ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

SCHOOL OF JOURNALISM AND COMMUNICATION

THE ROLE COMMUNICATION STRATEGIES IN REDUCING ROAD TRAFFIC ACCIDENTS: THE CASE OF ADDIS ABABA POLICE COMMISSION

BY

SAMUEL ASSEFA YAYEHYERAD

ADDIS ABABA, ETHIOPIA

September, 2022

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
SCHOOL OF JOURNALISM AND COMMUNICATION

THE ROLE OF COMMUNICATION STRATEGIES IN REDUCING ROAD TRAFFIC ACCIDENTS: THE CASE OF ADDIS ABABA POLICE COMMISSION

BY
SAMUEL ASSEFA YAYEHYERAD

ADVISOR

AGAREDECH JEMANEH (PhD.)

A THESIS SUBMITTED TO THE SCHOOL OF JOURNALISM AND COMMUNICATION Addis Ababa UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF ARTS IN JOURNALISM AND COMMUNICATION

ADDIS ABABA, ETHIOPIA
September 2022

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

SCHOOL OF JOURNALISM AND COMMUNICATION

THE ROLE COMMUNICATION STRATEGIES IN REDUCING ROAD TRAFFIC ACCIDENTS: THE CASE OF ADDIS ABABA POLICE COMMISSION

APPROVED BY THE BOARD OF EXAMINERS

Signed by the Examining Committee:

Advisor	Signature	Date
Internal Examiner	Signature	Date
External Examiner	Signature	Date

Chair of the Department of Graduate Coordinator

Declaration

This is to certify that the thesis prepared by Samuel Assefa, entitled ‘‘The role of communication strategies in reducing road traffic accidents: the case of Addis Ababa Police Commission’’ submitted in partial fulfillment for the requirements of the Degree of Master of Arts in Journalism and Communication complies with the regulations of the University and notes the accepted standards with respect to originality and quality.

Name: Samuel Assefa Yayehyerad

Signature _____

Date _____

ACKNOWLEDGMENT

First of all, I would like to thank the almighty God for providing me in abundance with all my needs. Thy name be glorified forever and ever!!!I would like to thank my advisor, Dr. Agaredech Jemaneh for hers motherly and professional advice, paper mentorship, guidance and her constructive feed backs which helped me to shape this paper in this way.

My special gratitude goes to my wife Tigist Genetu and my children Saron Samuel and Keab Samuel.

I am pleased to extend my thanks to Addis Ababa city Administrations traffic management office and Addis Ababa city administrations employees who cooperated me in providing the necessary assistances. Finally, I would like to thank all who contributed to the success of my study though I have not been able to mention them by name.

TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURE

ABBREVIATION

AATP	Addis Ababa Traffic Police
AATMA	Addis Ababa Traffic Management Agency
GDP	Gross Domestic Product
HBM	Health Belief Model
PMT	Protective Motivation Theory
RTA	Road Traffic Accident
TI	Traffic Injuries
TMC	Trans theoretical Model of Change
TSP	Traffic Safety Plan
UN	United Nation
WHO	World Health Organization

ABSTRACT

This study was aimed to assessing the role of communication strategies engaging in RTA's in Addis Ababa Police Commission in Addis Ababa. Addis Ababa police Commission works is no dynamic outcome to reduce RTA because of inadequate public awareness on traffic safety and traffic facilities. Then, the study raises basic questions to answer the study objective such as: which types of communication strategies effective to engaging in RTA in Addis Ababa? How Addis Ababa police Commission communication strategies to tracking RTA's in Addis Ababa cities? And Which types of communication strategies effective to engaging RTA in Addis Ababa? The study employed exploratory method and mixed research approach. Interview and questionnaire used to collect crucial information on road safety communication strategies method. The study selected 5 Addis Ababa sub cities from 11 sub cities by using simple random sampling and selected 6 key informant interviewers by using purposive sampling method. 244 respondents (113 drivers and 131 Pedestrians) were selected by using convenience sampling approach. Public and school campaigns, mass media campaigns, law enforcement and legislation, education and training programs were the main communication strategies of AAPC to engaging road safety. AAPC has been using multi communication channel approach but TV and radio are the most prominent channels. Combined road safety campaign was successful and bring change driver behavioral that respect speed limits, wear a seat belt, and drinking driving and speeding rather than mass media campaign. The study has identified the limitation of communication strategies to engaging RTA's such as lack of effective stakeholders' coordination, lack of monitoring and evaluation of road safety communication activities, and lack of check the campaign message delivered to the target audience. In addition, the communication channel and messages did not consider targeted road user behavior. Based on the study findings, the study draws the following recommendations AAPC should be adapted communication strategies and messages for target audience that easily-understood; established enforcement and legislation for pedestrians to respect road safety rule and regulation; preparing evaluation plan each activities of road safety campaign and its outcome.

Key terms: Road Safety, Road Traffic Accident, Campaign

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Road traffic accident (RTA) is a major public health (physical and mental) and development challenge in most of the countries. The effects were related to road traffic accidents that are considered to be a major critical problem all over the world (UN, 2020).

RTA is one of the problems associated with road transportation. RTA is accident involving one or more vehicles to vehicle and/or to objects resulting in damage to vehicle or loss of physical property, and vehicles to pedestrian resulting in deaths or personal injury or damage (OECD/ITF, 2014). RTA's are increasing through worldwide and becoming a major public health challenge that lead to create social and economic problems for countries and societies (Scurfield et al., 2004). WHO report indicated that number of deaths due RTA increase year after year and 9th leading cause of death across all age groups globally (WHO 2015).

According to world report in 2016, the World Health Organization (WHO) (2018) reported that the numbers of road traffic deaths continue to climb, and reaching 1.35 million. That is nearly 3,700 people dying on every day in the World's roads. In view of past trends, it is likely that deaths and injuries resulting from road traffic crashes remain a serious problem globally and current trends suggest that this will continue to be the case in the foreseeable future (Ibid).

Africa accounts for 20% of global road traffic deaths with nearly 272 000 deaths annually. It accounts for 14% of the total world population and 3% of the total number of registered vehicles (WHO, 2018). Similarly, 54% of world's registered vehicles in low and middle income countries, every year about 90% of road traffic deaths occur and 5% loss of GDP (UN habitat, 2018). In most developing country like Ethiopia has been high traffic accident estimated cost the between 0.8% - 0.9% of the GDP for the past consecutive years (Ethiopian Federal Police Commission, 2017).

From the foregoing, a number of countries have come up with measures to tackle RTA's especially in reducing the seriousness of injuries for victims and saving lives. Dominant among these measures is an emergency response that is facilitated by communication. Thus it can be said that communication is fundamental to human beings as it undergirds communities and organizations which consist of different individuals.

The first casualty of war, accident, nature disaster is the major incident is communication (London Borough in Nemeth and Somos, 2005). Delaney, Lough, Whelan, and Cameron (2008) noted that communication is vital in any society and that even under normal non-emergency circumstances; effective communication undergirds almost all of public health practice. Consequently, Badr (2009) stated that communication is significant to public health and it plays a pivotal role in promoting core public health objective. Therefore, communication plays an important role in attenuating the consequences of road traffic accidents and it were the modes of communication. Hence the study tries to assess communication strategic role of Addis Ababa Police commission to reduce RTA in the city.

1.2 Statement of the problem

Transportation has crucial role in reducing travel times, increasing production, improving accessibility, and enhancing employment productivity (Yeser, 1990). Additionally, everybody travels from different areas either to work or to do business or to study or to enjoy using various transport options. For a long time, transportation was considered to be the most vital factor in economic, regional, and social development (Ibid). Vehicle is the major widely used transport alternative and the major source of road traffic accidents in the world (WHO, 2015).

Road traffic accident is affected the livelihood of individuals and their family members (Persson, 2008). Road traffic accidents have vast impact on national economy by damaging invaluable property, and killing and disabling the productive age group of the community (Ibid).

WHO (2015) report indicated that road traffic injuries estimated to be the 9^{th} leading cause of death across all age groups in globally, and predicted to become the 7^{th} leading factor to the global injury in 2030. In Ethiopia, road traffic accident has been one of the top ten causes of death. For instance, in 2013, the number of people killed by RTA was equivalent to those who died due to malarial throughout the country (Damen, 2016).

Public health and development have challenges for country that adversely affect the livelihood of community and economy by Road traffic injuries and deaths, then RTA need effective measures to control the problem (Fesseha & Sileshi, 2014).

There are a number of national frameworks and policies aimed to reduce RTAs including drink-driving, seat-belt and child restraint laws, as well as policies to promote walking and cycling, and investment in public transport, among others. While enforcement authorities have seen some success in the area of seat-belt wearing, other areas of enforcement are low (WHO, 2012). Currently, within the context of Ethiopia's national road safety strategy and in alignment with the goals of the UN Decade of Action for Road Safety, there is a target to reduce road fatalities by 50% by 2020. Ethiopian Federal Police report in 2017/2018 report on traffic accident occurred 93% of the cases were associated with human factors, 5% accounted for vehicle factors, and 2% were associated with road related problems. In addition, 78% of Ethiopia road accident is due to driver fault (Federal ministry of transport, 2018). Similarly, The study conducted on road traffic accident factors in Addis Ababa by Fanueal (2006) result shows that there are three major factors that result in accident such as road and environment deficiencies (2% of all accidents); road user errors (human factors) (75 - 80% of accidents), and vehicle defects Fanueal (2006) noted that inadequate drivers' training and public awareness on traffic safety, and inadequate traffic facilities such as traffic lights, signs, signs crossing marks. Additionally, he added that road and environment deficiencies are those, which provide misleading visual information, or insufficient or unclear information to the road users (Federal Road Transport Authority Reports, 2018).

Addis Ababa has the largest number of road traffic accidents, fatalities and injuries. Not only the traffic accidents are concentrated in Addis Ababa city but the volume of motorized traffic is very high as compared to the other parts of the country (Dawit, 2016). Addis Ababa police commission department particularly Addis Ababa traffic police and traffic management agency indicates that the city has been recording serious traffic accidents in past consecutive years related to compared to the vehicle density (AATP, 2019). Addis Ababa police commission work with partners towards achieving their prime goal to reduce those traffic accidents by different strategies such as coordinated with their partners; improve policies relating to road safety, strengthening the capabilities of the local law enforcement and design strategic communication

to disseminate road safety information for the road users. While, Fesseha & Sileshi (2014) noted that there was not sufficient work to alarming the cause rate of the accident and reduce traffic accident.

Most scholars such as Endalkachew (2020); Fesseha & Sileshi (2014); Debela (2019); Damen (2014); Tariku (2017); Tulu, Washington, & King, (2014); and United Nation (2020) focus on the effect of RTA and its magnitude in Addis Ababa and Ethiopia. From researcher's knowledge there is limited research conducted exploring the practices and the availability of communication strategy engage in RTA's in Addis Ababa and in Ethiopia. Therefore, the purposes of this study are filling the gap by investigating the practices and the availability of communication strategy for RTA's in Addis Ababa city. Hence, the study attempted to examine the practice of Addis Ababa Police Commission communications strategic to reduce transport accidents in Addis Ababa city.

1.3 Research Questions

The following research questions were further formulated from the research objectives:

i. What types of communication channels are used by Addis Ababa police Commission in the dissemination of road safety information?
ii. Which types of communication strategies effective to engaging RTA in Addis Ababa?
iii. How Addis Ababa police Commission communication strategies to tracking RTA's in Addis Ababa city?

1.4 Objective of the study

1.4.1 General objective of the study

The general objective of the study is to examine the practice and the availability of communication strategy in tackling RTA's in Addis Ababa Police Commission, Ethiopia.

1.4.2 Specific Objectives

The specific objectives are to:

i. Explore Addis Ababa police Commission communication strategy to tackle RTA's in Addis Ababa city;
ii. Identify Addis Ababa police Commission communication channels to disseminate road safety information;
iii. Assess the effectiveness of AAPC communication strategies and practices of communication strategies to engage in RTA's in Addis Ababa city;

1.5. Significance of the study

The major traffic accident occurrences in Addis Ababa, the study will be examined the effective means of strategic communication that needs to be put into effect in order to bring about critical change moving to reduce road traffic accidents in the capital city. Therefore, the study mainly evaluates the AATMA and AATP office roles on communication strategy implementation to reduce the traffic accident in the city.

The finding of this study will be useful for AATMA and AATP and Addis Ababa road transport office, Addis Ababa health office, Addis Ababa education office and media to gain valuable information about the factors affecting communication strategies implementation to reduce RTA in Addis Ababa. Beside of this the study give crucial information to policy makers, AAPC (AATMA and AATP) and Addis Ababa road transport office, Addis Ababa health office, Addis Ababa education office and media to identify the role of communication strategy implementation engage in RTA in Addis Ababa city. Furthermore, they understand the role of communication strategy implementation to engage in RTA, thus make effective decision and design appropriate solution to the communication strategy for road safety in Addis Ababa.

On the other hand, the finding helps to enhance country economic value by ensuring good practice of communication strategy for road safety. Moreover, the study will also be starting point for other researchers as a reference and solutions to similar undergoing programmed throughout the country.

1.6. Scope of the Study

This study focused on the communication strategies and how effective were the communication strategies . The study mainly evaluates roles of the communication strategy that is implemented to enhancing road use, good practice and safety standards to reduce the current RTA in Addis Ababa. Addis Ababa police commission particularly Addis Ababa traffic management agency and Addis Ababa traffic police was purposively selected for the study because it is the organization that is mandated to ensure road safety in the city.

1.7 Limitations of the study

The main limitation of the study was limited empirical research in the effective communication strategies for RTA context to be eligible for the assessment and limited number of local research on the topic as well there is no any empirical role of effective communications strategy to reduce transport accidents. This may limit to generalize the study findings across communication strategies in Addis Ababa city.

1.8 Operational definition of Terms

Communication Channels: refers to the means via which the source conveys a message to the receiver. Communication channels may either be interpersonal or mass media in nature different roles in the distribution process.

Communication Strategy: refers to a well-planned sequence of actions aimed at accomplishing certain objectives via the use of communication methods, approaches, and techniques (Nelson, and Gruendel, 1986). It involves awareness raising, an educational approach for a campaign, and community mobilization.

Road traffic accident (RTA): is defined as a collision or incident involving at least one road vehicle. Thus, RTA can be a collision between vehicles, with pedestrians, animals, or between vehicles (WHO, 2012).

1.9 Organization of the study

The researcher has organized the entire study into five chapters. Each of the chapters' focuses on different features of the study. Chapter one encompasses necessary aspects for the foundation of the study purpose beginning from background of the study, statement of the problem, research question, objective of the study and scope of the study. Chapter two is literature review which discusses theories relevant to the study and provides literature previously done by other authors on effective communication strategies for road traffic accidents.

Chapter three specifies the research methodology and the data analysis method. This chapter delivers the methodology of how the research was be conducted through a questionnaire survey and interviews This chapter discusses the research design, sampling procedures, data collection methods and analyses that would have been used in the study. Chapter four, deals on findings that explain the outcomes of the data analysis from the questionnaire on communication strategies to reduce traffic accident and its cause. Finally, chapter five is conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

This chapter provides on communication strategies to reduce traffic accident. In particular, the review is presented in the following manner. First come concept of road safety and traffic accident. Following these, communication and communication strategies, communication in traffic accident, behavior change theory related to road safety, and effective road safety campaigns strategies presented.

