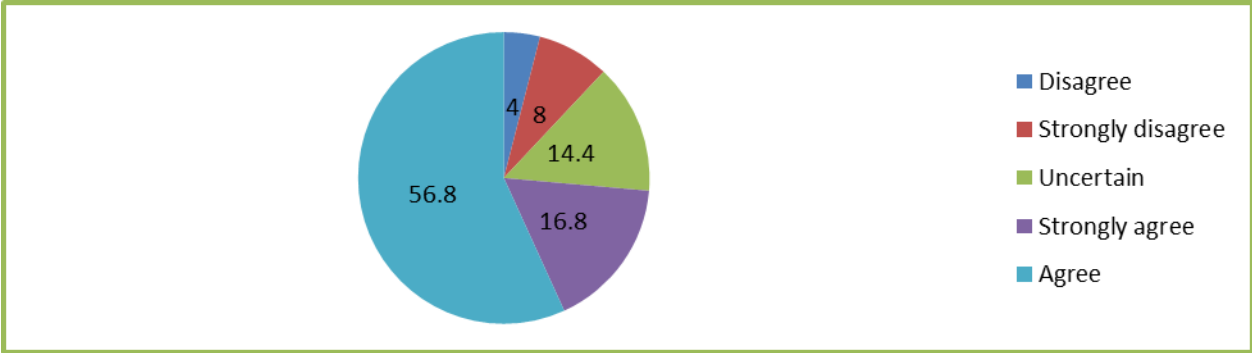


Figure 4.6: The Messages are appropriate to reach a good deal

Sources: Field survey, 2022

On the other side, based on the views of pedestrian included for this study as shown at Figure 4.7 below, greater from the informants such as 68(31.6%), 50(23.3%) and 49(22.8%) were disagreed, strongly disagreed and being neutral respectively concerning the airtime of the messages is appropriate to reach a good deal of audiences at the study area, whereas, 28(13%) pedestrian were agreed and 20(9.3%) pedestrian were strongly disagreed about the airtime of the messages is appropriate to reach a good deal of audiences at the selected study area. Thus, greater pedestrians 118(54.9%) were strongly disagreed/disagreed on the airtime of the messages is appropriate to reach a good deal of audiences. The response rate was revealed at Figure 4.7 below.

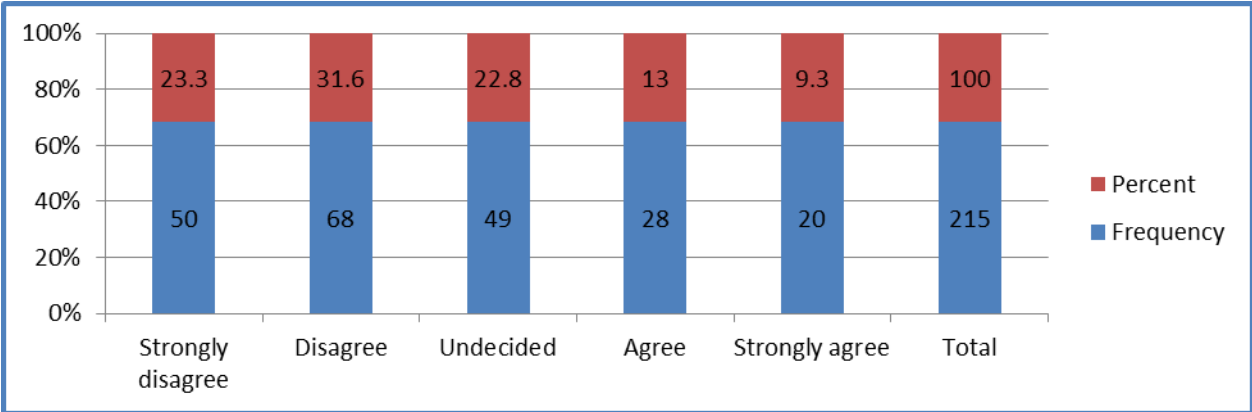


Figure 4.7: The airtime of the messages is appropriate to reach a good deal of audiences

Sources: Field survey, 2022

4.3.15 The usage of communication tools to create awareness about traffic accidents

According to Figure 4.8 below, greater respondent 53(42.4%) of respondents said that using communication tools to create awareness about traffic accidents is good, 33(26.4%) of the respondents said using communication tools to create awareness about traffic accidents is medium. While, other 30((24%)) rate the use of communication tools to create awareness about traffic accident very good and the smaller proportion such as 9(7.2%) were rated the use of communication tools to create awareness about traffic accident as poor . Thus, the cumulative of 83(64.4%) of the respondent believes that using communication tools is good way to create awareness at good at the study area.

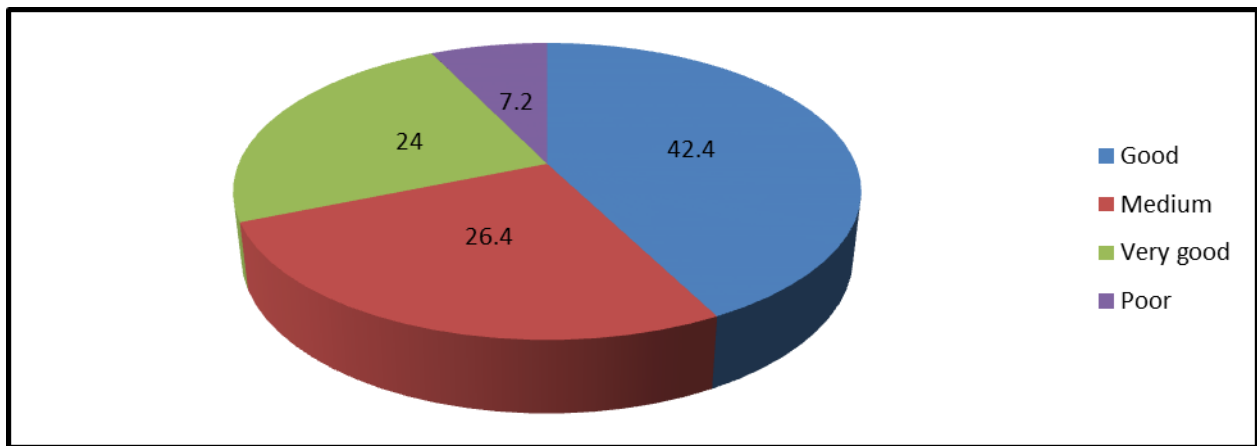


Figure 4.8: The usage of communication tools to create awareness about traffic accidents

Sources: Field survey, 2022

4.3.16 The Important of communication tools to create awareness about traffic accident issues

Table 4.13 below indicated that, 86(68.8%) of respondents responded that the communication tools to create awareness about traffic accident issues is very important; whereas 29(23.2%) and 10(8.0%) from the participants responded that, the communication tools to create awareness about traffic accident issues is important and rarely important respectively. This shows that almost 93% of the respondents believe communication tools almost very important to create awareness and to convey messages about traffic accidents. This indicates that the communication tools to create awareness about traffic accident issues are very important at the study area.

Table 4.13 Important of communication tools to create awareness about traffic accident issues

Variables	Response	
	Frequency	Percent
Very important	86	68.8
Important	29	23.2
Rarely important	10	8.0
Total	125	100.0

Sources: Field survey, 2022

4.4 The Effect of Implementing Traffic Safety Awareness program on road user’s knowledge regarding the traffic accident

4.4.1 The awareness program changes the attitude of road users

At Figure below shows, respondents were also required to explain whether they think the awareness program changes the attitude of road users or not. Accordingly, more respondents 108(86.4%) explained that the awareness program changes the attitude of road users; while others 17(13.6%) of respondents explained as the awareness program is not change the attitude of road users. This indicates that most of the respondents believe that the awareness program can change the attitude of road users and it is clear that the program is doing good change the attitude of the road users.

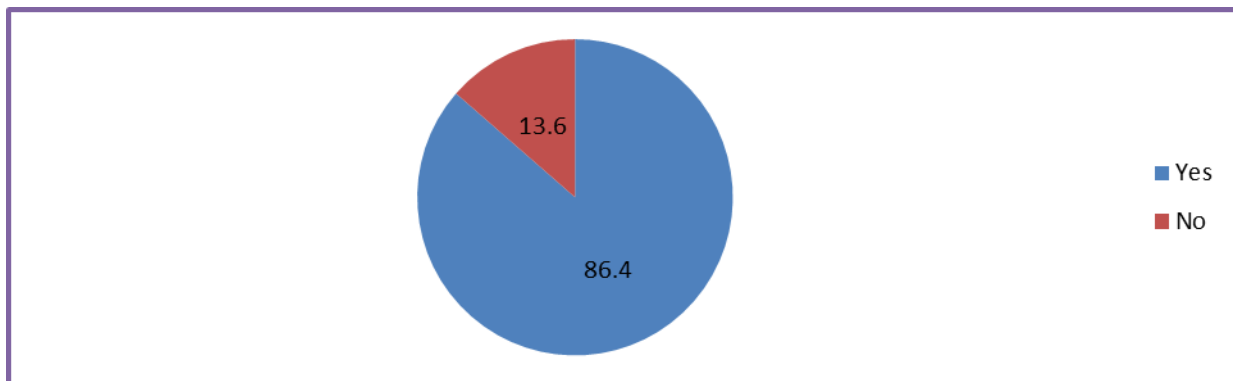


Figure 4.9: The awareness program changes the attitude of road users

Sources: Field survey, 2022

4.4.2 The Implementation level of Traffic safety awareness program on road user's knowledge regarding traffic accident

As Figure 4.10 below, 40(32%) of respondents estimated that the implementation level of traffic safety awareness program on road user's knowledge regarding traffic accident is good; 35(28%) of the participants indicated that, the implementation level of traffic safety awareness program on road user's knowledge regarding traffic accident it is moderate. Others 30(24%) and 19(15.2%) and 1(0.8%) of respondents expected the implementation level as very good, poor and very poor respectively.

This indicates that almost more than half of the respondents 70(56%) estimated that the implementation level of traffic safety awareness program on road user's knowledge regarding traffic accident is worthy.

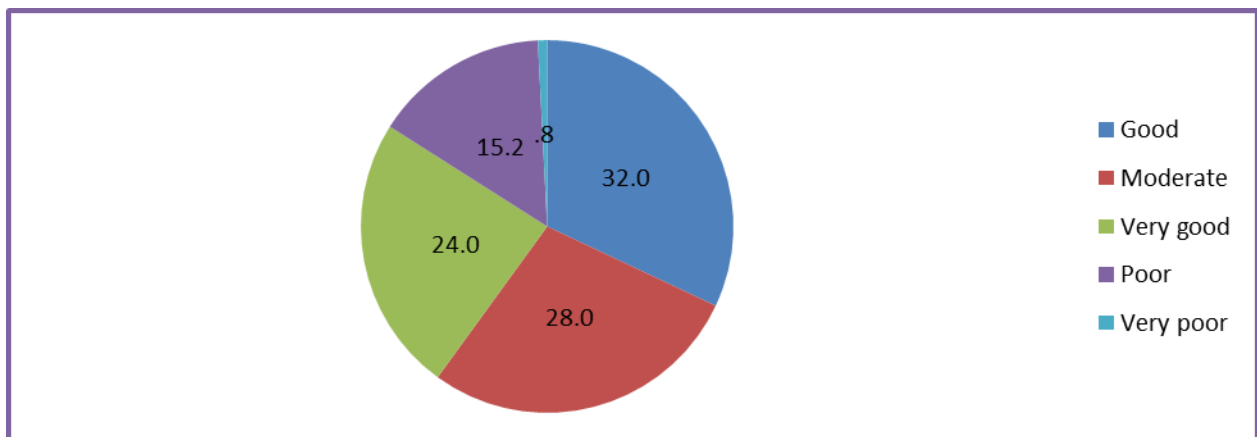


Figure 4.10: The implementation level of traffic safety awareness program on road user's knowledge

Sources: Field survey, 2022

4.4.3 The Main Victims of Traffic Regulation Violation

According to table 4.14 below, 56(44.8%) respondents were said pedestrians were the main victims of traffic regulation violation and the other respondent said that 27(21.6%) and 23(18.4%) from the respondents replied passengers and drivers are victims in traffic regulations violation respectively. But the rest 7(5.6%) respondent said that vehicles are victim of traffic regulation violation and other said that, the main victims of traffic regulation violation materials, motorist, and cyclist, animals, buildings, median trees and vegetables at the study area.

Table 4.14: The main victims of traffic regulation violation

Victims	Response	
	Frequency	Percent
Pedestrians	56	44.8
Passengers	27	21.6
Drivers	23	18.4
Vehicles	7	5.6
Others	12	9.6
Total	125	100.0

Sources: Field survey, 2022

4.4.4 The Effects of the weak awareness program on road user's traffic accident

As Table 4.15 below shows, 100(80%) of respondents estimated that the effect of weak awareness program on road users accident are all such as light injury, death, property damage, traffic congestion; whereas 10(8%) effects was death, 9(7.2%) effects are light injury, 5(4%) effects are Property damage and 1(0.8%) includes traffic are the effects of weak awareness program on road users accident at the study area. Thus, significant number of respondents indicated that, light injury, death, property damage, traffic congestion were the main effects of weak awareness program on road users accident at the area under study.