2.1 Concept of traffic accident and road safety

Road Safety

The term "safety" refers to being free from danger or risks, and protection and refuge (Dermawan and Nusraningrum, 2019). When safety is related to road traffic implies that road users being protected against traffic dangers in the street or road. This requires rules that will guide conduct in traffic situations to lead no incidents of no bodily injuries, collisions, deaths and no economic loss (Ibid). Therefore, "Road Safety" regularly implies to prevent the loss of lives and injuries and prevent traffic accidents. Due to this, traffic and transportation legislation and its enforcement are indispensable parts of Road Safety (Ibid).

Traffic Accident

A traffic accident is defined as any vehicle collisions between animals, pedestrians, and vehicles and the accident occurred on the road/street, and any place open to public road. The accident involved one or more road vehicles which were in motion at the time of the accident (Slinn, Guest & Matthews, 2005).

Under Vienna Convention, IRTAD (1992) define, RTA's is injury road crash involves a collision of a moving vehicle on a public road in which a road user injured. Besides, the most common definition of RTAs is given by the Economic Commission for Europe noted that RTAs are at least one vehicle is involved in accidents that occur on public open-street and then one or more persons being killed or injured. Generally, RTA is collisions between vehicles with pedestrians,

vehicles and animals; or between vehicles. There are two basic types of road accident, which are personal injury and damage only that occur in the public highway, including footways and become known by the police within 30 days of its occurrence. Personal injury is subdivided into killed, seriously injured, and slightly injured and Causality is a person killed or injured in accident (http://www.kbs.twi.tudelft.nl/Publications).

2.2 Concept of Communication and Communication Strategies

Communication

According to Mefalopous and Kamlongera (2004) communication refers to the process of transmitting and receiving information, and the related methods, techniques and media to achieve it. In this proposal, communication refers to the use of different types and media in the context of development, and sharing of information and experience to accelerate (Choudhury, 2011) the behavioral and social change towards road safety practices. In addition, communication defined as the interactive exchange of information, feelings, ideas, desires, and needs. Communication most often involves at least two participants, each playing the dual roles of speaker and listener, intra-individual communication occurs when the same person is both sender and receiver of the same message (Griffin, 2006).

Communication defined by Rockville it is interactive process of exchange of information and opinion among institutions, groups, and individuals; often involves multiple messages about the road safety and accident messages for risk management institutions (Rockville, 2002). And also, communication system is used to exchange information that registered in the traffic database such as front-end data characterizing vehicles (e.g. velocity, position, heading), and data describing the road (Sugg, 2016).

Communication Strategies

Communication strategy is defined as a well-planned series of actions aimed at achieving certain objectives through the use of communication methods, techniques and approaches. In the strategy, communication objectives directly address issues such as awareness, knowledge, attitude, practice, behavior and participation (Mefalopous and Kamlongera, 2004). This concept is the focus of this proposal, as it is intending to study the aspects of RTSA's Communication Strategy on road safety.

Communication strategy is conceptualized as a functional strategy, providing focus and direction to the communication function. Strategic communication is deliberate process of presenting ideas in a clear, concise, and persuasive way (Bacal, 2004). In addition, it is the selection of suitable communication objectives (Nwabueze & Mileski, 2018) to enhance the company's strategic positioning and contribute to increased performance (Argenti, 2016).

Strategic communications plan is a key to the success of the traffic safety plan. Strategies need to assist in changing behavior over the long term, be flexible and also support all programs and objectives set out by the overarching Traffic Safety Plan (TSP) (Kotler & Zaltman, 1971). Communication strategies can be motive peoples to change its attitude or behavior to improve road safety using specific media channels within a given time period. Communication strategies on safety campaign are used as a means of influencing the public to behavior (law enforcement, education, and training) more safety in traffic (Delhomm, Dobberleer, Forward, and Simoes, 2009).

The objectives in communicating road safety priorities are all based on educating for road users to increasing their awareness of traffic safety issues and to change driver attitudes and behaviors over the long term, ultimately reducing traffic casualties (Alberta Transportation, 2008). In addition, communication strategies became a successful lobbying action based on clever use of the mass media, which included raising awareness by ruthlessly and immediately exploiting every crash and every death, personalizing the victims and being well informed and innovative in communication (DECADE, 2020).

According to Delhomme et al., (2009) noted the importance of communication on road safety can have at least five main goals: To inform the public about new or modified laws; to improve knowledge and/or awareness and of appropriate preventive behaviors; to change underlying factors known to influence behavior; to modify unsafe behavior or maintain safety-conscious behavior; and to decrease the frequency and severity of accidents.

2.3 Theories of road safety campaigns

Well-researched psychological and social theories of behavioral change can provide a solid foundation to develop an effective road safety campaign. Indeed, research shows that campaigns that are based on well- developed theoretical foundations are more effective than those that are not (Elliot 1993).

The best road safeties campaigns are based on research-driven, psycho-social theories of behavior include behavior change theories, theories of social persuasion, and fear-based campaigns (Robertso & Pashley, 2015). It also provides some general guidance to inform the selection of appropriate theoretical models that can inform strategies to develop and implement campaigns to ensure that they reach their fullest potential.

2.3.1 Behavior change theories

Theory of Planned Behavior

This theory predicts that personal intentions to carry out certain behaviors are based on a combination of attitudes toward the behavior; subjective norms; and, perceived behavioral control (Ajzen, 1985). 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 instance, individuals who believe speeding is a fun activity without endangering others and engage in it, are more likely to make decisions to engage in speeding behaviors compared to individuals with opposite beliefs. In addition, subjective norms among teens, for instance, might be the perception that most teens use their cell phone while driving, and therefore they believe that it is a typical behavior of other teens that are similar to themselves. Subjective norms are often greatly influenced by internal and external motivational factors that can either prevent or encourage individuals to engage in the behavior (Stead & Eadie 2007).

Health Belief Model (HBM)

HBM theory has been widely adopted to explain human behavior. HBM basic principle is motivated people to preserve their health and avoid negative health behaviors. Key factors include susceptible causes for the consequences of action, identify barriers that decrease the possible cause of the action; determined seriousness of the consequences of action, assure to take

the ability of action, and external and internal motivators to affect the likelihood of action (Rosenstock, 1977). Although other motivational factors might contribute to the adoption of the specific health behavior, and HBM help to 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 mostly focuses on possible threats and vulnerability a person feeling from the idea of engaging in a negative behavior. The concept of PMT is protecting peoples from negative consequences based on coping appraisal and behavior fear. In this model, self-efficacy plays an important role in adopt person's decision behavior results in change or resistance to change (Rogers, 1983).

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. But Behavioral modification is a process that does not occur instantaneous. Road safety campaigns have been shown to influence behavior in different ways depending on the individual's beliefs and characteristics. Thus, local governments and community partners must consider the possibility that certain audiences or individuals may be more ready to accept change than others (Robertso & Pashley, 2015).

TMC of Change, developed by James Prochaska in the 1970s, addresses these differences and suggests that people may be in different stages of change. In particular, the five stages of change include: pre-contemplation (awareness or acceptance of the need to change has not occurred; individual may not be aware of the need or benefits of change); contemplation (recognition of a problem); preparation (decision to change has been made); action (taking steps to change behavior); and, maintenance (change has become permanent and efforts are need to avoid relapse and sustain the new behavior) (Robertso & Pashley, 2015).

According to this theory, before permanent behavior change can occur, individuals must pass through each of the prior stages successfully and completely. It should also be noted that the stages in these models are fluid.

2.3.2 Theories of social persuasion

Popular psycho-social theories underlying road safety campaigns focus on addressing the existing and perceived social norms of a population. Two such theories, Social Norms Theory and the Elaboration-Likelihood Model, are highlighted below.

Social Norms Theory

This theory suggests that people tend to act in accordance with group expectations and behaviors based on affiliation needs and social comparison processes, social pressure toward group conformity and the formation of reference group norms. In other words, behavior is influenced by (often inaccurate) perceptions of how other members of their social group think and behave (Yanovitzky, 2004). This theory predicted personal beliefs are strengthened via share the same attitudes and perceptions to others (McAllister & Studlar 1991). This is an important concept to consider when developing road safety campaigns because it suggests that a person's social perceptions may have a more powerful effect on behavior than the risks to health or safety. The study conducted by Linkenbach and Perkins (2005) result revealed that the tendency of young drivers to engage in risky behaviors because they thought from others were doing and demonstrated the phenomenon clearly. Thus, developing a campaign that aims to change the way behaviors are perceived in relation to others may be a very important strategy (Ibid).

Elaboration-Likelihood Model

Petty and Cacioppo (1986) are developed this model and they stated how people form and change attitudes as a dual process model such as a person's motivations and their ability to elaborate on the situation. Individual is changing their attitudes through be motivated and personal or social responsible to reduce the danger by think about the campaign message (Wundersitz, Hutchinson, & Woolley 2010).

2.4 Fear-based campaigns

A fear-based campaign is increasing peoples' fear through negative consequences of risky behaviors such as graphic imagery to scare and shock individuals, and using messages that attempt to appeal to shame/guilt (SWOV, 2009).

Fear-based campaigns depending on individuals 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 also help for individuals how to avoid a negative behavior safely or show coping mechanisms (Wundersitz et al. 2010). Therefore, behavior change 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).

2.5 Communication strategies for road safety

Strategic planning primarily involves the assessment and evaluation of intervention activities in order to improve public awareness and influence behavior before, during and after a public health emergency event. The evidence review indicated there is no singular strategy for ensuring successful communication in such situations. The Guideline Development Group agreed that planning is an overarching best practice that should be presented prior to the specific recommendations on emergency risk communication practice (WHO, 2017).

Effective communication strategic includes creating a strategy and framework for communicating with all stakeholders; developing and selecting basic messages for issues likely; and developing a system for message review and approval (U.S. Department of Health and Human Services, 2016) clearly roles and responsibilities (Spana et al., 2016) and created and maintained partnerships network communication and planning working with media (Turner, Shaikh, & Rimal, 2016).

Canberra Australian Transport Council designs Strategic communication planning for road users to reduce RTA (Delhomme, 2004) as follow:

Source: Delhomme (2004)

Figure 1: Canberra Australian Transport Council Designs Strategic communication planning

An effective road safety information system should collect and analysis processes that cover the following; information on prevailing circumstances e.g infrastructure factors, traffic volume, average traffic speeds, seat belts wearing rates, etc; and law enforcement efforts; fatal crashes and injuries; contain detail of location, vehicle type, road environment and road users involved in road crashes (e.g. pedestrians, driver, passengers, cyclist, as well as possible causes), and reports information in a timely manner that to reduce the road crash, injuries and fatality rates (Delhomme, 2004).

On the other hands, best practice of South African Ministers of Transport conducted by Ali, (2016) indicates that their basic communication strategy is prepare education to emphasize the danger of poor behavior and present the emotive result of deaths and injuries on the roads. In addition, concerned organization should be targeted those who are repeat offenders, and groups who are considered "at risk" e.g. public transport and heavy duty drivers, pedestrians and young men. And also, concentrate on a particular behavior at any one time, not be generalized or generic in nature. The emphasis should be on the primary offences e.g. non-wearing of seat belts, inappropriate and unsafe speed, unsafe overtaking and drunk driving…etc (Ibid).

The strategy should be based on a television campaign, supported by radio, billboards, posters etc. using the same graphics and copy to re-enforce the messages given on the high-visibility television campaign (Sundstrom, 2020). Sundstrom described essential communication strategies such as develop strategic interventions to reach all stakeholders and segments of society, including the youth and children, rural and urban people, with appropriate, accessible language and style. Secondly, make road safety discussion on radio and television, and the potential for discussion from a reality TV show which may be produced. Ensure a spokesperson is properly trained to give clear, educational information, stressing the responsibility of every road user to abide by the rules of the road and drive safely. Lastly, change attitudes and behavior of all road users such as drivers, passengers and pedestrians, including education of youth so that when they become drivers, they become part of a compliant, law-abiding society. Identify and use well known, famous role models as ambassadors to promote the system (Ibid).

2.6 Communication channel for road safety

There is different communication channel to traffic safety particularly, television, radio and outdoor advertising (poster and billboard) such as signs along roadways, would be particularly relevant to local road safety messages since they provide the best opportunity to deliver messages as the targeted behavior occurs are the most common covering road safety and traffic problems (Wundersitz et al. 2010).

Communities' medium channel should choose locations with high traffic flow among the target audience. Choosing communication medium should be determined in social and behavioral characteristics of the target audience, time and location in which the targeted behavior takes place and complexity of the message (Baglo et al. 2013). However, the target population should always be taken into account when considering a means of communication (Wundersitz et al. 2010).

One of the most basic issues in considering campaign characteristics is the choice of appropriate media (Cameron & Harrison 1998). Possible media includes television, radio; press advertising, cinema advertising, and brochures (Cameron & Harrison, 1998) reported that television is the most persuasive medium, due to the realistic representation of human emotion and moving images. Beside of this, Mathew and Krishna Rao (2007) noted that road communication tools

(traffic signs, road marking, traffic signals, and parking controls) used to provide information to regulate, warn, and guide the road users in a traffic system (Ogunmola, 2013).

There are different methods to deliver traffic safety particularly, television, radio and outdoor advertising, such as signs along roadways, would be particularly relevant to local road safety messages since they provide the best opportunity to deliver messages as the targeted behavior occurs (Wundersitz et al. 2010). However, consider what media to use should be made based on the target audience and the characteristics of the media itself such as reach and selectiveness, information capacity, lifespan, ability to gain attention and costs (Delhomme et al., 2009).

Communication tools are usually the combination of linguistic and non-linguistic elements (Ogunmola, 2013) road communication tools are very important in reducing RTA. noted that road safety campaigns programme include the following activities: road safety exhibition; dissemination of information and instructions regarding safety through bunting, posters, banners, notice boards or billboards; distribution of flyers, pamphlets, badges, stickers, key chains or bulletins; road safety videos; safety slogan and pledge on road safety; road safety week/month with specific subject/focus on road safety; orientation programme which includes activities and sharing of information on commuting crash prevention and road safety.

Sticker should prepare with for every bus in the country. The stickers should also be handed out to drivers who drive through the specially chosen areas with the billboards. They are to be handed out and placed on the dash board or wind screen (Ravn, 2008). The billboards can be placed before entering a village on the highway or before a site where you can stop and rest. The regional coordinators will help defining the right places for the billboards and for handing out stickers (Ravn, 2008). Posters should be put up at stations and rest places along the roads where drivers and passengers stop at times and for the coordinators to hang up when having meetings with relevant stakeholders (Ravn, 2008). Posters image messages are very important for a traffic safety body to have a positive image in the eyes of the target group (Ledru, 1997).

2.7 Impacts of Road Traffic Accident

Transport has always been and remained one of the main driving forces in the economic development of any country including Ethiopia. This will particularly be the case in developing countries like Ethiopia – a landlocked country where rapid motorization is likely to occur over

the next decades. There are several literary accounts calculating the tangible impacts of traffic accidents amongst the parties involved in the context of the life style of the people and the economic status of the country being reviewed.

However, behind each statistic there is a story of a father or mother, son or daughter, brother or sister, grandchild, colleague, classmate or friend whose life was transformed in an instant by a road crash that is not valued in terms impact being calculated.