Table 4.15: The effects of weak awareness program on road user's traffic accident

Effects	Response	
	Frequency	Percent
Light injury	9	7.2
Death	10	8.0
Property damage	5	4.0
Traffic congestion	1	0.8
All	100	80.0
Total	125	100.0

Sources: Field survey, 2022

According to interview response, for Addis Ababa traffic management agency, one of their responsibilities they should develop “the public’s knowledge and awareness of road traffic and safety issues by using different communication tools. As AATMA public relation directorates tried to elaborate on a media means they were using to create road traffic awareness programs, and provided their response as

“In our agency mass media plays lion share roll, we were using so many Medias and the major are print and electronic Medias. We were using more than 12 ways means of print Medias like newspapers, articles, stickers, posters, banners, billboard, and training manuals as a media. The next and most preferable media is electronic, which include radio and music, in addition to radio and television, we were using social medias as an electronic means of communication by using official face book website and also public transport Tv screens as a means to reach to the audience. The other way of providing awareness for drivers were face to face training ,talks shows, panel discussion, and street campaign made in accordance to fulfill the question of accessibility. Each and every media of communication has its own advantage and drawbacks. However, our primary target is to answer the question of accessibility so this mainly achieved by electronic media than the others, that’s why we give much more emphasis to this media. Generally, the media (print and electronics) were given much more focus. There is limitation on face to face training because of the number of people engaged and its effectiveness.”

According to the AATMA, road traffic safety and capacity building directorate to meet the ultimate goals of the agency like reducing accident and facilitating road traffic mobility, awareness creation programs to road users is mandatory. To do so a variety of methods and specific strategies were used in order to apply the process, procedure and practices RTS awareness programs. In fact there is habitual practice but they differ based on media of communication. There are common characteristics like issue identification or focus areas were selected based on risk factors and day to day traffic mobility experience and then before production stages issues edited in different dimension by a group of professional. They further explained as:-

“Before production stage issues evaluated by criteria’s like risk factor analysis, audience based analysis and issues were selected by string pilot committee, governmental and non-

governmental organization working on related road traffic safety issues. Majority of the production were done by internal capacity however some of the activities were given to the other professional in fact we had a problem regarding internal piloting and evaluation of programs made by internal capacity.”

A key informant from the AATMA tried to precisely explain internal system, integration and interaction within the agency.

“During 2020 annual plan we were considered an integrated plan with core process directorates. The agency had five core process (Road traffic operation core process, Road traffic regulation and enforcement main officer, Road traffic safety capacity building office, Parking service providing and licensing, and Road traffic regulation and organizing center) and their ultimate goal is to reduce traffic accident and facilitate traffic mobility .we were working together on the risk factors like speed, drunk driving, helmet wearing and so on, however it was not deliberately planned and performed.”

4.4.5 The Correlations Between communication strategy and their effectiveness

Table 4.16 below shows about the correlation between communication strategy and their effective performance level, thus, from the findings of the study indicated that, there is the perfect positive correlation association the effective performance of communication tools and attractive with Pearson's correlation of 0.315, there is the perfect positive correlation association between trustworthy and the effective performance of communication tools Pearson's correlation of 0.322; there is the perfect positive correlation association between Persuasive and the effective performance of communication tools at the Pearson's correlation of 0.265; there is the perfect negative correlation association between relevance and the effective performance of communication tools at the Pearson's correlation of -0.141; there is the perfect negative correlation association between credible and the effective performance of communication tools the Pearson's correlation of -0.376; and there is the perfect negative correlation association between consistent and the effective performance of communication tools at the Pearson's correlation of -0.181 in the study area.

Table 4.16: Correlation between communication strategy and effectiveness

Correlations									
		Attractive							
Attractive	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	215							
Consistent	Pearson Correlation	-.140*	1						
	Sig. (2-tailed)	.041							
	N	215	215						
Relevance	Pearson Correlation	.149*	.477**	1					
	Sig. (2-tailed)	.029	.000						
	N	215	215	215					
Clear	Pearson Correlation	.123	-.352**	-.399**	1				
	Sig. (2-tailed)	.073	.000	.000					
	N	215	215	215	215				
Trustworthy	Pearson Correlation	.236**	-.272**	-.345**	.230**	1			
	Sig. (2-tailed)	.000	.000	.000	.001				
	N	215	215	215	215	215			
Credible	Pearson Correlation	.190**	.376**	-.014	.303**	-.088	1		
	Sig. (2-tailed)	.005	.000	.836	.000	.196			
	N	215	215	215	215	215	215		
Persuasive	Pearson Correlation	.200**	.348**	.052	-.348**	-.205**	-.011	1	
	Sig. (2-tailed)	.003	.000	.451	.000	.003	.870		
	N	215	215	215	215	215	215	215	
the effective performance	Pearson Correlation	.315**	-.181**	-.141*	.076	.322**	-.376**	.265**	1
	Sig. (2-tailed)	.000	.008	.039	.266	.000	.000	.000	
	N	215	215	215	215	215	215	215	215
*. Correlation is significant at the 0.05 level (2-tailed).									
**. Correlation is significant at the 0.01 level (2-tailed).									

4.5 The challenges faced during the use of communication tools

Different challenges were faced during the use of communication tools and each problem can be illustrated as below based on official's response, as revealed at Table 4.17. According to table 4.19 below, the challenge relating lack of feedback have high 46(36.8%) and very high 44(35.5%) hindering effects to use the communication tools used to create awareness. While, 25(20%) of the respondent said lack of feedback have medium effects to use communication tools for creating awareness for users of road; but, the challenge have low 6(4.8%) and very low 4(3.2) effects to use better communication tools for creating awareness at the study area. In cumulative, lack of feedback as the challenge have higher (mean=4.4) hindering effects on the adoption and utilization of communication tools and the response rate was varied with (1.0) standard deviation among officials at the study area.

Table 4.17 also indicated that, overall lack of communication have the hindering effects to use communication tools at higher 39(31.2%) and medium 34(27.2%) challenge level, while others such as 24(19.2%), 17(13.6%), and 11(8.8%) from officials rated the stated challenge at low, very high and very low effects respectively to apply better communication campaign at the study issues. In general, the challenge relating to overall lack of communication have higher effects for using communication tools to create awareness on road safety and other issue with mean score of (4.8) and the effects rate among officials was varied with (1.1) standard deviation.

According to official's response, language barrier with 92(73.6%) was the very high challenge for the proper use communication tools to create awareness, while 20(16%) respondents said language barriers to use the communication tools to create awareness have medium hindering effects on road safety issue. However 5(4%) and 4(3.2 %) of them said language barriers of communication have high, low and very low of the communication tools used to create awareness respectively. Thus, language barrier was the main challenge that hinders the proper use of communication tools to create awareness on road traffic measures and safety issues with average score of (4.0) and the challenges higher effect was varied among respondents with (1.0) standard deviation.

The other challenges relating to budget constraints was rated at very high 83(66.4%), medium 24(19.2%) and high 13(10.4%) hindering effects for adopting the communication tools used to create awareness; whereas, others such as 3(2.4%) and 2(1.6%) evaluated budget barriers effects

at low and very low hindering impacts for using the communication tools for creating awareness about road safety measures and general information, in general budget constraint have very high hindering effects impacts for using the communication tools for creating awareness about road safety measures with mean score of (5.0) and the response variation at (1.0) standard deviation.

According to table 4.20 below shows, the majority of the respondents 43(34.4%) 30(24%)and 29(23.2%) replied lack of motivation of the communication tools used to create awareness is have medium, high and very high hindering effects respectively to use communication tools at the study area. While, 15(12%) of them said lack of motivation of communication have low and 8(6.4%) said the challenge have very low curb effects to use the communication tools used to create awareness. However, lack of motivation have an average mean score (3.5) which is ranged at medium rate and response rate was differentiated with (1.1) standard deviation between respondents.