Economic Impact

Road crashes are a significant issue for all countries around the World including Ethiopia especially if valued in terms of its human and economic impact among other indicators. In this regard, Tooth argued that an understanding of the road crash costs is important in guiding policies towards greater road safety and influencing planning and policy across all transport modes (Tooth, 2010).

While assessing human and economic impact of road crashes estimating the loss of life and quality of life provides a challenge to estimating the costs of road crashes. A vehicle can be replaced (at a market determined price) but a life cannot. Road crashes have a number of negative impacts in the wider society as well as those involved in the crashes. While considering these costs it can be broadly divided into human costs, property damage and other general costs related with insurances.

In the Ethiopian context, the annual cost of crashes is estimated to be between 3 and 5 percent of Ethiopia's GDP, which is equivalent to USD 2, 409 million per year (i.e. 3 percent of GDP=USD 80,289 million) (UN, 2019).

According to the National Highway Traffic Safety Administration (NHTSA), in 2010 the total economic cost of motor vehicle crashes in the United States was $242 billion. This represents the present value of lifetime economic costs for 32,999 fatalities, 3.9 million non-fatal injuries, and 24 million damaged vehicles (NHTSA, 2015).

Health and Social Impact

According to the International Road Traffic Accident Data (IRTAD) three indicators are commonly used to measure road safety performance and compare safety levels across countries. These are mortality rate (the number of fatalities per population expressed per 100,000 or per million inhabitants), fatality risk (the number of fatalities per distance travelled by motorized vehicles expressed in terms of road deaths per billion vehicle kilometers) and number of fatalities per number of motorized vehicles (IRTAD, 2019). In the Ethiopian context the highly prevalent used measurement available is mortality expressed in terms of the number of registered motorized vehicles.

Hence, mortality is an essential indicator of the scale of any health problem, including injury. It is important, though, that non-fatal outcomes – or injury morbidity – should be measured and included, so as to reflect fully the burden of disease due to road traffic collisions (Pedan et al, 2018). Road traffic injuries constitute a major public health challenge killing thousands of people prematurely every day, representing the leading cause of death for young people (Beyene et al, 2019).

In general as far as the fatality rates calculated based on traffic police reports in terms of road deaths need be understood in context. Hence, the global total of 1.35 million annual road deaths must be seen in the context of an estimated 20 to 50 million serious injuries sustained in crashes around the world every year (GSRRS, 2018).

Psychological Impact

Psychological distress following a Motor Vehicle Crash (MVC) is prevalent, especially when the person sustains an associated physical injury. Literary accounts reveal that psychological distress can exhibit as elevated anxiety and depressive mood, as well as presenting as mental disorders such as Post Traumatic Stress Disorder (PTSD) or Major Depressive Disorder (MDD) (Rebecca, 2014). If unmanaged, psychological distress can contribute to, or exacerbate negative outcomes such as social disengagement (e.g., loss of employment) and poor health-related quality of life, as well as contribute to higher costs to insurers (Rebecca, 2014).

In a research conducted to understand the psychological impact of injuries sustained involving motor vehicle crash it was revealed that 21–67% of MVC survivors experience depressive mood, up to 47% experience elevated anxiety and driving phobia, and from 20% to 40% suffer post-traumatic stress disorder (Craiag et al, 2016). In this vein, a report by the National Highway Traffic Safety Administration reveals that when quality-of-life valuations are considered, the total value of societal harm from motor vehicle crashes in the United States of America in the year 2010 was $836 billion (NHTSA, 2015).

2.8 Effective Road Safety Campaign strategies

It is important to understand the potential factors that affecting road safety campaigns influential factors that make campaigns successful or not to change attitudes and behaviors of road users. This is necessary in order to be able to realistically conceive the potential effectiveness design of new road safety campaign.

There is a wide range of issues related to effective design of road safety campaign strategic includes the target behavior and audience, message and campaign characteristics, links with enforcement and legislation, and institutional management.

Target audience

Identifying the target audience is the main factor to campaign success. The most known target audience characteristics are knowledge, behaviors, beliefs, social environment and stage of behavior change, that help to developing an effective campaign that might influence attitudes and/or behavior. Identification of the target behavior leads to identification of the characteristics and circumstances most frequently associated with the behavior, and hence, identification of the target group (Cameron & Harrison, 1998).

Determining the appropriateness and estimated effectiveness of a particular method of communication relies on several factors. Such factors can include: consideration of the social and behavioral characteristics of the target audience; complexity of the message; time and location in which the targeted behavior takes place (Baglo et al. 2013). Therefore, the target group also needs to be carefully identified through consideration of the issues involved. A well-defined behavior is more appropriate for a short message (Cameron & Harrison, 1998). The most

effective strategies and content vary for different age, education, and gender groups (Donovan et al., 1995).

The fit between a message and its audience

Once the target behavior has been identified, the campaign and message characteristics can be developed (Cameron & Harrison 1998). Developing an effective and attractive campaign message is crucial to capturing an audience's attention. Messages play an important role in the success of the campaign, and include both content and style. Message content needs to be based in research to establish the specific characteristics of the target behavior and target group (Cameron & Harrison, 1998). Messages need to be credible and realistic and include a consistent slogan in order to link the messages together, and optimize the audience impact. New information can also increase the campaign effect size (Delaney, Lough, Whelan, & Cameron, 2004).

When establishing of effective and attractive campaign message, then identification of the target group's perceptions, attitudes, and self-reported behaviors. The message needs to be modified to the social and psychographic profiles of the target audience (Flynn et al., 1994; Maibach & Cotton, 1995; Palmgreen, Donohew, Lorch, & Harrington, 1995). To assess whether the message fits with the characteristics of the target audience and how the message is received and interpreted, the campaign message should be pre-tested with the target audience. There are a number of different strategies for pre-testing a campaign including interviews, focus groups, questionnaires and thought-listing tasks (Bourlanger et al., 2007).

Levels of exposure

Further important variables relate to media placement, including issues such as duration of campaign, intensity, timing and exposure. The intensity means the media has a power and to be received and absorbed by the target audience (Cameron & Harrison, 1998). The effective frequency is the best number of exposures required to effectively convey the campaign message to the desired audience. Three to ten exposures are seen to be most effective while over ten exposures is believed to be excessive (Donovan et al., 1995).

Communicating strategy with policy-makers and journalists should be creating public relations that planned communications designed to influence specific social groups in order to achieve the

desired aim (Phillips, Ulleberg, & Vaa, 2011). In addition, policy-makers are responsible for taking decisions on legislation, the economy, and policy approaches to be adopted communication strategies for road safety. Road safety communication strategy continues to be widely implemented because of their potential benefits for road safety, especially when developed according to an evidence-based set of principles to reduce road traffic accident (Delhomme et al., 2009; Elliot, 1993; Phillips et al., 2011).

Good communication strategies ensuring to change the public positive image of the initiatives undertaken by the organizations responsible for road safety is a very important aim. At the same time, government institutions must be kept widely informed of on the activities of the lobby group. The communications strategy for this target group should link policy with the social benefits to be gained from a reduction in the number of road accident casualties (Phillips et al., 2011).

The variety of campaigns approaches, which is target vulnerable road users, including mass media and social media helps to improve public knowledge and awareness about road safety issue and encourage all road users to share the road safety information for others (Baglo et al. 2013). The campaigns promotion is responsible to shared and disseminate positive emotional messages through advertisements, television, brochures, and radio.

2.9 Role of the Media in Road Safety and Social Construction

Conventional mediation or simply communication via a medium are widely used to expose high proportions of large populations to messages through routine uses of existing media, such as television, radio, and newspapers. Studies assert that the media are not simply technologies that organizations, parties, or individuals can choose to use - or not use - as they see fit. In this regard, the presence of the media has become a structural condition for social and cultural practices, both within particular cultural spheres and in society as a whole (Livingstone, 2009).

In the context of both decision-making processes and altering road users' behavior, particularly at times of increasing traffic accidents, the media have a crucial role in the treatment and interpretation of information (Gilboa, 2002). Furthermore, the media are among the discursive actors society entails and the most efficient in the dissemination of a specific narrative (Kuusik, 2010). Agenda-setting (Shaw, 1979; McCombs and Shaw, 1993) and framing theories (Gofman,

1974) assist in explaining the power of media to determine the current agenda in every moment, i.e. the power to shape what should be discussed and what should be dismissed, as well as the power to validate a particular vision about an issue or an actor. Media are, hence, not just an information channel, but rather an active "communication network" (Naveh, 2002) where specific understandings and representations of actors, intentions and events are (re)produced, either intentionally or unintentionally, affecting media's coverage, decision-makers' political decisions, and public opinion's preferences.

Reporting Road Safety as a Public Health Issue

Road traffic injuries are a growing public health issue, disproportionately affecting vulnerable groups of road users, including the poor. Several studies reveal that more than half the people killed in traffic crashes are young adults aged between 15 and 44 years – often the breadwinners in a family. Furthermore, road traffic injuries cost low income and middle-income countries between 1% and 2% of their gross national product – more than the total development aid received by these countries (Pedan et al, 2000).

While employing the media to address road safety as a public health issue experts argue that it needs to be done in the hope that three effects might occur: the learning of correct health information, the changing of health attitudes and values and the establishment of new health behavior (Griffths and Kunuston, 2000).

Agenda Setting Role

For a continually evolving and increasing toll of road traffic accidents in Ethiopia, just as for virtually all topics and concerns, citizens deal with a second-hand reality – a reality that is structured by journalists' information about these objects, situations and people (McCombs, 2005). The intellectual father of the agenda setting idea Walter Lippmann – noted that 'the world that we have to deal with politically is out of reach, out of sight, out of mind; it has to be (...) reported and imagined' (Lippmann, 1954). News media, our windows to the vast world beyond direct experience, construct mental pictures of the reality in our heads. Mass media do more than signaling the existence of events and issues, they also focus our attention and manipulate our discernments of what the key topics are.

Awareness Raising Role of the Media

The role of the media becomes very important as it can play an effective role in spreading the right kind of consciousness and awareness among the public regarding the wide range of road safety issues. It can also educate people about the priorities of the nation in combating deaths in its road.

The media also plays an effective role in opening up debates among the larger society as well as the relevant stakeholders and policy makers at large. This helps to shed lights about the root causes and possible solutions to cater the challenge facing the country in the face of growing motorization and increase in road infrastructure across the country.

While signing the United Nations Decade of Action for Road Safety several member countries including Puerto Rico have prepared a five-year action plan for raising road user awareness to improve road safety (Benjamin, 2011). However, Ethiopia has no road safety action plan to strengthen the awareness of the public about safe road usage to date.

Educational Role of the Media

As far as the role of the media to prevent road injury prevention is concerned the majority of public health sector campaigns have encompassed a wide range of measures, but education has always featured as the mainstay of prevention (Peden et al., 2014). It is clear that informing and educating road users can improve knowledge about the rules of the road as users include among others motorists, pedestrians, vehicles of all types, bicyclists and animals. In many countries including Ethiopia, basic skills on how to drive vehicles, motor bicycles and related machines in the road are taught formally before the issuance of a driving license. In this regard, Australian young driver education and training approaches have differed from the mandatory school-based programs found internationally; generally comprising voluntary programs conducted outside of licensing (Teressa, 2014).

Many researchers believe that educating the public in the media regarding road safety issues in support of legislation and law enforcement, publicity and information can create shared social norms for safety. However, when used in isolation, education, information and publicity do not generally deliver tangible and sustained reductions in deaths and serious injuries (Peden, et al.,

2014). Historically, considerable emphasis has been placed on efforts to reduce road user error through traffic safety education – for example, in pedestrian and cycle education for school children, and in advanced and remedial driver training schemes.

2.10 Types of road safety campaigns

The following section discusses the successfulness of specific types of road safety campaigns including those focused on drinking and driving, seat belt use, distracted driving, speeding, and vulnerable road users. A discussion of factors that were shown to influence the effectiveness of each type of campaign is presented subsequently as well as factor of RTA.

Drinking and driving, seat belt use, and speeding are three of the most recognized road safety issues that have traditionally been a focus of campaigns; there are a range of other topics that have also been addressed using communication campaign strategies.

Drinking and driving campaigns

Alcohol is a critical road safety problem as it significantly increases the risk of severe road crashes. Driving under the influence of alcohol alters both driving ability and driving behavior, and the risk of being involved in a fatal crash or incurring serious injuries also increases significantly (Maibach, & Cotton, 1995). The risk of fatal collision could be four or five times higher among drunken drivers (Piyapong, (2012).

Drinking and driving campaigns, especially those combined with enforcement activity, have shown positive results based on existing evaluations. Indeed, mass media campaigns have been shown to be most effective in reducing drinking and driving if their messages are reinforced by other initiatives such as grassroots activities, law enforcement efforts, or other media messages (Wundersitz et al. 2010).

The study of a basic education campaign in Italy to raise awareness of the hazards of driving is effective at reducing injuries (Zampeeti et al. 2013). Similarly, after drinking and driving campaigns, road-side survey evaluation on targeted groups indicated that males ages 21-34, reported significant reductions in the proportion of drivers found to have a positive blood alcohol concentration and reduced overall fatalities by 2.6 deaths per month in Connecticut over an 18-month period (Gopalakrishnan, 2012). Similarly, in Canada, the number of deaths in crashes that

involved a drinking driver decrease from 1,296 deaths in 1995 to 744 in 2010, representing a reducing in the percentage of alcohol-related fatalities from 38.8% to 33.6% in between 1995 to 2010 (Choudhury, 2011). Similarly, the study conducted in Sweden, on road safety campaign effectiveness on road incidents found a statistically significant 14.4% decrease in road safety incidents as a result of drink driving campaigns (Vanlaar,, Robertson, & Marcoux, 2008).

Seat belt campaigns

The study result consistently shows that in the event of a crash, 45% of death and injury can be reduced by wearing front seat belt and wearing front seat belt reduce 50% of moderate to critical injury (Chaudhary, 2014). This is the most effective and easiest preventive measure for injury reduction among car occupants. As suggested by WHO, the proper child is the best solution to reduce child mortality due to road traffic accidents.

The dangers of not wearing a seat belt while driving or riding in a moving vehicle are well-known. Studies found that next to secondary enforcement seat belt laws, campaign on seat belt use had been effective in United States then the evaluation in 2002 revealed that the greatest increases in belt use occurred in United States that (Vasudevan et al. 2009).

Regarding on wearing a seat belt, Transport Canada report in 2007 was shows that 7% of Canadians not wearing seat belts accounted for almost 40% of fatalities in vehicle collisions. (Vasudevan et al., 2009). The study conducted in Jordan, after four months' educational seat belt campaign was increased belt use from 19% to 28% introduced (Tarawneh et al. 2001).

Speeding driving campaigns

Speed has been identified as a key risk factor in road traffic injury severity. Inappropriate speed influences both crash risk and the severity of its consequences. The higher the speed the greater the stopping distance required, and hence the increased risk of road traffic crash (Vanlaar et al. 2008). In Slovenian anti-speeding campaign, 'Speeding is Worth Regretting! Campaign was effective in changing participants' behavioral intentions, personal norms, normative beliefs, and self-reported speeding behaviors (Divjak and Zabukovec 2009). The 2008 campaign used messages that associated speeding with negative emotions such as regret and grief that implied consequential severe injury and/or death. The campaign relied on television, radio and outdoor advertising in combination with keen police enforcement efforts. Following the campaign,

participants assessed their personal responsibility to respect speed limits, and their intentions not to speed as more positive; they also reported speeding less frequently (Ibid).

2.11 Combined road safety campaigns

Supplement campaigns help strengthen the proper behavior. This emphasizes the need for cooperation and coordination between disciplines to accomplish meaningful improvements to road safety (Sundstrom, 2020). A communication campaign is not the only intervention that serves to improve awareness or change beliefs and behavior. Other activities such as legislation, enforcement, education, enhancing personal commitment, incentives, etc., are often further to the communication campaign in order to increase its effectiveness.

Legislation and Enforcement

Most of the legislation enacted in an attempt to reduce road traffic casualties by press and visual media, who have very actively cooperated in informing and educating the public concerning the reasons for the various legislation being introduced and any penalties prescribed. Therefore, incidence of injuries and death were decreased due to road traffic accidents largely the result of active media publicity and community education concerning the reasons for the impending new legislation (Vernon, 1980).

In February 1968, the State of Victoria enacted legislation which made it necessary to fit seat belts to the front seat of a motor car before it could be licensed. There was little effect reduce 30% of front seat occupants of vehicles were using the seat belts provided. In England, over 95% of all private cars and vans licensed are fitted with seat belts in the front seats after the legislation. But in 1977, fewer than 20% of the 2212 car drivers and front-seat passengers killed on English roads were wearing them. In addition, other legislative measures compulsory blood analysis for alcohol of all road traffic casualties treated at public hospitals, breath testing of road traffic offenders and persons involved in road traffic accidents, and the setting up by the police of random breath testing stations and a number of persons injured and killed on the Victorian roads were the lowest of any State in Australia 1977 (Vernon, 1980).

Enforcement can be used to support the campaign message. High law enforcement can raise audience awareness about the campaign theme. Enforcement upholds society's expectations and imposes sanctions and standards when laws are broken. The threat of these sanctions is what

persuades most road users to comply with the rules. Enforcement discourages people from repeating similar behavior that has already earned them a sanction, and this helps in creating a useful prevention breaking rules and encouraging people to develop habits of compliance (Odero & Anthony, 1995).

Educational campaigns

Education can have a big impact by raising awareness of road safety matters (Alonso, Pastor, Montoro & Esteban, (2015) and education will help reduce traffic hazards, especially for people who break the law. Education programs focus on traffic safety issue such as: speeding, using mobile, drink driving phones and other types of distractions. Governments should provide traffic safety education programs in all schools particularly road safety for children and teenagers can be achieved through these programs. In addition, drivers need to understand what acceptable driving behavior is (Bekiaris, Wiethoff, & Gaitanidou, 2021).).

In Florida, better driver campaign (2004 to 2008) focused on increasing awareness about the hazards of aggressive driving through public education and providing tips to deal with those types of situations. The campaign slogan "Aggressive Driving Gets You Nowhere Fast" was featured on billboard advertising and used in public outreach activities. Therefore, the campaign was brought effective and increasing awareness of aggressive driving among drivers (Lee et al. 2010). In addition, Ivers, Sakashita, Senserrick, Elkington, Lo, and Boufous (2016) found educational campaign increase in young drivers' confidence following a coaching program. In a study conducted in 2011, Johnson and Adebayo found that road safety education was significantly associated with a better awareness on road safety signs.

2.12 Overview the experience of Road traffic accident in the world

Traffic Injury is of significant importance to deal with. Globally, WHO reported in 2013 Traffic Injuries (TI) are a major public health problem worldwide, accounting for almost 1.24 million deaths per year and it is a number one cause for the death among those aged 15-29 years. Men are affected more than females, although low- and middle-income countries only have half of the world's vehicles, they have 80% of Traffic Injury related deaths, unlike the high-income countries which have Traffic Injury related death rates of 8.7 per 100,000 populations with low- and middle-income countries have higher rates 20.1 and 18.3

respectively. Among these all-deaths fifty percent of all Traffic Injury related deaths are among pedestrians (22%), cyclists (5%) and motorcyclists (23%) (WHO, 2015).

WHO calculated the risk of dying in a road traffic crash by continent, Africa is the leading a 24.1% chance followed by eastern Mediterranean (21.3%). The Traffic Injury has significant impact on the global population being the 9th leading cause of death in 2015 reported by WHO projected it would be the fifth leading cause of death in 2030 (WHO, 2015).

Data found from WHO report in 2009 indicates that road traffic injury is the leading cause of death among people aged 15-44 which has a greater impact on the global economy and health of the population. Ampanozi and Benoset al (2012), analyzed fatal motor vehicle collisions in Macedonia, Greece, the country ranked seventh highest position in road crash fatalities among 38 countries in Europe, and found that 266 (85.26%) of the total were males and almost 60% of fatalities were among drivers followed by 22.76% passengers and 18.59% pedestrians. 49% of the pedestrian victims were aged over 65 years, followed by people under the category of 35-44 years. The cause for 87 (28%) fatality cases was alcohol consumption. This finding is the same with the data found in the study conducted in New York City, by Aleberat communications, (2018) in which pedestrians aged above 65 years (48%) and female were victims in the largest developed countries and most fatalities occur in day time and weekdays. Ae (2014), showed the same result in Iran the trend shows increasing male victims and male to female ratio is 4:1, WHO reported in 2013 in USA majority of traffic injury crash victims were drivers 62%, then passengers (26%) and the least were pedestrians which account 12% of the total road traffic disability in the contrary most fatalities in the road happened in night time; weekend and holidays. Unlike USA the one among high income countries, China, which also is the leading populated country, has high mortality of pedestrians 16,683 (24.6%) and passengers 24.1%, the rest were motorcyclists (22.0%) may be attributed to the number of highly populated pedestrians, large proportion public transport users and high number of motorcyclists in the country.

In Vietnam, de Andrade (2014), demonstrated that death rate attributed to RTA was 20.3 per 100,000 population; among 73% of 467 were age ranging from 15 to 49 economically productive population with the median age of 33.0, similar to the China study published in 2014, (ZHANG, 2013) significant number of fatalities (79%) were males, as per their

occupation more than half 597 (56.27%) were non-farmers, 323 farmers and the rest were students/children, motorcyclists (including drivers and passengers) were largest victims accounting 58% and pedestrians were 11% the majority of victims were students of primary and secondary school 22.14% and 32.23% respectively.

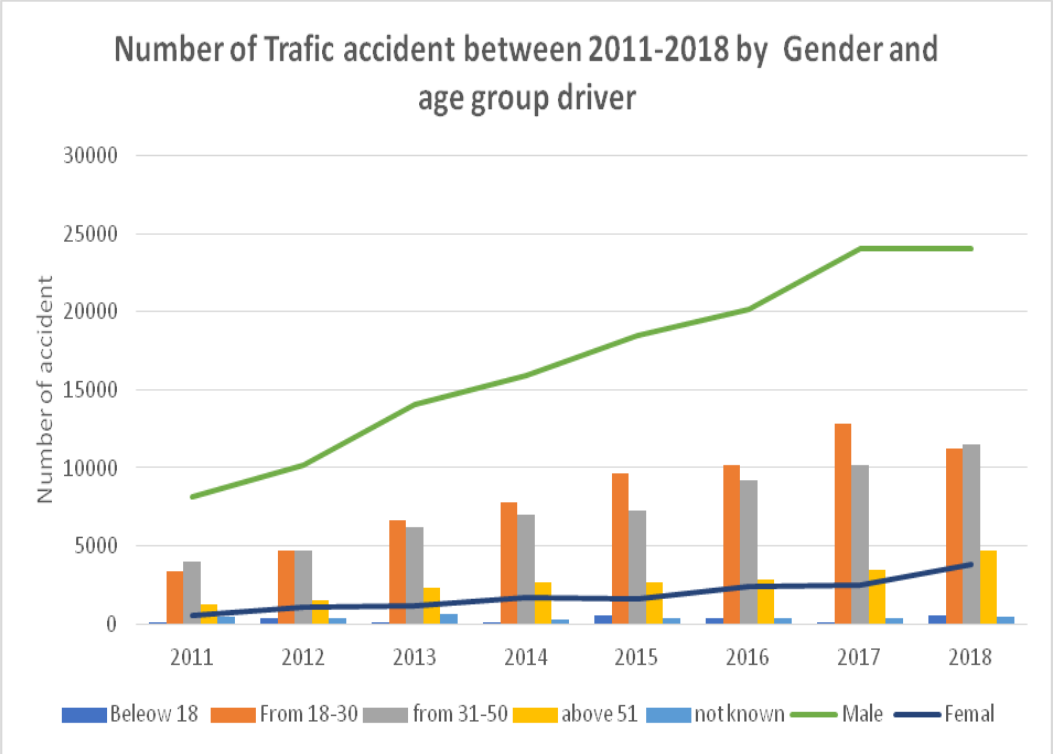
In the above study 42% of deaths occur at the scene (25%) or en route (17%) to the health care facility. The main reasons for those injuries were reported to have alcohol (70.7%) and reckless driving and the peak incident was seen in June and December to January (al. Ne., 2012).

In China study RTA hotspot analysis study showed that the high way double lane to single lane ratio is 2:1; males are more affected than females due to the proposed reasons like risk taking behaviors and reckless driving; complex traffic patterns; high density of pedestrians. Majority of happened in the night time (Guoqing Hu TBSPB, 2011). Even though death rates have been decreasing over the last four to five decades in many high-income countries for instance in China being 6.00 per 100,000 populations in 2007, road traffic injuries remain an important cause of death, injury and disability.

Current trends from African countries and other low and middle income countries (LMIC) indicate that the situation is expected even to get worse, unless there is a coordinated response in these countries by the year 2030, RTA will be the fifth leading cause of death due to increase in motorization and developmental efforts as well as public health issues The mortality rate due to MTI's in LMIC including SSA is about 20 per 100,000 populations while in High Income Countries (HIC's) it is about 10.3 per 100,000 populations.

2.13 Over view the experience of Road traffic accident in Addis Ababa

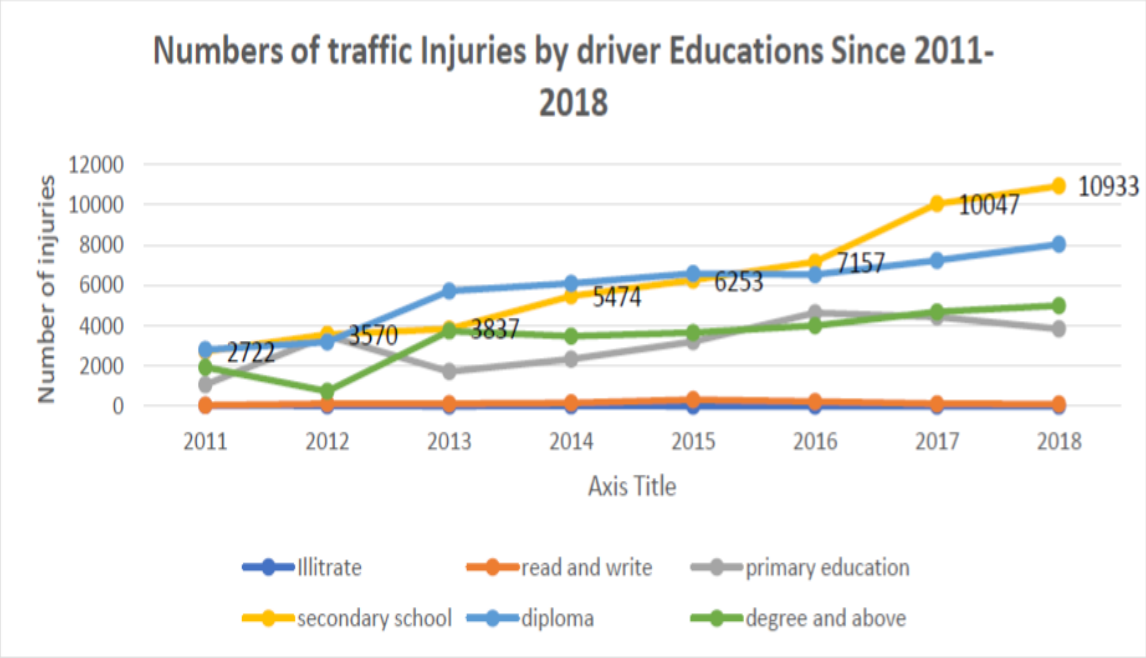
From the below chart regarding to road casualty statistics from Addis Ababa Police Commissions from 2011 to 2018 show traffic accident was occurred higher in male than female. The gender difference is also far more pronounced when looking at serious causality than when looking at slight causality, showing men have much greater involvement in serious crashes that result in death and serious injury.



Source: From Addis Ababa Police Commissions, 2019.

Figure 2: Traffic accidents between 2011-2018 by gender and age group

With regarding to traffic injuries, there are increased from 18-30 years and from 31-50 years old are highly take over traffic injuries from 2011 to 2018. According to the above data younger drivers injured in crashes experience more severe injuries even in non-fatal crashes. The risk of both moderate and severe injuries increased steadily from age 18-30 on. The risks of moderate and severe injury and death were particularly elevated in the adolescent age group, from 31-50 years and above



Source: From Addis Ababa Police Commissions, 2019.

Figure 3: numbers of traffic injuries by driver educations since 2011-2018

From above chart, regarding to Numbers of traffic Injuries by driver Educations Since 2011-2018, primary educator is the higher sever the accident next to diploma holder. Similarly, Debela (2016), evaluate drivers by using their educational status shows that drivers who are primary educations completed has high rate of crashes, traffic violations, and accident record in Ethiopia. A descriptive epidemiological study examining a census of all teen drivers in Nebraska (2018), during an eight-year period from 2003 to 2010, conducted research showed that majority of road accident creators are from 151,880 drivers, 48.6% primary educators, 51.4% diploma and others.

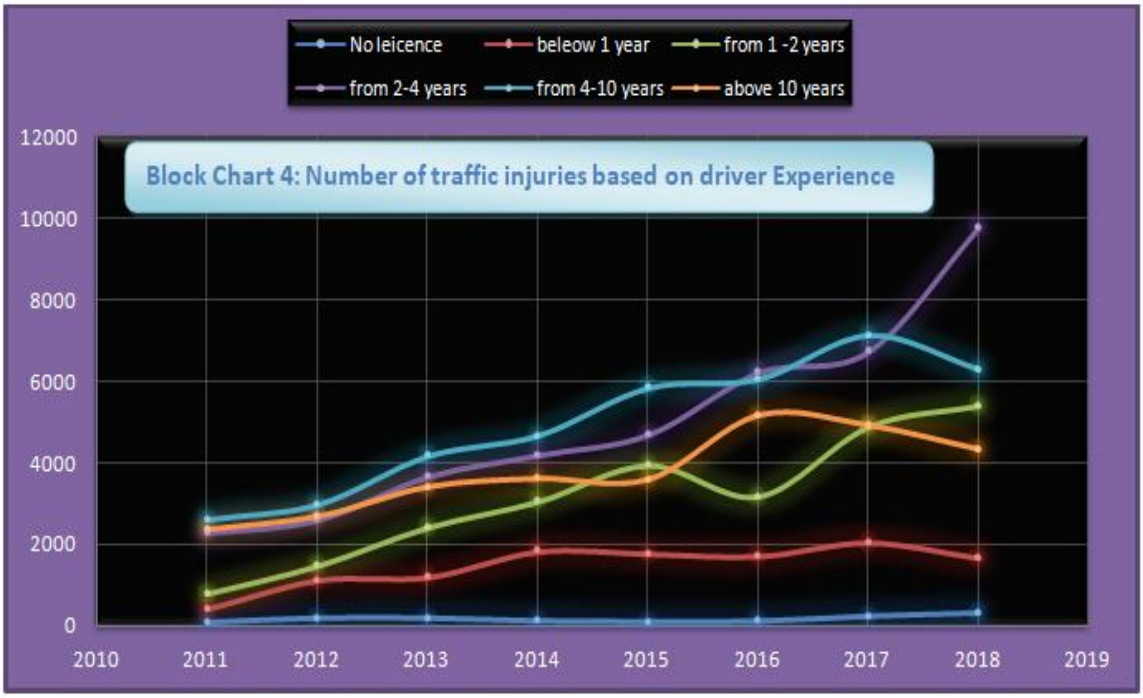


Figure 4: Number of traffic injuries based on driver experience

Source: From Addis Ababa Police Commissions, 2019.