Table 4.17: The challenges faced during the use of communication tools

No	Challenges		Level of effect				
			Very high	high	medium	low	Very low
1	Lack of feedback	Mean(4.4)	44(35.5)	46(36.8)	25(20)	6(4.8)	4(3.2)
		Sta.D (1.0)					
2	Language Barriers	Mean (4.0)	92(73.6)	5(4)	20(16)	4(3.2)	4(3.2)
		Sta.D (1.0)					
3	Budget Constraints	Mean (5.0)	83(66.4)	13(10.4)	24(19.2)	2(1.6)	3(2.4)
		Sta.D (1.0)					
4	Lack of motivation	Mean(3.5)	29(23.2)	30(24)	43(34.4)	15(12)	8(6.4)
		Sta.D(1.1)					
5	Using the Wrong Tool	Mean(3.3)	65(52)	12(9.6)	22(17.6)	19(15.2)	7(5.6)
		Sta.D(1.3)					
6	Lack of adequate material	Mean(4.0)	55(44)	27(21.6)	30(24)	9(7.2)	4(3.2)
		Sta.D(1.1)					

Sources: Field survey, 2022

The other challenge was relating to the use of wrong tool, the majority of the respondents 65(52%) said using the wrong tool of the communication tools used to create awareness have

medium challenging effects. However 22(17.6%) and 19(15.2%) of them said using the wrong tool of communication have very high and low effects on the communication tools used to create awareness. The remaining 7(5.6%) of the respondent said that using the wrong tool of communication have very low challenges of communication tools faced to create awareness. In general, these challenges have medium (3.3) mean values and the rate of this challenge was differentiated with (1.3) standard deviation at which there is relatively wider response variation between the officials.

The remaining challenge was relating to Lack of adequate material, the majority of the respondents with 55(44%) rated lack of adequate material of the communication tools used to create awareness with having very high effects. Whereas 30(24%) rated at medium and 27(21.6%) rated at high the challenges like lack of adequate material of communication.

The remaining 9(7.2%) and 4(3.2%) of the respondent replied that lack of adequate material of communication have low and very low effects to adopt the communication tools faced to create awareness. In general lack of adequate material is the challenges during the use of communication tools have high (4.0) mean values and the response variation with (1.1) standard deviation.

In general, from the challenges that have very high effects are budget constraints, high hindering challenges includes overall lack of communication, lack of feedback, language barriers and lack of adequate material, while the challenges that have medium effects are lack of motivation and using the wrong tool to use the communication tools for creating awareness of on road safety issues, regulation and rules at the study area.

4.6 Practices of Road Traffic Safety Awareness Creation Programs

These were the basic topics that were raised for discussions; through (audio, video, displays, training, campaign etc...) each of the issues was undertaken by different means of communication like print media, electronic, social media, and billboards. However, most of the time, these topics were not always respected. The majority of the programs focused on and covered raising issues related to the incident, even if the topic of discussion for the date is quite different. A variety of road traffic safety messages dispatched in various ways of printing media like brusher, banner, poster, magazine, flyer, sticker, news later and newspaper. In addition to the

multiplicity of content and means of communication, the frequency and the numbers of copies dispatched were increased from time to time.

4.7 Conclusions

To conclude this chapter, data on the evaluation of the existing trend in the practice of using communication tools to create awareness about traffic accidents in the case of Addis Ababa Traffic management agency were analyzed and interpreted by using questionnaire and interview thematically interpretation. Quantitative data were collected on the practice of using communication tools to create awareness about traffic accidents analyzed and interpreted by using the statistical package for social science (SPSS) and descriptive-analytical methods. The data were triangulated through the use of mixed-method, where qualitative and quantitative data analyses were used to interpret the findings.

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS

4.1 Introduction

This chapter discuss conclusion which are drawn from the findings presented and analyzed in chapter four. The chapter also makes recommendation based on the findings to the practice of using communication tools to create awareness about traffic accident made by AATMA. Therefore to attain these objectives, three research questions were formulated.

This study has been conducted with the objective of assess the practice of using communication tools by Addis Ababa traffic management Agency (ATMA) in creating awareness about traffic accident. To attain this objective assessing the usage, procedures and practice of road traffic safety awareness creation program, identify communication tools used by the Agency to create awareness about traffic accident, examine the of implementation of traffic safety awareness program on road users knowledge regarding traffic accident and identify the challenges in the use of communication tools.

4.2 Summary of Findings

Based on the results of the study, 56.8% and 16.8% of respondents were agreed, strongly agreed that the communication tools of the messages are appropriate to reach a good deal of audiences respectively, While, 8% and 4% of respondents were strongly disagreed and disagreed on the communication tools of the messages are appropriate to reach a good deal of audience. Majority of the respondent 86% believes the awareness program changes the attitude of road users while, minorities 14% were believes the awareness program does not change the attitude of road users. The majority of the respondents 52% were accepts using the wrong tool of the communication tools used to create awareness have medium challenging effects. However 17.6% and 15.2% of respondent believes using the wrong tools of communication have very high and low effects on the communication tools used to create awareness. road traffic safety capacity building core process used mass medias like printing and electronics, trainings public campaigns to meet there goals. The process to perform road traffic safety awareness programs differ based on the medium of communication used. Some of the awareness programs made by internal capacity lack distinct narratives and piloting system in comparison to out sourced road traffic

safety awareness programs because using variety of medium requires higher amount human power and financial resource to have qualified message and being addressed. The other core problems they had is absence of impact assess on road traffic safety awareness creation programs which let them to plan unintentionally.

In addition to that experts tried to precisely explain internal system, integration and interaction within the agency. They were working together on the risk factors like speed, drunk driving, and helmet wearing and so on; however it's not deliberately planned and performed. This provides a signal for awareness creation program process and procedures needs special attention. Practices of road traffic safety awareness programs related issues; the agency core process tried to touch different road safety issues, tried to use multiple medium of communication to outreach the road safety message, tried to reach different society level, encouraged those who were working on road safety issues, tried to use events, occasions to reach road safety issues to the public, activities enhanced by their quantitative and type of information they convey and tried to focus on medium of communication most people prefer to accesses it.

There are some of the constraints for awareness creation practices exposed for these are, set a plan without having a baseline study or information, absence of integrated plan and execution with the rest four core process of the agency, deficiency of depth and inconsistency of road traffic safety issue, using multiple medium of communication let them producers not to focus on specific medium and lose the quality of production, activities to reach to the community was at the initial stage, having strong relationship with few stakeholders like minister of education, health, communication and Addis Ababa traffic police, most discussion opportunities were not public participant, less media coverage on an issue of pedestrian road usage and its problems, less participation and acceptance on social media and website which is a classical medium of communication, absence of evaluated activities performance and their effectiveness regarding sets of goals and less attention make the practices attain their objectives.