From above chart 4 regarding to the Number of traffic injuries based on driver driving Experience, suggests that year of driving is viewed as an important contributing factor for this age group is from 2 -4 years driving experience. Inexperience or drivers with no license were also generated frequently for traffic injuries scenarios and actual collisions. Conversely, but according to police officers indicated during interview shows that the traffic injuries and conditions are uncorrected or defective eyesight as typical factors for older driver scenarios. These contributing factors were typically attributed to actual police-reported collisions involving older drivers. Moreover, the likelihood ratings for these factors as a function of drivers' age mimicked their actual association with driver age in the accident records.

CHAPTER THREE

METHODOLOGY

The study methodology approach is described in this section in order to explore the role of AAPC communication strategies to reduce RTA's in Addis Ababa. In addition, the rationale for choosing the research methods explained information about research design, sampling size and techniques, data collection instruments, data analysis and anticipated ethical issues followed in all steps of the order.

3.1 Research Design

The investigation was aimed at assessing the role of communication strategies to reduce RTA's in Addis Ababa. Therefore, the study is exploratory in nature and the single exploratory case study was the most appropriate.

The exploratory case study allows the investigator to have a broad explanation of overall strategies of Addis Ababa police commission communication practice related to the literature review. The exploratory study was served as the target for the development of the interview questions those responses to answer the research question. Exploratory case study was chosen assuming that it is the best to investigate the role of communication strategic plan to reduce RTA's in its natural settings. Moreover, in order to achieve the intended objective mixed (qualitative and quantitative) research approach methods was chosen.

3.2. Sampling Population and sampling techniques

Under AAPC there are two departments such as Addis Ababa Traffic Police (AATP) and Addis Ababa Traffic Management Agency (AATMA) particularly related to disseminate RTA's information and create awareness to reduce the accident in the city was the target population. All of them were taken as a target population for the purpose of this study. Therefore, the study employed purposive sampling method to select the study participants in AATP and AATMA.

The study selected 1 top manager, and 2 seniors for the in-depth interviewing in role of communication strategies for road safety in each AATP and AATMA. Participants were selected based on their specific positions of hierarchical authority in order to gain deep information on the RTA's and road safety communication ways for road users to reduce daily accident in Addis Ababa. Because it given a chance for the researcher to apply his/her expertise knowledge to select samples which he/she thinks represent the population.

The study selected 5 (Arada, Addis Ketema, Yeka, Bole, and Gulele) Ababa sub cities from 11 sub city by using simple random sampling. Then, questionnaires was distributed and filled by pedestrians in different places like office, home, School and café by using purposive sampling method.

The study employed stratified sampling techniques and strata were made based on the nature of road users which is driver and pedestrians. The rationale for using stratified sampling technique help the researcher to get more accurate representative sample (Vanderstoep & Johnston, 2009) and to make more accurate inferences about a participant (Lodico, Spaulding, & Voegtle, 2006).

The study unable to employed simple random sampling and purposive sampling method to select the participant because of the nature of the study population. Then, the study employed convenience sampling approach to select the study participants. For, this study 250 road users (115 drivers and 135 pedestrian) were selected using convenience sampling approach and had equal participant in each selected sub cities. The questionnaire was distributed to readily available respondents and this is deliberate sampling, which is one of the widely used sampling techniques in research. From the total of 250 questionnaires were distributed to the respondents among of them 244 (113 drivers and 131 pedestrian) questionnaires were collected and used to analyze the data.

3.3 Data collection instruments

The required data were gathered from primary and secondary sources. In this study, the data was gathered using three instrumental tools which include questionnaire, interview, and document review which was RTA recorded data in AATMA. Thus, the primary sources of data were collected through the following instruments.

Interview

Interview was the main data collection instrument to conduct the study. During this particular study interview was utilized to assess communication strategies to reduce RTA's in AATP and AATP offices. Then, the interview was developed for traffic polices and RTA management senior employees and manager/ leader in AATP and AATMA.

The study was used Semi-structured interview style so as to deal with key themes of the study topic. In addition, it helps to allow flexibility for the researcher to reply to the answers of the interviewees.

The interview provided face to face interaction with AATP and AATMA employees. The interview was included open ended questions. The interview guide for in-depth interviews consisted of open ended inquiring to provide clarification on communication strategies practice to reduce RTA in Addis Ababa. During the interview the researcher asks questions to explain unclear questions or participants may be afraid to answer questions for the interviewee.

Questionnaire

Questionnaire used to quantitative data. Drivers and pedestrians were asked to identify their awareness on road safety campaign that contribute to reduce RTAs in Addis Ababa city. The questionnaire was designed with the objective of obtaining information about driver and pedestrian behavior and awareness AAPC road safety program.

Document review

Document review used as a tool of data collection to achieve research objective one concerning the investigation of the effectiveness of communication strategies engaging in RTA in Addis Ababa. Secondary documented data, showed time serious (2016/17 – 2020/21) of RTA data that recorded in Addis Ababa and its achievement. It helps to cross-check data gather through in-depth interview on communication strategies engaging in RTA outcome. In sum, document review is significant to achieve research objective.

3.4 Data collection procedure

Before the main data collection process was started, links have been made with the Addis Ababa Police Commission office and get approved in order to establish understanding for conduct of the study.

Based on traffic police attendance list traffic police was selected by random sampling. From then on, purposive sampling technique was employed to select AATMA and AATP managers and senior employees.

After the sampling procedure was over for all respondents, the researcher was arranged a good place for traffic police at lunch time. Interviews were conducted in 1:00 - 2:00 PM in the arranged place. AATP and AATMA managers and seniors' interview were conducted in their own office for 1 hour.

During the interview time the researcher explained the objectives of the study in Amharic language for all participants. Before interviewing the researcher requested all participant permission to audio records.

Furthermore, observation was also conducted in different roadside, particularly the accident occurred frequently place in different time to assess the practice of communication strategies on RTA. After observation researcher was taking image of traffic communication tool and narrative note on what was communication strategies for road safety.

3.5 Data Analysis

Data obtained from open-ended items of the interview were administered to all respondents of AATP and AATMA managers and senior employee views were interpreted and analyzed qualitatively.

First all participants interview was identifying and categorizing and classifying their views based on the interview question, depend on the data conducted in recorded audio.

According to Creswell (2014) noted that thematic analysis which is based on the frequent theme of data can be used to make sense of qualitative data. It can be used to analyze qualitative information and to systematically gain knowledge about a person, an interaction, a group, a

situation, an organization or a culture. Additionally, Kothari, (2004) stated that qualitative research is concerned phenomenon and takes place in the natural setting. This enables the researcher to develop a level of detail about the individual or the organization. Then, this approach helps to apply description and interpretation of the circumstances at the time of the study. This study also administers qualitative data in terms of content and where applicable and a quotation form analyze practice of strategic communication engaging in RTA in Addis Ababa by AAPC departments such as AATMA and AATP.

Quantitative analysis was employed using the SPSS version 27. Descriptive statistics such as frequencies, percentage, graph, variables and averages were mostly used to analyze the data.

3.6 Trustworthiness and Authenticity

A common term used to describe validity and reliability in qualitative research is trustworthiness and authenticity.

Qualitative study can establish trustworthiness and authenticity by addressing the credibility, transferability, dependability and conformability (Trochim and Donnelly 2007 cited in Kumar, 2011).

The study was engaged all the above techniques to demonstrate the trustworthiness and authenticity of the research. Then, all interview items were defined clearly for the participants by their languages. The researcher followed similar manner to other study interview procedures and process in order to verify the accuracy of the results. Lastly, similar interview questions were asked twice for the identical group respondents in order to verify reliability result.

3.7 Ethical consideration of the research

There are several procedures to be followed and measures to be taken before, during and after the research will over. The following points are discussing the procedures.

Ethical approval of the research was obtained from the ethical review of College of Humanity Language Studies, Addis Ababa University. The researcher got support letter from the School of Journalism and Communication, Addis Ababa University in order to get permission from the AAPC managers to investigation the study.

After that organization managers were informed about the purpose of the study that contribute necessary information for Media ethical role and practice during transition period.

After getting the permission from the AAPC managers the researcher was informed about the objective of the study, important of the study and specific place for the participants. Finally, the researcher required to perform member check to ensure validity of the finding. The researcher was announced the participants that information gained from them can be used only for research purposes and secured and remain confidential. Finally, researcher requested senior and manager in AATMA and AATP permission to tape record the interviews and interviews will be recorded.

CHAPTER FOUR

INTERPRETATION, ANALYSIS AND PRESENTATION

The main purpose of the study was exploring the role of communication strategies to reduce traffic accident in Addis Ababa. Therefore, this chapter presents the results and discussion about the practice of mass media campaign on road safety to reduce accident in the city.

4.1 Interpretation and analysis of qualitative data

4.1.1 Background of the participants of qualitative data

This chapter reflects the findings of the study. The aim of the study was to assessing the role of communication strategies on reduce traffic accident in Addis Ababa. 6 interviews were conducted in the study among of them 3 from AATMA and 3 from AATP department in AAPC were included in the study. The participant of the study donated by Key informant 1, 2, and 3 4, 5, and 6 who work in AATMA and AATP department under AAPC.

The study key informants were 4 degree and 2 MA holders. Their age ranged between 30 to 42 years old and their experience range between 4 to 12 years and all key participants were men.

Interview data was analyzed the role of communication strategies to reduce traffic accident in Addis Ababa. In addition, each section of the themes is describing the participant views and quoted key informants words are presented.

Communication Strategies for road safety

An in-depth interview with the senior employee and managers described traffic management agency plan communications strategy on road safety. AAPC ensuring that matters of road safety based on annual work plan that contain all duties and activities related to road safety issues. AAPC communication plan mainly focuses on the main causes for accidents such as drink driving; speed; violation the rule, motorcycle helmet use; and seatbelt. In addition to the common main causes for accidents, AAPC employees identify the problem of the actual kind of accident and the behavior that lies behind, then RTA reduced by the campaign in order to change the behavior of the road-users.

AAPC communications strategy includes public campaigns and education for reducing traffic accident and education. In addition, communications strategy includes combined with legislation and enforcement. On the other hand, AAPC work together with stakeholders to help reduction in the number of casualties resulting from traffic collisions in Addis Ababa and ensure long-term road user behavior change about road safety. AAPC use to disseminate road safety information through communication channel include new media, print media, posters, electronic media, radio and television programmes contributed to pedestrians and motorists, and driver awareness, knowledge; attitude and behavior change to road safety and accidents

Communication Strategies and Channels used in the Delivery of Messages

Communication has been one of the important tools in the fight against driver road rule violation and pedestrian road accidents. AAPC use mass media for road safety promotion presents an opportunity to communicate to large numbers of people and to target particular groups of people.

AAPC started to analyze road safety programmes which include raising awareness on road safety, providing interactive road safety education. The regular target group is car driver, motorcycle driver, and pedestrian include students. The road safety communication strategies are aimed at making road user aware of their traffic environment and enlightening them what to expect from them on the road.

There are different mass media to reduce RTA using electronics; print media, billboard, poster, and social media (Face book). But, there is a limited campaigns dissemination of messages through advertisements on buses and bus stops rather than use them for commercial advertisements. During traditional ceremonies, AAPC particularly, AATMA carry different messages aimed at increasing public awareness of road safety.

AAPC develop the most effective key messages and delivery strategies via TV and radio. But that is not quite suitable for the targeted group. AAPC try to address road safety information using the combination of the different communication strategies brings social change campaign because each strategy has a different effect on the audience.

Road safety awareness campaign has been given for public about road side traffic messages and symbols, how to cross the road, traffic light, the impact of traffic accident and its cause in school, condominium residence, religious organization, and road users in highly populated area.

Road Safety Campaign for the Students

AATMA prepare doing different campaign activities to protect students from traffic accidents. As the interviewee described awareness creation for the students as follow:

> *In 2022, AATMA gave training for 300 students from 30 schools that support traffic police at entrance and exit. AATMA give training and awareness over 3,500 students in Addis Ababa city from over 200 different schools for reducing RTA around schools. However, traffic police have been support those students nearby. This action in somehow reduce RTA around school, but still there is need additional work (key informant 4)*

650 volunteer traffic police took training about pedestrian and driver ethics, their responsibility, and duty; benefit of road safety in order enhance their skill and ability in order to perform their work as expected. Beside of this, volunteer traffic police give awareness for public audience in highly populated area about road side traffic messages and symbols, how to cross the road, traffic light, the impact of traffic accident and its cause in school. Particularly, during religious ceremony they guide road users to cross the road on the right way as well as they manage and control road network flow around the area.

Traffic management agency coordinated with traffic police educates and creates awareness how to protect themselves from traffic accident and its consequence. In addition to this, education bureau in collaboration with traffic police road safety school club included as co-curriculum and road safety school club used mini-media is for road safety awareness to the school community in order to reduce road traffic accident. Then, road safety for children and teenagers in different schools can be enhanced through educational and mini-media programs.

Community Publicity Campaigns

There is different road safety campaign in Addis Ababa such as 'Road safety week', ''Street for people'', ''Street for life'', ''love 30'' and other help to address information for the road users.

AAPC creates awareness creation program for road users about road safety and RTA's causes. AAPC has given road safety education programs for students, teachers, volunteer's traffic police, and drivers, in schools, religious organization, drivers, condominium residence, health sectors and stakeholders.

Volunteer traffic police and traffic management employees to inform pedestrians about road safety when pedestrians moving on foot. Road safety education campaigns is inform pedestrians were informed about road traffic rules, how to avoid dangerous situations when moving on foot, respect road safety rules and show and advice the priority measurement in dangerous situations. On the other hands, AATMA is sensitizing condominium residence to aware their children to cross the road and other cause of incidents. As far, accident analysis stated that they identify the particular area that accidents most frequently occur to reduce RTA they educate and aware the people and use billboard and posts messages for the residence peoples.

On the other hands, campaigns shouldn't target the relevant aspects of attitudes that determine a specific type of behavior; and age rather than cause of traffic accident. As interviewee shows that traffic accident prevention campaign plan was not consider RTA factor linked to the driver and the road user. In addition, respondents' response shows that they select similar communication medium for all road users. Most drivers are not internalized traffic laws in transport then traffic police and traffic management are focus on traffic laws implemented by the driver.