4.3 Recommendations

Based on the findings of the study, the following recommendations could be made:

- The process to perform road traffic safety awareness programs needs intensive and persistence internal capacity in order to have distinct narratives and piloting system AATMA requires qualified human power and higher amount financial resource to have qualified message and being addressed.
- The agency should have to performing both on time and progressive impact assess on road traffic safety awareness creation programs which is a base to further activities
- Adequate budget allocation is needed to restart its mass media and the publication to reach large audience.
- Participatory media such as community radio will serve participatory approach of communication. So AATMA should consider using this type of media.
- AATMA should work with the media to ensure that the public are aware of traffic accidents. The media should carry out its social responsibility functions to the entire society by upholding the responsibility and accountability of the government to the people. These media roles include educating informing about traffic accidents.
- Feedback mechanism should be implemented to make sure about traffic accident issues
- For capacity building, AATMA should work closely with non-governmental and international organization and should evaluate its communication and training programs and have its own communication tools.

References

- Addis Ababa City Government, [AACG] (2010). *Urban Development Indicators; Research Report by Finance and Economic Development Bureau*; Addis Ababa, Ethiopia.
- Addis Ababa road traffic management agency. (2017). **Addis Ababa road safety strategy (2017 - 2030)**.**Addis Ababa city administration**; Addis Ababa, Ethiopia.
- Addis Ababa Road Traffic Management Agency. (2018). *Addis Ababa road traffic management agency 2018 Annual report* , Addis Ababa, Ethiopia
- Addis Ababa Road Transport Bureau (2018). Road traffic crashes in Addis Ababa. Addis Ababa.
- Addis Ababa Traffic Police Reports (2013-2020).Road Traffic Accident annual report and Fact Sheet.
- Adedeji, Abejide and Hassan, 2016).Effectiveness of communication tools in road transportation: nigerian perspective” Proceedings of International Conference on Traffic and Transport Engineering (ICTTE); Belgrade, Serbia,
- African Road safety council (2015).Assessment of Progresses and Challenges in Road Safety Management System.
- Amina,A.M, Neama,Y.M. & Ahlam,M. M,(2018) “Effect of Implementing Traffic Safety Awareness Program OnDriver’s Knowledge Regarding Traffic Safety Practices In Alexandria – Egypt” *Journal of Nursing and Health Science (IOSR-JNHS) p- ISSN: 2320–1940 7(4) PP 39-56*
- Baldock, M R J, and McLean, A J (2005). The economic cost and impact of the road toll on South Australia. Report 009, Centre for Automotive Safety Research, University of Adelaide.
- Bello A , and Sunday O. (2012). First aid knowledge and application among commercial inter-city drivers in Nigeria. *African Journal of Emergency Medicine* (2012) 2, 108–113.doi.org/10.1016/j.afjem.2012.06.003.
- Bolderdijk and Steg,(2013). *Values determine the (in) effectiveness of informational interventions in promoting pro-environmental behavior. Plos One*, 12(8), 1-7. [doi:10.1371/journal.pone.0083911](https://doi.org/10.1371/journal.pone.0083911)
- Boulder, 2013. *Critical Components for Public Awareness Campaigns. Advocacy Unleashed*. Retrieved from <https://advocacyunleashed.kontribune.com/articles/1371>

- Boyd, L. (2014, June). Digital engagement: The key to reaching youth more effectively. Workshop at the 2014 CYFAR Professional Development Event. Washington DC.
- Christie R. (2017). Road Safety Education and Training from a Public Health Perspective. SBN 1-876346-46-9, RS2002 Conference.
- Dan Archer, Margaret Boittin, Cecilia Hyunjung Mo, and Sarah Rich-Zendel (2018), *Designing an Effective Human Trafficking Awareness Campaign: Lessons from Nepal*, Vanderbilt University.
- Delhomme, P., De Dobbeleer, W., Forward, S., & Simoes, A. (2009). Manual for designing, implementing and evaluating road safety communication campaigns. Brussels: Belgian Road Safety Institute.
- Derek.F., Benjamin.T. & Moses.M., (2012), Road Communication Technologies and Safety Regulation Enforcement on Roads in Uganda. International Journal of Advances in Management and Economics: ISSN 2278-336
- Donovan, R., Henley, N., Jalleh, G., & Slater, C. (1995). Road safety advertising: An empirical study and literature review. Canberra: Federal Office of Road Safety.
- Elliot, B. (2008) *Strategic Review of Best Practice; Key Issues in the Delivery of TSE in Victoria*, www.education.vic.gov.au/studentlearning/programs/traffic Department of Education, State of Victoria (DEECD).
- Federal Transport Authority (2018), Road Safety Performance Review Ethiopia .
- Folarin, B. (1998). Theories of mass communication. Ibadan, Nigeria: Sceptre Publishing.
- Forward, (2013). Improving the effectiveness of road safety campaigns: Current and new practices.
- Franklin N. M., Talabi K., and Danso-Abbeam G., (2017). Awareness of Health Implications of Agrochemical Use: Effects on Maize Production in Ejura-Sekyedumase Municipality,
- Gayle, D. P. & Linda, I. (2002) *Road Safety Education and Training; An Alternative Perspective*
- Getachew Tilahun Wakenie .(2009) *Communication Strategies to Influence Audience Behavior; The Case of Road Traffic Safety Radio Programs in Addis Ababa*
- Ghana, Hindawi Advances in Agriculture Volume 2017, Article ID 7960964, 11 pages
- Glasman, L. R., & Albarracin, D. (2006). Forming attitudes that predict future behaviour: A metaanalysis of the attitude-behaviour relation. Psychological Bulletin, 132(5), 778-822.

- Hagere, Y. (2014). *Challenges and Prospects of Traffic Management Practices of Addis Ababa City Administration, MA Thesis*
- Haines R., and Riemer K. (2011). The User-Centered Nature Of Awareness Creation In Computer-Mediated Communication; Thirty Second International Conference on Information Systems, Shanghai.
- Heale and Twycross. (2015). Validity and reliability in quantitative studies. *BMJ Journals*, 66-67.
- Kapila, K.K., Prabhakar A., Bhattacharjee S. (2013). Safe Road Infrastructure Design For Highways; Transport and Communications Bulletin for Asia and the Pacific No. 83, 2013.
- Kothari C.R. (2004). Research Methodology: methods and Techniques. New Age International (P) Ltd, Dehil, India.
- Krishna, 2010. Agroecosystems of South India: nutrient dynamics, ecology and productivity. Universal-Publishers
- Lee NR, & Kotler P. (2011). Social Marketing. Influencing behaviours for good, fourth Edition. Sage Publications; 2011; 358.
- Lindlof, R. and Tylor, C. (2013). Qualitative communication: sega management study guide. (2013) guidelines for effective communication. Retrieved from [http // www.management study guide.com](http://www.managementstudyguide.com)
- Lukyamuzyi and Friday, (2014). The Effect of Road Communication Technologies on Driver Compliance in Uganda
- Mathew and Krishna, (2007). Introduction to Transportation Engineering
- Mohamed A. A., Mohammed N. Y. & Mohamed A. M. (2018). Effect of Implementing Traffic Safety Awareness Program On Driver's Knowledge Regarding Traffic Safety Practices In Alexandria – Egypt; IOSR Journal of Nursing and Health Science (IOSR-JNHS) e- ISSN: 2320–1959, p- ISSN: 2320–1940 Volume 7, Issue 4 Ver. XI (Jul.-Aug. 2018), PP 39-56.
- Morley A. Morris An., Semaan M. Ab., Hancox G. (2017). A Guide for Policy Makers: On Reducing Road Fatalities; PWC, Loughborough University.
- National Road Safety Council office of Ethiopia (2013). National road safety action plan for 10 years (2011-2020). Addis Ababa.

- OECD/DAC .(2018) *Definitions, Sources and Methods*; The United Nations Economic Commission for Europe (UNECE), Statistics of Road Traffic Accidents in Europe and North America (several issues),
- Ogunmola,(2013). Signs and Symbols as a Communication strategy: A semiotic study of highway codes in Nigeria
- Okaka W. and Rwothumio J.(2018). Developing Public Awareness Communication Strategy for Road Safety Good Practice Norm Conference Paper · November 2018.
- Peden, M., Scurfield, R., Sleet, D., et al. (2004) World Report on Road Traffic Injury Prevention. World Health Organization, Geneva.
- Petty and Cacioppo (1986), communication and persuasion: enteral and peripheral routes to attitude change. New york: spring- verlag , in press.
- Phillips, R., &Torquato, R. (2009). A review of 45 anti-speeding campaigns. Oslo, Norway: Institute of Transport Economics.
- Riemer, K., Klein, S., and Flößler, F. (2007). "Towards a practice understanding of the creation of awareness in distributed work," Proceedings of the Twenty-Eighth International Conference on Information Systems.
- Rimal, R. N. (2000).Closing the knowledge-behavior gap in health promotion: The mediating roles of selfefficacy. *Health Communication*, 12(3), 219-237.
- Robertson R. D. &Pashley C. R. (2015). Road Safety Campaigns, Traffic Injury Research Foundation.
- Rothengatter, J.A. (1986). *Evaluation of road safety education programmes*.pp.86-07. University of Groningen, Traffic Research Centre, Haren.
- Sakaria M. I & Petrina,O.A (2014) “Assessment of the Effectiveness of Road Safety Programmes in Namibia: Learners’ Perspective” *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)* University of Namibia Faculty of Education © Scholarlink Research Institute Journals, (ISSN: 2141-7024) 5(6):532-537
- Singh Y.K., (2006). Fundamentals of research Methodology and statistics, New Age International (P) Ltd, new Delhi, India.
- Singhal, A. & Everett. M. R. 2003. “*The Status of Entertainment Education Worldwide.*” In *Entertainment-Education and Social Change: History Research and Practice*, 1st Ed, edited by New York: Routledg

- Singhal, A. and Rogers, E.M. (2003) *Combating AIDS: Communication Strategies in Action*. Sage Publications, Thousand Oaks.
- Small and Runji, (2014). Road traffic accidents resulting in deaths and injuries have an enormous impact on public health and the economy in Africa.
- SOHAIL, M., MAUNDER, D.A.C. and CAVILL, S., (2006) Effective regulation for sustainable public transport in developing countries. *Transport Policy*, 13(3), pp. 177-190 [doi:10.1016/j.tranpol.2005.11.004]
- Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). *Use of mass media campaigns to change health behaviour*. *The Lancet*, 376(9748), 1261-1271. doi:10.1016/s0140-6736(10)60809-
- Wanqiu, L.D.(2014) report on traffic safety education and information campaign activities in china, University of Technology, China
- WHO (2018). *Global status report on road safety 2018*. Geneva.
- World Health Organization (2016).*Road safety mass media campaigns: a toolkit*, Bloomberg Philanthropies.
- Wundersitz LN., Hutchinson TP., & Woolley JE (2010). *Best practice in road safety mass media campaigns: A literature review*; Centre for Automotive Safety Research; University of Adelaide South Australia.
- Yin, R. K. (2011). *Qualitative Research from Start to Finish*. New York, USA: The Guilford Press.

Addis Ababa
University
(Since 1950)



Appendix I: questionnaire for Officials

My name is **Alemayehu Muniye**, a graduate student of Addis Ababa University. I am collecting data on the practice of using communication tools to create awareness about traffic accidents, for the fulfillment of the requirements for my MA degree in Public Relation and Strategic Communication. I would very much appreciate your participation in this survey and your genuine information is very important for the success of the research. Whatever information you provide will be kept strictly confidential. I assure you that your participation will never cause you any risks.

Instruction: fill the space provided this sign (X) from the given alternative.

Note

- Do not write your names on the questionnaire.
- Your responses are very important for the researcher to accomplish the research study. Therefore fill the questioner on yourself.
- This questionnaire has two parts:-
 - Part I: Demographic information
 - Part II: The perception of awareness creation and capacity building officer towards road traffic safety awareness creation program.

I. Demographic information (circle your choice)

- 1. Age: 1) 18 up to 29 2) 30 up to 40 3) 41 up to 50 4) above 50
- 2. Sex: 1) Male 2) Female
- 3. Educational background: 1) 9- 12 2) Certificate 3) diploma
4) Degree 5) Masters
- 4. Relevant work experience: 1) less than 3 years 2) 3- 6 years 3) 6 -9 years 4) above 9 years

II. The perception of awareness creation and capacity building officer towards the practice of using communication tools to create awareness about traffic accident program

5. Which of the following communication tools do you prefer to use to disseminate information for a program promoting road safety awareness? Rank items from most favored (1) to least (5):

- A) Brochure -----
- B) Newspaper-----
- C) Radio and television spot-----
- D) Billboard -----
- E) Banner-----
- F) Life let -----
- G) other, specify: -----

6. Which of the following are the main contents of the road traffic safety Messages you provide for users? (you can choose more than one option)

- A) News about road traffic casualties and resource damages
- B) Pieces of advice for pedestrians and drivers on using roads carefully
- C) Information about which way is safe and which is full of traffic
- D) Discussions on road traffic safety problems, their causes and solutions

E) Other,

7. The messages prepared to create awareness are easy to understand:

- A) strongly Agree B) Agree C) Uncertain/undecided D) Disagree
E) strongly disagreed

8. How do you evaluate the degree of coverage of actual road traffic awareness by the communication tools you engaged with?

- A) Exaggerated B) truly covered C) Uncertain D) mildly covered
E) Undermined

9. From your preferred Communication tools, how often do you transmit road traffic safety messages to users?

- A) Always B) Sometimes C) Rarely D) Never

10. How often you have been involved in road traffic awareness creation discussions in public forums like at school, religious gatherings, and social gathering?

- A) Always B) Very often C) Sometimes D) Rarely E) Never

11. The communication tools to create awareness about the traffic accident and the interactive nature of the program are interesting to the audience.