> *Drivers expected to know the traffic laws, and then the general public should be equally informed of these traffic rules. The majority of pedestrian using the roads does not know the basic laws of traffic because of they are not punished by the law enforcers whenever they make a mistake. Due to this, most people blame the drivers but pedestrians also the major traffic accident cause* (Key informant 6)

> *Due to long distance of road crossing area, most pedestrians are often unwilling to use pedestrian overpasses and sometimes they jump over the median road fences barriers to cross the roadways. Due to this, seriously injured or killed occurred by fast moving vehicles.*

Whenever pedestrians make a mistake, the driver is punished by the law enforcers because drivers are not liable for such pedestrian injuries because it is a fully access-controlled road (Key informant 2)

Pedestrian crossing the road from places not designated for pedestrian crossings however, then most traffic police and volunteer traffic police aware them face to face campaign on the road. The awareness creation program was not considered pedestrian behavior like age sex, and education.

Mass Media Campaigns

The respondents indicated that using TV to transmit traffic awareness programs is the best way to create traffic awareness and to reduce RTAs**.** The mass media campaigns focusing mainly on cause of the accident such as drinking and driving, seat-belt use, and helmet us.

Key Informant (6) interviewee described as mass media particularly private and state TV and radio cover traffic accident. For instance, Fana radio and Fana television, Ethiopia national television service, Addis Ababa network media (including FM radio 96.4) are carried road traffic news relatively tragic causality and damages at Monday and Thursday 2:00 – 3:00 Am. Mass media were not giving more emphasis to traffic accident like other hot issue and did not address or discuss technical problems that lead to traffic accident. Due to this, audience received wrong impression about road traffic news stories and don't take it as a serious public health issues.

TV program such as Addis Ababa television network and private media are the major provider of traffic report that indicate clearly the incident location and other traffic related information. Addis Ababa police commission and traffic management agency coordinate with media prepare traffic accident stories to changing the behaviors and attitudes of the society. However, the stories did not elaborate the plots rather showing adopting problem behavior and suffering. Advertises mainly focus on inappropriate on speeding, driving, safety belts and cross the road and its consequence. For instance, there are three media campaigns advertising to prevent drink and driving such as testimonial, celebration, and enforcement advertising.

There are a lot of documentaries deal with RTA's and its possible consequences. But, most documentary which is presented in both EBC, Walta, Addis Ababa television and Fana television media done by interviewing drivers and victims of accidents rather than interviews road safety specialists about how it happens and what can be done.

The main barrier of road safety communication strategies in radio traffic program reports is not possible to offer all pertinent details on all of the incidents occurring at a given time. Most road users received the information at the specific interval of program schedule. This supported as:

> *Television station did not give frequent attention for traffic accident like other hot issue as well as traffic incident information did not display on the screen for the audience. This may decrease peoples give more attention for the issue rather than disseminate the information as a formal schedule for the daily program* (Key informant 1)

On the other hand, the interview shows that they classified the road users according to the road traffic accident. The respondents described the how to identify the target group as:

> *We identify targeted group who are more probable to get traffic accidents, then we create awareness those targeted groups (*Key Informant 6)

From the interview they identify the target group like students, drivers, and motorcycle…etc rather than age, sex and education. They do not coordinate the target group incident with its cause with target group sex, age level, and education background. Due to this, the message and the communication channel are not predetermining target group in terms of age, sex, their educational background related to cause of accident. This method of communication strategies may not deliver the message for the specific target group to change their behavior on road safety.

Generally, key informant 1 and 2 were of the view that "increased cooperation with the media and cooperation between the Department of Traffic management and Addis Ababa education bureau and transportation Authority was help to increase traffic safety awareness", while other stakeholders make meeting to reduce RTA but not in practical.

Stakeholder Sectors harmonization

A communication strategy is not the only intervention to advance awareness and behavioral change. Other activities could be crucial such as enforcement, education, and legislation are often added to the communication campaign in order to increase its effectiveness through stakeholders' coordination.

Under AAPC there are inter agency collaborations involved in reducing traffic accident. Under AAPC, traffic management and traffic police is the major actor involving in the road safety activity in the city.

AAPC has more than 10 stakeholders and inter-and intra-agency collaborations from public and private sectors involved in reducing traffic accident. The two key informants stated the involvement of stakeholders to reduce RTA's below:

> *More than 10 private and government sectors have agreed with* AAPC. *But, there are a number sectors integrated to reduce traffic accident in the city. Addis Ababa education bureau and road transport have active involvement in road safety in the city. But, other sectors agreed to corporate with AAPC but there has not been concrete result to reduce traffic accident. Therefore, lack of effective integration makes campaigns ineffective. This make difficult to reduce the accident as expected''* (Key Informant 4)

Addis Ababa police has been organizing and delivering speed (using speed cameras), and of seat belts campaigns for the drivers in the city. There are 102 Addis Ababa traffic police officers who were trained on speed, drink driving and seat belt enforcement. Addis Ababa city traffic police department to enforce traffic rules and regulations on the road and corrective measures are applied to compel drivers to obey the rules of the road safety. Addis Ababa traffic police help controlling the road users and apply legislation on seat belt wearing for drivers, child restraint, substance abuse, speed limits, and helmets under road transport traffic control regulations – 395/2017 and 208/2011, which ascertain the existence of safe and expedite road traffic movement on roads in the country. However, respondents described some stakeholders are inactive as follow:

> *I feel strongly most stakeholders are inactive and Addis Ababa transport bureau, Addis Ababa education bureau, medias particularly TV and Radio, Addis Ababa city roads authority stakeholders come forward to coordinate with AAPC. However, Addis Ababa city transport bureau has been more active and successful for preventive strategies* (Key Informant 5).

Addis Ababa transport bureau and road authority work together with AAPC to reduce RTA. Transport sectors made or speed humps to reduce the risks exposure of road users, identify hazardous locations and provide information for drivers through road signs and signals by using billboards alongside roads both out and inside built-up areas. In addition, road transport also rebuilds and design road corridors, painting the road, increase traffic light, speed control (spead breaker) to enhance traffic flow in the city.

> *Addis Ababa transport bureau and Medias (TV and Radio) were coordination with AAPC contributes to decrease rapid growth of RTA in the city. Those two sectors integration makes campaigns more effective* (Key Informant 3)

Most key informant agreed that mass media campaign is not effective alone to reduce RTA's while enforcement and legislation are more impactful to change drivers' behavioral change to reduce RTA's. Furthermore, communication strategies like road marking and signing, road fence, and traffic light, have been correct seat belt and drink behavioral change.

On the other hand, there is still limited on *Addis Ababa education bureau to enhance* students' awareness on road traffic accident in the curriculum. The key informant describes the main limitation of Addis Ababa education bureau as:

> *Addis Ababa education bureau has developed road safety curriculums for primary schools to improve on road safety awareness in the country. But, they did not include for above grade 7 which difficult to increase road safety awareness for other grade students* (Key informant 6)

Regarding on successfulness of campaign, the majority key informants argued that the major road safety campaign in school was successful. The campaign focus how to cross the road through multiple strategies such as volunteer student police traffic, give training and awareness for the teachers, and students and using road safety club and school mini media in the school.

Despite these reductions, drinking and driving campaign was significant increased awareness and efforts to continue to reduce alcohol-impaired driving on roadways. Lastly, campaign on seat belt is successful to increase wearing front seatbelt through enforcement.

Monitoring and evaluation of communication strategies

From the interview AATMA and AATP were not conducting evaluation why the road user behavior did not change on road safety. Moreover, they focus to monitor and evaluate on the number of campaign conducted from their set annual prime target goal.

According to (Key Informant 2) stated that there is a rear monitoring and evaluation of communication strategies outcome that bring public behavioral change on road safety and not evaluate clearly identified message for the target group. The interviewee stated as follow:

> *We are not sure road safety communication information delivered to the targeted group and implement the message in practical* (Key informant 3)

AAPC monitor and evaluate their activities according to administrative goals, rather than to the impact of the implemented interventions themselves. As the (Key Informant 2) described that monitoring and evaluation based reach the prime set target plane of the month and the year rather than their campaign hit the target or the campaign change road user behavior. However, law enforcement is the major influential to change driver behavior like drinking and driving, seat belt and respect traffic rule.

Generally, monitoring and evaluation of is not targeted to improve communication strategies and did not identify the communication channel for the target group as well as the road safety message is not evaluated and monitor to address the specific target group. Communication campaign and its channel and message are common for all road users. In short, mass media campaign and its message are not identified for the target groups.

Recommendation

Most respondents forward similar recommendation for enhancing communication strategies in order to reduce RTA increase holding traffic courses in each schools' level, increasing traffic law enforcement against violations after 1:00 PM, plane education on traffic safety within companies and workplaces, educate and aware road traffic safety for informal business sectors on roadside, and increase traffic sign posts at every junction to reduce RTA's.

4.2 Interpretation and analysis of quantitative data

4.2.1 Demographic characteristics of the pedestrian respondents

Table 1: Demographic characteristics of the pedestrian (N = 131)

No	Items	Categories	Frequency	Percent
1	Gender	Male	76	58.0
		Female	55	42.0
2	Age	Below 20 year	56	42.7
		20-30 year	40	30.5
		30-40 year	28	21.4
		>40 year	7	5.3
3	Education level	Secondary school and below	13	9.9
		Certificate	3	2.3
		Diploma	67	51.1
		Degree and above	48	36.6

The above able demonstrates that from 131 pedestrian respondents, 58.0% were male and 42.0% female. Most of the pedestrians are at least educated to high school level, with 36.6% holding a degree and above qualification. This means that when designing a traffic awareness campaign, the majority of pedestrians should have few problems in understanding and appreciating the

information and laws. The majority 73.2% of the pedestrians were under 30 years old, while only 5.3% were aged >40 year.

Table 2: Demographic characteristics of the drivers' respondents (N = 113)

No	Items	Categories	Frequency	Percent
1	**Gender**	Male	65	57.5
		Female	48	42.5
2	**Age**	20 – 25 year	5	4.4
		20-30 year	36	31.9
		30-40 year	48	42.5
		>40 year	24	21.2
3	**Education level**	Secondary school and below	12	10.6
		Certificate	5	4.4
		Diploma	39	34.5
		Degree and above	57	50.4

The above table relevant demographic characteristics of the driver survey respondents. Of the 113 driver respondents, 57.1% were male and 42.5% female. The majority of the drivers were between 20-40 years old, while only 21.3% were aged above 40. It is interesting to see that there were a significantly higher proportion of young driver respondents. 50.4% of respondents were degree and above level; 34.5% were educated to diploma and 10.6% of drivers were educated level up to high school and less than high school. It can therefore be seen that the majority of the participants have been educated to a high level and they should therefore thoroughly understand and greatly benefit from traffic awareness programs.

4.2.2 Road user received road safety campaign in communication channel

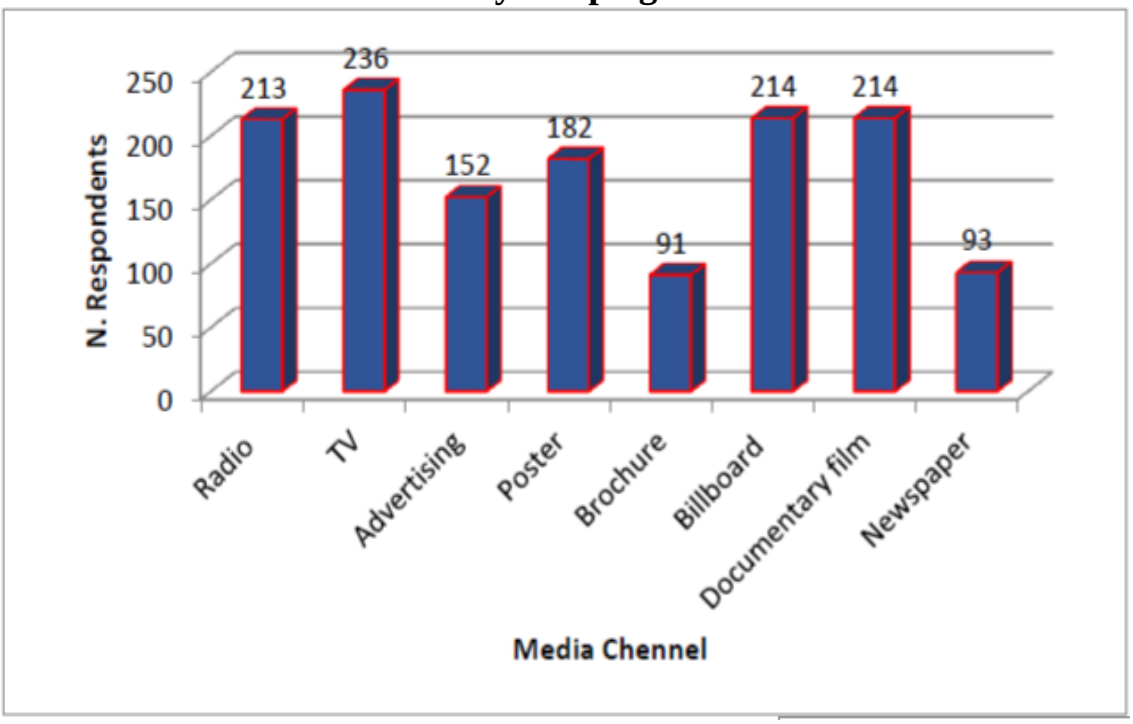


Figure 5: Respondents received road safety messages via communication channel

Both drivers and pedestrians get information through different communication channels. TV is the major channel for the road users. In addition, radio, documentary, and billboard are also the main communication channels to disseminate road safety information. While, there was a little road users get information in newspaper and brochure. Generally, as we seen from the above figure billboard, documentary, radio, and TV the major channel for the road user which help to change their behavior regarding on road safety.

4.2.3 Road Safety Advertisement Messages

The tables bellow message was motto for reducing RTA's in Ethiopia. The Slogan has a power to change road user behavior. Therefore, the study measure how many road users remember the slogan that disseminate via communication channels.

Table 3: Ability of Respondents to Remember the Road Safety Advertisement Messages

No	Items	**Yes, I** Remember		**No, I don't** Remember	
		Freq.	%	Freq.	%
	Don't drink and drive	244	100		
	Don't drink and walk	88	36.1	156	63.9
	Speed kills! Drive safely	213	87.3	31	12.7
	Give priority for the pedestrian	244	100		
	Slow you speed nearby school	184	75.4	60	24.6
	Wear the belt and reduce 50% of accident	215	88.1	29	11.9
	Don't phone call and drive	155	63.5	89	36.5
	Don't drive with fatigue	911	37.3	53	62.7

The study result revealed that how much the campaign message remembered by the road users. In addition, it indicated that how much road safety campaign effective to prepare slogan for the road users to change their behavioral in order to reduce RTA's. Then, 'Don't drink and drive' and 'give priority for the pedestrian' are the dominant slogan and well remember by the road users. 88.1% and 87.3% of respondents were remembered 'Speed kills! Drive safely' and 'Wear the belt and reduce 50% of accident' slogan respectively.

75.4% of respondents were remember 'Slow you speed nearby school' and also 63.5% of respondents were remembered 'Don't phone call and drive' this indicated that the rest respondents who did not remembered those road safety slogans may not have participated in campaign and low awareness on road safety rule and regulation. Particularly, 62.7% and 63.9% respondents were did not remembered 'Don't drive with fatigue' and 'Don't drink and walk'. There are a few road users remembered the above to slogan. The implication of this result shows

that the slogan message may not carefully prepare for the road user to recall the message easily. On the other hands, the massage may not frequently deliver to the road users.

4.2.4 Road safety advertising recall behavior

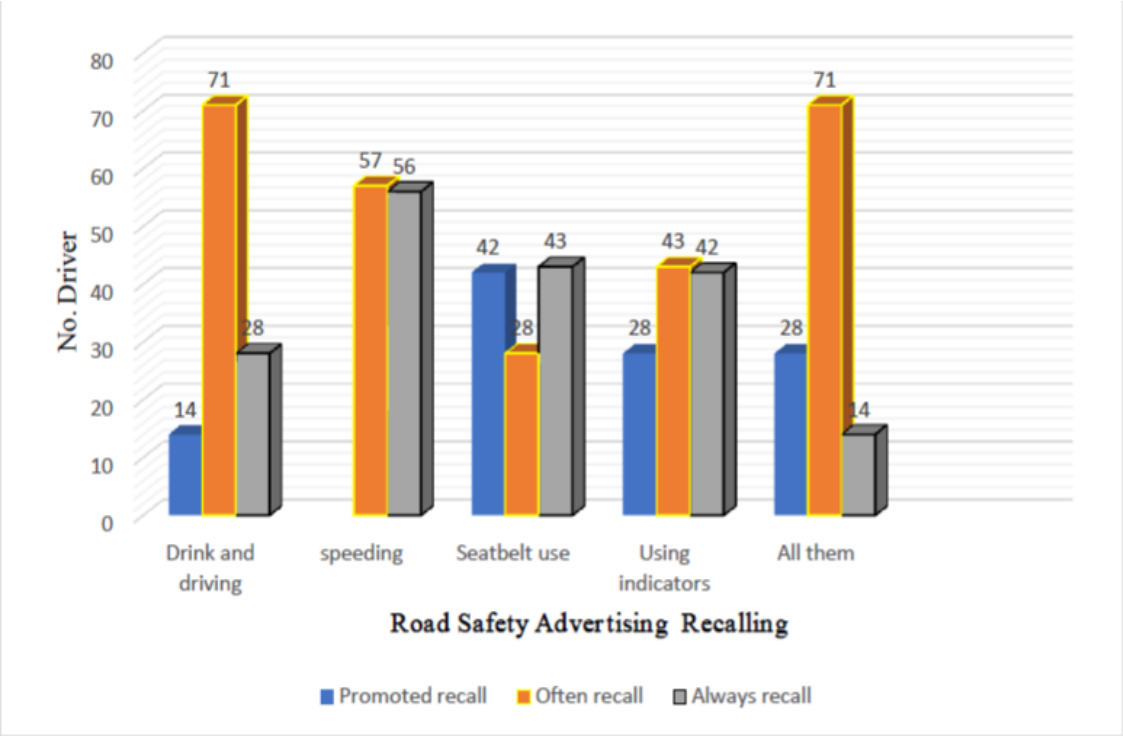


Figure 6: The effect for road safety advertising for driver behavior during driving

The above graph result indicated that drink and driving advertising was 28 (24.8%) always recalled, 71(62.8%) often recall, and 14(12.4) promoted recall the drivers about road safety on Drink and driving. Speeding advertising was 57(50.4%), often recall and 56(49.6%) always recalling the driver about speed killing. Drivers were 42(37.2%) promoted recall, 28(24.8%), and 43(38.1%) by Seatbelt use advertising. 28(24.8%), 43(38.1%), and 42(37.2%) of drivers were promoted recall, often recall and always recall respectively on using traffic symbol indicators adverting. Generally, 71(62.8%) of drivers were often recalled by the four road safety advertisement and also 14(12.4%) of drivers always recalled by the whole advertisement. Drink and driving and speeding advertising was change driver behavioral change than other advertising. Generally, advertising was not change drivers' behavior at high or optimal level.

4.2.5 Pedestrian Behavior on road safety

Table 4: Pedestrian Behavior on road safety

	Items	Yes		No	
		Freq.	%	Freq.	%
1	Used a seatbelt when you are backseat	16	12.2	115	87.8
2	Used a seatbelt when you are front seat	115	87.8	16	12.2
3	Using mobile phone while crossing the road	50	38.2	81	61.8
4	Crossed the road from places not designated for pedestrian crossings	48	36.6	83	63.4

38.2% of respondents were admitted cross the road when they are talking on a mobile phone. It shows that it is one of the most reported hazardous habits among pedestrians. From the results of the study, 36.6% of pedestrian were crossed the road from places not designated for pedestrian crossings. This indicated that those respondents had indicated that they are not aware road traffic accident.

The effectiveness of AAPC road safety campaign

The study assesses the effectiveness of road safety campaign based on its outcomes and reduce car crashed. 7.83% of physical disabled occurrence was reduced in 2018/19 compare to 2019/20 year. Similarly, physical injured was reduced in 22.28% in 2019/20 from the previous years.

On the other hand, number of death was decrease in 2019/20 and 2020/21. AAPC was reducing 4.58% and 12.66% death of in 2019/20 and 2020/21 respectively. The main goal of road safety campaign is reducing distraction, death and injured. As we seen the below figure road safety campaign was less reducing physical injured after 2018/19 year. This indicated that after 2018/19 AAPC road safety campaign was effective to reduce death and physical injured in Addis Ababa city.

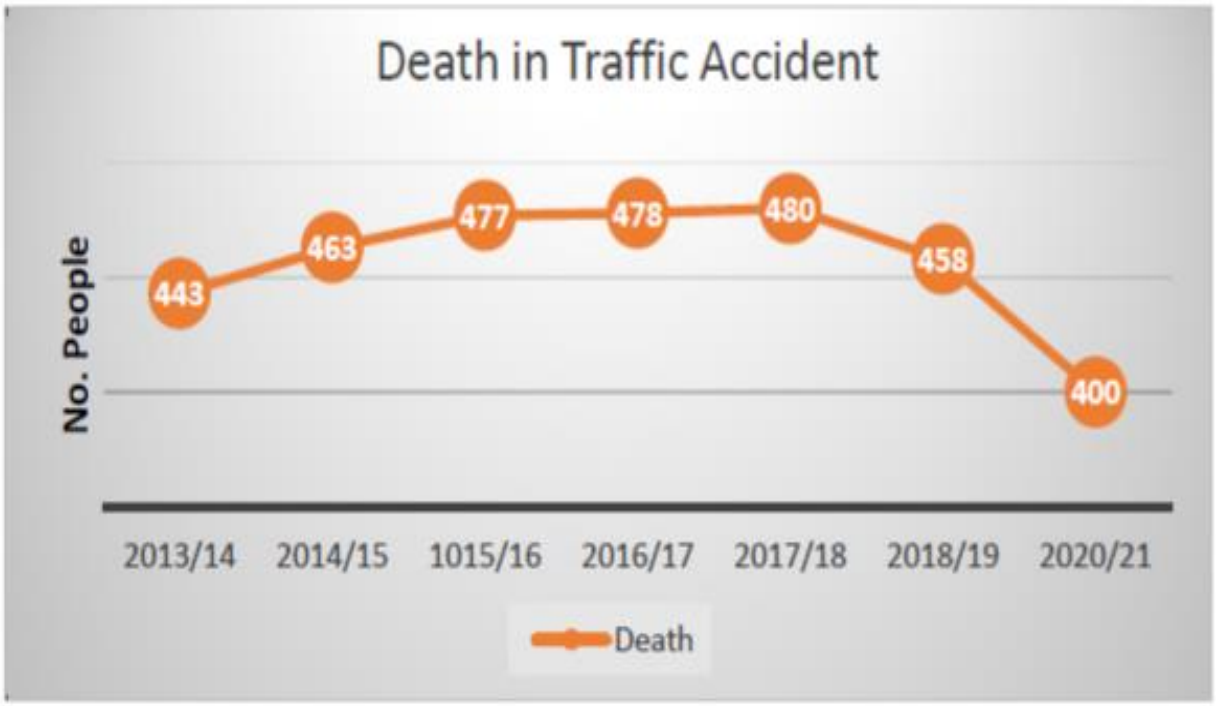


Figure 7: Number of deaths and physical injured in traffic accident in Addis Ababa between 2016/17- 2020/21 (AATMA, 2022)

The above figure result illustrated that 83% and 71% of pedestrians were dead and become injured from the total traffic accident in 2020/21. Beside of this, AAPC report indicated that victim to 83% and 71% of male was victim to death and injuries respectively. Half of productive human resources between 20 - 39 ages were victim among traffic injuries and death. As the study concludes that road safety campaign for pedestrians particularly male were within 20 – 39 ages was poor and ineffective. This indicated that the campaign did not select target group to deliver road safety campaign.

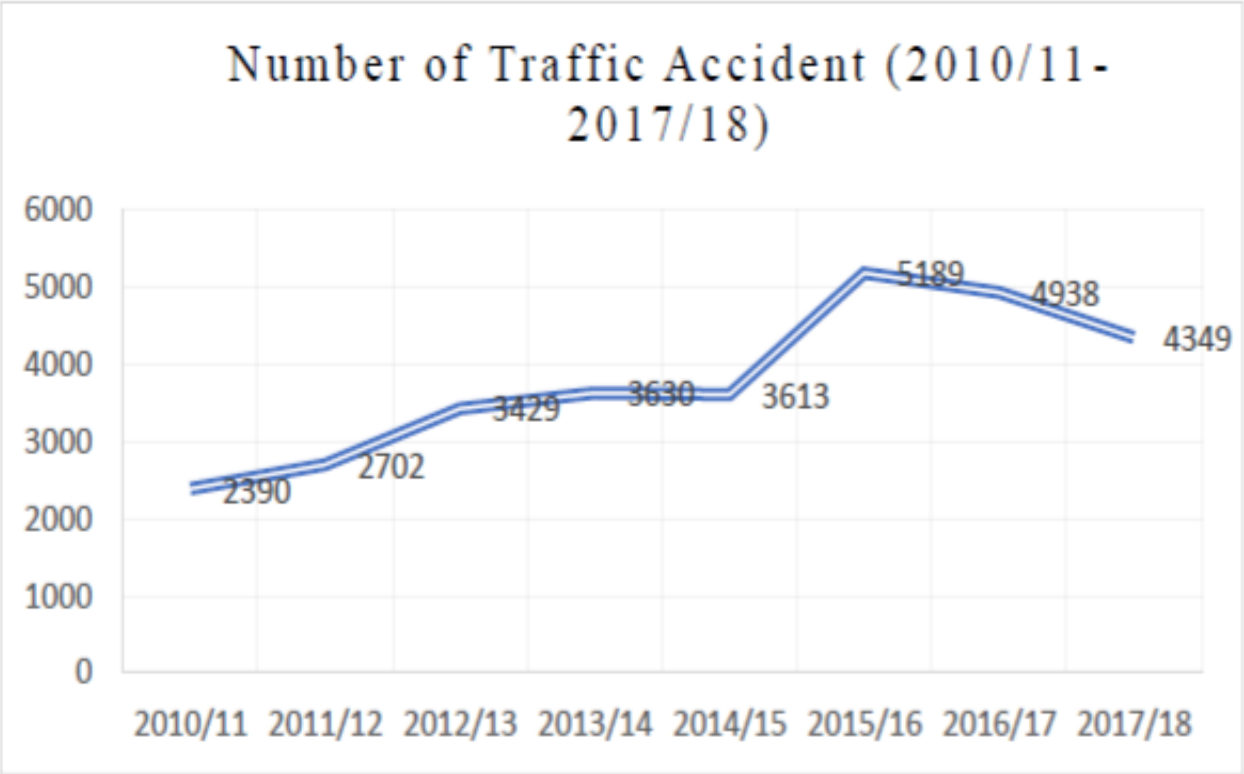


Figure 8: Traffic accident causes to death and physical disable between 2016/17- 2020/21 (AATMA, 2022)

The number of traffic accident was highly increased in 2018/19 and 10.87% of traffic accident cause to death and traffic injuries was reduced in 2019/20 compare to 208/19. However, in 2020/21 5% of traffic accident was increased from 2019/20. Generally, AAPC did not achieve to reduce traffic accident below 3061 accidents. After 2017/18 traffic accident was remain increase rather than reduce the accident.

AATMA organized traffic campaigns for speeding, drinking and driving, seat-belt use, and traffic light and helmet use in commercial streets. There was less likely behavioral change of road user on speed, alcohol, seat belts compare to the 2019/20. According to AATMA 2020/21 report indicated that there is 27% of motorcyclist were correctly wear helmet and 84% driver were use seat belts and there was only 6% of behind the car seat used the seat belts.

AATMA traffic accident data shows that 46% of drivers drive above limited speeding in 2020/21. Beside of this, 36% of death caused by drunk and drive accident occurred between 7:00 – 6:00 PM on ever Friday and also 62% of motorcycle drive in high speed and the accident was

high since last three years. This shows still it need more work to aware the drivers on speed, alcohol, seat belts use for road safety. But, there has been insufficient campaign on wear back seat belt. This indicated that road traffic campaign was not effective to bring behavioral change of the driver. Because, the key participant argumentative most drivers perceived media advertising on ‘do not drink and drive’ as a rule rather than behavioral change. But, behavioral change of the driver brought by enforcement and legislation actions. Therefore, traffic accident was reducing slowly through enforcement and legislation actions rather than road safety campaign.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The study employed in-depth interviews and questionnaire for communication strategy for RTA's in Addis Ababa. However, in implementing the road safety has depended on annual AAPC plans which have been used in the past to implement communication activities on road safety.

The study has identified components of a communication design strategy method to reduce RTAs in Addis Ababa such as: public campaigns and school, mass media campaigns, law enforcement and legislation, education and training traffic safety programs. The campaign mainly focuses on the major cause of traffic accident in Addis Ababa. The campaign was prepared based on the main cause of traffic accident and the victims rather than consider targeted road user behavior such as sex, age, education. In addition, the communication channel and messages did not consider targeted road user behavior.

The most commonly communications channels are mass media channels which include television and radio. Newsletter and brochure communication channel were usefulness but far much below the radio and television channels.

Mass media campaigns and advertising are more focus on drinking and driving, seat belt, and speeding. The mass media campaigns bring change pedestrian behavior to respect rule and regulation of road safety. But, mass media campaign alone could not bring change driver awareness and behavioral change. Indeed, advertisements on speed limits drive after consuming alcohol were able to recall road users about traffic accident.

In assessing the effectiveness of AAPC communication strategies, combined campaign with enforcement law enforcement and legislation were successful to reduce road traffic crashes in Addis Ababa. Combined campaign with enforcement of road safety laws were bring change driver behavioral that respect speed limits, wear a seat belt, and choose not to drive after consuming alcohol and achieved reduced road traffic crashes in Addis Ababa. Similarly, based

on school campaign, communication strategies was effective through training for parent and teacher, volunteer traffic police student training, road safety club in the school, and using school mini media.

The study has identified the limitation of communication strategies to reduce RTA's such as lack of effective stakeholders' coordination, lack of monitoring and evaluation of the impact of road safety communication activities, and lack of check the message delivered to the target audience.

5.2 Recommendations

The study findings have highlighted some gaps in the communication strategies used by the AAPC to improving road safety behavior among road users. Then the following recommendations are proposed to enhance RTSA's communication strategy:

Designing the campaign:

- AAPC should focus on road safety message and instructional design, communication channels design for specific and target group that considering their age, sex and education background.