- A) strongly Agree B) Agree C) uncertain D) Disagree E) strongly disagreed

12. The communication tools of the messages are appropriate to reach a good deal of audiences.

- A) strongly Agree B) Agree C) uncertain D) Disagree E) strongly disagreed

13. How do you rate the usage of communication tools to create awareness about traffic accidents? A) Very good B) Good C) medium D) poor E) very poor

14. How important are communication tools to create awareness about traffic accident issues? A) Very important B) important C) rarely important D) not important

15. What's your suggestion to improve road traffic safety awareness creation programs at communication tools? _____

16. What's your suggestion to improve overall road traffic safety programs?

Part III. The effect of implementing traffic safety awareness program on road user's knowledge regarding the traffic accident

17. Do you think the awareness program changes the attitude of road users?

A) Yes B) No

a. If your answer for question number 18 is "no" why? -----

b. If your answer to question number 18 is yes what are the changes? -----

18. In general, how do you evaluate the implementation level of traffic safety awareness program on road user's knowledge regarding traffic accident?

A) Very good B) Good C) moderate D) poor E) very poor

19. Who are the main victims of traffic regulation violation?

A) Pedestrians B) Passengers C) Drivers
D) Vehicles E) Any other-----

20. What are the effects of the weak awareness program on road user's traffic accident?

A) Light injury B) Death C) Property damage D) traffic congestion E) all

21. How to enhance traffic safety awareness program on road user's knowledge regarding traffic accident in Addis Ababa? -----

Part IV. The challenges in the use of communication tools on road users

22. How do you see the challenges faced during the use of communication tools rate each problem effects? (Put X in the level of effect)

No	Challenges	Level of effect				
		Very high	high	medium	low	Very low
1	Lack of feedback					
2	Language Barriers					
3	Budget Constraints					
4	Lack of motivation					
5	Using the Wrong Tool					
6	Lack of adequate material					

Any others-----

23. How to reduce the challenges faced in using communication tools? -----

Annex I: Pedestrian questionnaires

A. Demographic information

1. **Sex:** 1) Male 2) Female
2. **Age:** 1) less than 18 2) 18 up to 29 3) 30 up to 40 4) 41 up to 50 5) above 51
3. **Educational background:** 1) No formal education but read and write 2) 1-8 3) 9- 12 4) Certificate 5) diploma 6) degree 7) above degree
4. **Which of the following do you own?** 1) Radio 2) Television 3) Telephone 4) Internet service 5) All of them 6) Any of them combined mention
5. **Income level (monthly)** 1) <1,000 2) 1,001 – 5,000 3) 5,001 – 10,000 4) >10,000
6. **What is your Occupation?** 1) Government 2) non-government 3) private 4) unemployed
7. **How long have you lived in Addis Ababa?** 1) Less than 3 years 2) 3 – 5 years 3) 6 – 10 years 4) more than 10 years

B. The perception of road users towards road traffic safety awareness creation program

1. From the following media, which ones do you prefer as a source of information for road safety awareness program? Rank from the most preferred (1) to the least (5):

No.	Media	Rank				
		1st	2nd	3rd	4th	5th
1	Television					
2	Newspaper					
3	Radio					
4	Billboard					
5	Internet					

Other people specify: -----

2. Which of the following is the main contents of the road traffic safety Messages you get?
 - F) News about road traffic casualties and resource damages

- G) Pieces of communication tools talk to road safety
- H) Pieces of advice for pedestrians and drivers on using roads carefully
- I) Information about which way is safe and which is full of traffic
- J) Discussions on road traffic safety problems, their causes and solutions
- F) Other, specify-----

3. The messages you get are easy to understand. 1)strongly disagree 2) Disagree
3)undecided 4) agree 5) strongly agree
4. How do you evaluate the degree of coverage of actual road traffic problem by the programs you engaged with? 1) Exaggerated 2) Truly covered 3)Uncertain4) mildly covered 5)Undermined
5. On average, for how long (in hours) do you get road traffic safety messages per a day?
1) Less than an hour 2) 1 -2 hours 3) 3 – 4 hour’s 4) More than 4 hours
6. How often do you discuss road traffic safety issues with family members or friends?
1) Always 2) very often 3) Sometimes 4) rarely 5) Never
7. How often have you involved in road traffic safety issues’ discussions in public forums like at schools, religious gatherings, social gatherings, etc...?
1) Always 2) very often 3) Sometimes 4) rarely 5) Never
8. The live and interactive nature of the program is interesting. 1)strongly disagree 2) Disagree 3)undecided 4) agree 5) strongly agree
9. The airtime of the messages is appropriate to reach a good deal of audiences 1)strongly disagree 2) Disagree 3)undecided 4) agree 5) strongly agree

III. The effectiveness of the communication message strategy

10. How do you evaluate the effectiveness of the message strategy you get as pedestrian

No	Effective message strategy	Very high	High	Medium	Low	Very low
1	Attractive					
2	Consistent					
3	Relevance					
4	Clear					
5	Trustworthy					
6	Credible					
7	Persuasive					

Any other -----

11. How do you rate the effectiveness of the communication message provided by Addis Ababa traffic management agency? 1) very effective 2) effective 3) moderate 4) not effective 5) not very effective

Guiding Questions for the In-depth Interview with Road Traffic Safety awareness Programs directorate

Current responsibility: _____ **For how long:** _____

1. What are the media or means your office is using to create awareness on road traffic safety?
Which of the methods your office intensively working on it? Why?
2. What are the methods you have been applying in the process, procedure and practices of RTS awareness programs?
3. What specific communication strategies do you employ in the production of RTS messages?
Do you undertake surveys? Audience/ cultural analysis? Pre-testing of your programs? Etc.
4. What are those road traffic safety awareness creation programs outputs or outcomes your office recorded or seen respectively?
5. How do you explain your office capability of implementing RTS awareness programs?
Financial/human/resource
6. What external challenges you have been facing to perform RTS awareness creation programs? Integration with Stakeholders?
7. What methods you have been applying in monitoring and evaluating RTS awareness programs?
8. What's your office belief on the perception of road users on RTS awareness creation programs?

High medium low

What do you think is the reason behind _____

II. Guiding questions for the in-depth interview with RTS awareness for traffic police officers

Current responsibility: _____ **For how long:** _____

1. What were your office rolls on RTS awareness programs?

2. How do you evaluate road user's road traffic regulation?

High medium low

What do you think is the reason behind _____

3. Is there any behavioral change your office recognized on road users?

If yes, what are those changes? Do you think it's because of the RTS awareness creation program?

4. Do you think the most necessary road traffic safety awareness creation is given for road users about traffic accidents is adequate in Addis Ababa?

Yes No

If No, what do you think is the reasons _____

5. Do you agree with the available road traffic safety awareness creation program can reduce traffic accidents, traffic penalty or improper road usage?

Agree Disagree

If you agree, what affects you recognize because of having the program

If you disagree, what do you think is missed to reduce traffic accident?

6. What is your recommendations and opinions on road traffic safety awareness creation programs made by AATMA?

አባሪ 1:- የእግረኛ መጠይቆች

ሀ. አጠቃላይ የግለሰብ መረጃ

1. ጾታ : ሀ) ወንድ ለ) ሴት
2. ዕድሜ: ሀ) ከ18 በታች ለ) 18 እስከ 29 ሐ) 30 እስከ 40 መ) 41 እስከ 50 ሠ) ከ51 በላይ
3. የትምህርት ደረጃ: ሀ) ማንበብና መጻፍ እንጂ መደበኛ ትምህርት የለም ለ) 1-8 3) 9- 12 ሐ) ስርተፍኬት መ) ዲፕሎማ ሠ) ዲግሪ ረ) ከዲግሪ በላይ
4. ከሚከተሉት ውስጥ የቱ ነው የያዙት? ሀ) ሬዲዮ ለ) ቴሌቪዥን ሐ) ስልክ መ) የኢንተርኔት አገልግሎት ሠ) ሁሉም ረ) አንዳቸውም ሲጠመሩ
5. የገቢ ደረጃ (ወርሃዊ) ሀ) <1,000 ለ) 1,001 - 5,000 ሐ) 5,001 - 10,000 መ) >10,000
6. ሥራህ ምንድን ነው? ሀ) መንግሥት ለ) መንግሥታዊ ያልሆነ ሐ) የግል መ) ሥራ አጥ
7. አዲስ አበባ ውስጥ ስንት ጊዜ ኖረዋል? ሀ ከ 3 ዓመት በታች ለ) 3 - 5 ዓመት ሐ) 6 - 10 ዓመት መ) ከ 10 ዓመት በላይ

ለ. የመንገድ ተጠቃሚዎች ስለ የመንገድ ትራፊክ ደህንነት ግንዛቤ ፈጠራ ፕሮግራም

1. ከሚከተሉት ሚዲያዎች ለመንገድ ደህንነት ግንዛቤ ማስጨበጫ ፕሮግራም የመረጃ ምንጭ አድርገው የሚመርጡት የትኞቹን ነው? በጣም ከተመረጠው (1) እስከ ትንሹ (5) ደረጃ:

ቁጥር	ሚዲያ	ደረጃ				
		1ኛ	2ኛ	3ኛ	4ኛ	15ኛ
1	ቴሌቪዥን					
2	ጋዜጣ					
3	ሬዲዮ					
4	ቢልቦርድ					
5	ኢንተርኔት					

ሌሎች ካሉ ይገልጻሉ:-----

2. ከሚከተሉት ውስጥ የሚያገኙቸው የመንገድ ትራፊክ ደህንነት መልእክቶች ዋና ይዘት የትኛው ነው?
 - ሀ) ስለ የመንገድ ትራፊክ ጉዳት እና የንብረት ውድመት ዜና
 - ለ) የመገናኛ መሳሪያዎች ክፍሎች ከመንገድ ደህንነት ጋር ይነጋገራሉ
 - ሐ) መንገዶችን በጥንቃቄ ስለመጠቀም ለእግረኞች እና ለአሽከርካሪዎች ምክሮች
 - መ) የትኛው መንገድ ደህንነቱ የተጠበቀ እና የትኛው በትራፊክ የተሞላ እንደሆነ መረጃ
 - ሠ) በመንገድ ትራፊክ ደህንነት ችግሮች፣ መንስኤዎቻቸው እና መፍትሄዎች ላይ ውይይት

ረ) ሌላ፣ ካለ ይግለጹ -----

3. የሚያገኙቸው መልዕክቶች ለመረዳት ቀላል ናቸው. ሀ) በጣም አልሰማም ለ) አልሰማምም ሐ) አልወሰነም መ) እስማማለሁ ሠ) በጣም እስማማለሁ
 4. በተሰማራችኋቸው ፕሮግራሞች የትክክለኛውን የመንገድ ትራፊክ ችግር ሽፋን ምን ያህል ይገመግማሉ? ሀ) የተጋነነ ለ) በእውነት የተሸፈነ ሐ) እርግጠኛ ያልሆነ መ) በመለስተኛ የተሸፈነ ሠ) የተዳከመ
 5. በአማካይ፣ በቀን ለምን ያህል ጊዜ (በሰዓታት) የመንገድ ትራፊክ ደህንነት መልዕክቶችን ያገኛሉ? ሀ) ከአንድ ሰአት በታች ለ) 1-2 ሰአት ሐ) 3 - 4 ሰአት መ) ከ 4 ሰአት በላይ
 6. የመንገድ ትራፊክ ደህንነት ጉዳዮችን ከቤተሰብ አባላት ወይም ጓደኞች ጋር ምን ያህል ጊዜ ይነጋገራሉ? ሀ) ሁል ጊዜ ለ) ብዙ ጊዜ ሐ) አንዳንድ ጊዜ መ) አልፎ አልፎ ሠ) በጭራሽ
 7. በመንገድ ትራፊክ ደህንነት ጉዳዮች ላይ እንደ ትምህርት ቤቶች፣ ሃይማኖታዊ ስብሰባዎች፣ ማህበራዊ ስብሰባዎች፣ ወዘተ... ባሉ የህዝብ መድረኮች ላይ በመንገድ ትራፊክ ደህንነት ጉዳዮች ላይ ምን ያህል ጊዜ ተሳትፈዋል? ሀ) ሁል ጊዜ ለ) ብዙ ጊዜ ሐ) አንዳንድ ጊዜ መ) አልፎ አልፎ ሠ) በጭራሽ
 8. የፕሮግራሙ የቀጥታ እና መስተጋብራዊ ተፈጥሮ አስደሳች ነው። ሀ) በጣም አልሰማም ለ) አልሰማምም ሐ) አልወሰነም መ) እስማማለሁ ሠ) በጣም እስማማለሁ
 9. ብዙ ተመልካቾችን ለመድረስ የመልእክቶቹ የአየር ሰአት ተገቢ ነው ሀ) በፅኑ አለመስማማት ለ) አልሰማምም ሐ) ያልተወሰነ መ) እስማማለሁ ሠ) በጽኑ እስማማለሁ
- ሐ. የግንኙነት መልእክት ስትራቴጂ ውጤታማነት**
10. እንደ እግረኛ የሚያገኙትን የመልእክት ስልት ውጤታማነት እንዴት ይገመግማሉ

ተ.ቁ	የመልእክት ስልት ውጤታማነት	በጣም ከፍተኛ	ከፍተኛ	መካከለኛ	ዝቅተኛ	በጣም ዝቅተኛ
1	ማራኪ					
2	ወጥነት ያለው					
3	ተዛማጅነት					
4	ግልጽ					
5	እምነት የሚጣልበት					
6	የሚታመን					
7	አሳማኝ					

ሌላ ካለ -----

11. በአዲስ አበባ ትራፊክ ማጠቃለያ ኬጀንሲ የሚሰጠውን የመገናኛ መልእክት ውጤታማነት እንዴት ይገመገማሉ?
ሀ) በጣም ውጤታማ ለ) ውጤታማ ሐ) መካከለኛ መ) ውጤታማ ያልሆነ ሠ) በጣም ውጤታማ አይደለም