Means of communication:

- The type communication channel should be identifying for each target audience related to age, sex and education level and others.
- AAPC should be use community radio stations on road safety communication programmes by different language to reach more road users who cannot understand their second language.

Target audience:

- Establish communication strategies for a specific target population such as age, gender and education level through objective measures and evaluations.

Stakeholder engagement:

- AAPC should be identify and understanding the partners and the types of communication tools for each partner uses to dissemination road safety information that help to strengthen campaign penetration and reach.
- Design road safety communication strategies with partners like Addis Ababa Road Transport who can promote road safety advertising facilitated road safety campaign in health center, hospitals, and city bus through their television screen. This help to keeps stakeholders engaged.
- AAPC should work effectively with stakeholder sectors and they designing communication strategies for each sectors as far point out each stakeholder responsibility and duties agreement in order to aware the audience on road safety rule and regulation and reduce traffic accident in the city.

Message:

- Messages should be adapted and appropriate to the target audience and easily-understood messaging approach.

Enforcement and **legislation:**

- Established enforcement and legislation for pedestrians to respect road safety rule and regulation.

Evaluation:

- The campaign should be preparing evaluation plan each activities of road safety campaign and its outcome.
- AAPC should be evaluate and monitor the communication strategies and its output. In addition, each stakeholder evaluates and monitors their campaign message delivered to the target audience.

Reference

Ajzen, I. (1985). *From intentions to action:* A theory of planned behaviour. In J. Kuhl & J. Beckman (Eds.), Action-control: From cognition to behaviour. Heidelberg: Springer.

Ali, (2016). Traffic accident and road safety management: a comparative analysis in industrial, developing and rich developing countries, SATC, South Africa, Pretoria .

Alonso, Pastor, Montoro & Esteban, (2015). Driving under the influence of alcohol: frequency, reasons, perceived risk and punishment, *Substance Abuse Treatment, Prevention and Policy*, March; DOI: 10.1186/s13011-015-0007-4.

Amanda Delaney, Bella Lough, Michelle Whelan, and Max Cameron. (2004). A Review of Mass Media Campaigns in Road Safety.

Baglo, K., Habib, A., and Peterlin, M. (2013). Share the Road Nova Scotia: Volume 1 Best Practice Review & Stakeholder Consultation. Dalhousie Transportation Collaboratory (DalTRAC), Halifax, NS

Boele-Vos MJ, de Craen S. (2015). *A randomized controlled evaluation study of the effects of a one-day advanced rider training course.* Accid Anal Prev.Vol, 79: Pp- 152-9. –

Bourlanger, A., Daniels, S., Delhomme, P., Deugnier, M., Divjak, M., Eyssarteir, C., et al. (2007). Campaigns and awareness-raising strategies in traffic safety. Deliverable 2.2: Comparison of research designs. Brussels, Belgium: Belgian Road Safety Institute.

Cameron, M., & Harrison, W. A. (1998). Developing an effective public education strategy for road safety based on successful experience in Australasia. Paper presented at the 9th International Conference Road Safety in Europe, Germany.

Carl Sundstrom, P.E. (2020). Road Safety Fundamentals: Concepts, Strategies, and Practices that Reduce Fatalities and Injuries on the Road., Research Associate, UNC Highway Safety Research Center. https://rspcb.safety.fhwa.dot.gov/rsf/

Chaudhary, N. K., Cassanova-Powell, T. D., Cosgrove, L., Reagan, I. and Williams, A. (2014). Evaluation of NHTSA distracted driving demonstration projects in Connecticut and New York. Washington, D.C.: National Highway Traffic Safety Administration. DOT HS 811.

Choudhury, P.S. (2011). Media in Development Communication. Global Media Journal – Indian Edition. Winter Issue. Vol. 2 (2):1-13.

Damen Haile Mariam. (2014). Road traffic accident: A major public health problem in Ethiopia. Ethiop. J. Health Dev. 2014;28(1)

Damen Haile Mariam. (2016). Road traffic accident: A major public health problem in Ethiopia.

Dawit Oluma, (2016). *Road Traffic Accident and Safety Evaluation Case of Addis Ababa Bole Sub City* (MA thesis), Addis Ababa University

Debela Dem. (2019). Road Traffic Accident in Ethiopia from 2007/08-2017/18 (Since Ethiopia Millennium). American International Journal of Sciences and Engineering Research; Vol. 2, No. 2; 2019

Delaney, A., Lough, B., Whelan, M., & Cameron, M. (2004). Review of mass media campaigns in road safety (No. 220). Clayton, Victoria: Monash University Accident Research Centre.

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.

Dermawan and Nusraningrum. (2019). Road Safety Campaigns to Reduce Traffic Accidents For Young Road Users. Pp- 601-606

Divjak, M., and Zabukovec, V. (2009). Evaluation of an Anti-Speeding campaign in Slovenia. A Theoretical Approach to Assess Road Safety Campaigns: Chapter 7. pp. 193-210.

Donovan, R., Henley, N., Jalleh, G., & Slater, C. (1995). Road safety advertising: An empirical study and literature review. Canberra: Federal Office of Road Safety.

Elliott, B. (1993). Road Safety Mass Media Campaigns: A Meta-Analysis. Canberra: Federal Office of Road Safety.

Endalkachew Kabtamu Mekonen. (2020). The Economic Effect of Road Traffic Accidents in Ethiopia: Evidences from Addis Ababa City.

Ethiopia Federal Transport Authority. (2018). Number of Motorized Vehicle in Ethiopia. Addis Ababa: The Reporter Ethiopia English,.

Ethiopian Federal Police Commission. Road traffic accident report. Addis Ababa: Ethiopian Federal Police Commission; 2017.

Evangelos Bekiaris , Marion Wiethoff , Evangelia Gaitanidou. (2021). Infrastructure and Safety in a Collaborative World Road Traffic Safet: Infrastructure and Safety in a Collaborative World.

Fanueal Samson. (2006). Analysis of Traffic Accident In Addis Ababa: Traffic Simulation.

Fesseha Hailu & Sileshi Teshager, (2014). Road Traffic Accident: The Neglected Health roblem in Amhara National Regional State, Ethiopia

Flynn, B. S., Worden, J. K., Secker-Walker, R. H., Pirie, P. L., Badger, G. J., Carpenter, J. H., & Geller, B. M. (1994). Mass media and school interventions for cigarette smoking prevention: Effects 2 years after completion. American Journal of Public Health, 84(7), 1148-1150.

Ivers RQ, Sakashita C, Senserrick T, Elkington J, Lo S, Boufous S. (2016). *Does an on-road motorcycle coaching program reduce crashes in novice riders? A randomised control trial*. Accid Anal Prev.Vol, 86: Pp- 40-6.

Jette Ravn. (2008). Road Safety Campaign Handbook: How to develop and implement successful campaigns and information activities.

Maibach, E. W., & Cotton, D. (1995). Moving people to behavior change: A staged social cognitive approach to message design. In E. Maibach & R. L. Parrott (Eds.), Designing health messages: Approaches from communication theory and public health practice (pp. 41-64

Mefalopous, P., and Kamlongera, C. (2004). Participatory Communication Design: A Handbook. 2nd Edition. FAO. Rome.

Ogunmola. (2013). Signs and Symbols as a Communication strategy: A semiotic study of highway codes in Nigeria, New Media and Mass Communication, 19.

Palmgreen, P., Donohew, L., Lorch, E. P., & Harrington, N. G. (1995). Reaching at-risk populations in a mass media drug abuse prevention campaign: Sensation seeking as a targeting variable. Drugs & Society, 8(3-4), 27-45.

Petty, R. E., and Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer-Verlag.

Phillips, R. O., Ulleberg, P. and Vaa, T. (2011). Meta-analysis of the effect of road safety campaigns on accidents. Accident Analysis and Prevention 43: 1204-1218.

Piyapong J. (2012). *Effectiveness of the 100% motorcycle helmet use campaign in Thailand. Injury Prevention*. 18 (Suppl 1): A193-A193.

Robyn D. Robertson Charlotte R. Pashley. (2015). *Road Safety Campaigns What the Research Tells Us.* Traffic Injury Research Foundation.

Rockville . (2002). Communicating in a Crisis: Risk Communication Guidelines for Public Officials

Rosenstock, I. M. (1977). What research in motivation suggests for public health? Journal of Public Health, 50, 295-302.

Schoch-Spana M, Kwik Gronvall G, Brunson E, Kirk Sell T, Ravi. (2016). How to steward medical countermeasures and public trust in an emergency – a communication casebook for FDA and its public health partners. Baltimore, MA: Center for Health Security;

Scurfield, David Sleet, Dinesh Mohan, Adnan A. Hyder, Eva Jarawan and Colin Mathers, (2004). World report on road traffic injury prevention, Switzerland.

Slinn, P. Guest and P. Matthews. (2005). Traffic Engineering Design: Principles and Practice", Second Ed.,Elsevier Ltd., London.

Stead, M., and Eadie, D. (2007). *Evaluation of Foolsspeed Campaign*: Final phase: Report. Retrieved from: http://www.scotland.gov.uk/Resource/Doc/171178/0047895.pdf.

Sugg C. (2016). Coming of age: communication's role in powering global health. London: BBC Media Action; (http://downloads.bbc.co.uk/mediaaction/policybriefing/role-of-communication-in-global-health-report.pdf, accessed 27 July 2017).

Swaddiwudhipong W, Boonmak C, Nguntra P, Mahasakpan P. (1998). Effect of motorcycle rider education on changes in risk behaviours and motorcycle-related injuries in rural Thailand. *Tropical Medicine & International Health. Vol, 3 (10); Pp- 767-70.*

SWOV. (2009). *SWOV Fact sheet*: Fear-based information campaigns. Leidschendam, the Netherlands. Institute for Road Safety Research.

Tarawneh, M. S., Al-Balbissi, A. H., and Tarawneh, T. M. (2001). The effectiveness on seat belt use in Jordan of a public education campaign. Journal of Traffic Medicine.29(3-4):30-36.

Tariku Ayana Abd. (2017). Road Crashes in Addis Ababa, Ethiopia: Empirical Findings between the Years 2010 and 2014. AFRREV VOL. 11 (2), SERIAL NO. 46, APRIL, 2017:1-13

The Centers for Disease Control and Prevention (2013), Fact sheet

Tulu, G.S., Washington, S., & King, M.J. (2014). Characteristics of Police-reported road traffic crashes in Ethiopia over a six-year period

Turner MM, Shaikh H, Rimal R. (2016). Ebola risk communication project in Liberia: lessons in crisis communication. Washington, DC: Department of Prevention and Community Health, George Washington University;

United Nation. (2020). Road Safety Performance Review Ethiopia

United Nations, (20120). Road Safety Performance Review (RSPR) of Ethiopia, Switzerland.

Vanderstoep, S. W., & Johnston, D. D. (2009). *Methods for Research Everyday Life: Blending Qualitative and Quantitative Approaches* (first edit). San Francisco: John Wiley & Sons, Inc.

Vanlaar, W., Robertson, R., and Marcoux, K. (2008). The Road Safety Monitor 2007: Excessive Speeding. Traffic Injury Research Foundation, Ottawa, ON.

Vasudevan, V., Nambisan, S. S., Singh, A. K., and Pearl, T. (2009). Effectiveness of media and enforcement campaigns in increasing seat belt usage rates in a state with a secondary seat belt law. Traffic Injury Prevention. 10: 330-339. doi: 10.1080/15389580902995190

Vernon D. Plueckhahn. (1980). Road Traffic Accidents and the Prevention of Injury and Death of Vehicle Occupants. Med. Sci. Law (1980) Vol. 20. No.1 Printed in Great Britain.

WHO, (2012). Mobile Phone Use: A Growing Problem of Driver Distraction, WHO; Geneva, Switzerland

Wilson O. Odero and Anthony (1995). Alcohol-Related Traffic Injuries and Fatalities in LMICs: A Critical Review of Literature," in *Proceedings of the 13th International Conference on Alcohol, Drugs, and Traffic Safety*, ed. C.N. Kloeden and A.J. McLean (Adelaide: University of Adelaide, Australia, 1995): 713-20

Wilson O. Odero and Anthony (1995). Alcohol-Related Traffic Injuries and Fatalities in LMICs: A Critical Review of Literature," in *Proceedings of the 13th International Conference on Alcohol, Drugs, and Traffic Safety*, ed. C.N. Kloeden and A.J. McLean (Adelaide: University of Adelaide, Australia, 1995): 713-20

Woratanarat P, Ingsathit A, Chatchaipan P, Suriyawongpaisal P. (2013). *Safety riding program and motorcycle-related injuries in Thailand.* Accid Anal Prev. Vol, 58: Pp-115-121.

World Health Organization, (2015). Reporting on Road Safety: A Guide for Journalists, Switzerland

World Health Organization, (2018). Global Status Report on Road Safety 2018, Geneva

World Health Organization. (2013). Global Status Report on Road Safety. http://www.who.int/violence_injury_prevention/road_safety_status/2013/co…

Wundersitz, L. N., Hutchinson, T. P., and Woolley, J. E. (2010). *Best practice in road safety mass media campaigns: A literature review*. *Centre for Automotive Safety Research*. Adelaide, Australia

Yeser, M. (1990). Transport and Development in the Yemen Arab Republic, Ph.D thesis, University of Wales.

Zampetti, R., Messina, G., Quercioli, C., Vencia, F., Genco, L., Di Bartolomeo, L, and Nante, N. (2013). Nonfatal road traffic injuries:Can road safety campaigns prevent hazardous behaviour? An Italian experience. Traffic Injury Prevention. 14: 261-266. doi: 10.1080/15389588.2012.705189.

Web source:

- http://unhabitat.org/?wpdmact=process&did=NjAyLmhvdGxpbms= (17/08/2015)
- http://www.kbs.twi.tudelft.nl/Publications

Index

Addis Ababa University

College of Humanity Language Studies,

Journalism and Communication

Dear

The interview is designed to collect data for the research entitled on *"The role of communication strategies in reducing road traffic accidents: the case of Addis Ababa Police Commission"*as a partial fulfillment of MA Degree in Journalism and Communication. The study is intended to explore role of communication strategies in reducing road traffic accidents in Addis Ababa city. The interviews need your exact feeling of answers, which makes my study sound and complete. Whatever you answer is considered right; so, feel free and give your true feelings on in each item. Your response will remain confidential and not transferred to other bodies. Hence, I kindly request you to answer the interview honestly and genuinely.

Thank you very much for your kind cooperation!!!

Interview questionnaire

- How you created public educational programs to advise road users on road safety? How the organization implemented those strategies? What are the priorities criteria associated with reducing RTA?
- What measurement your organization gives proper solution for the target group?
    - How your organizations reduce drinking and driving effect? Is it effective?
    - What method your organizations use to aware drivers speed limiting, use seatbelts, importance?
- How did your organization approach training and education campaign on road safety and road users?
- What types of communications tools were implementing to disseminate road safety information?
- Identify any key success factors that should be met to maximize the likelihood of the success of your program and any measures to take these into account?
- What agreements were necessary in developing the partnership to reduce RTA? What guidelines did you follow?
- What are the critical activities that need to be performed to successfully your organization road safety program?
- Identify any key success factors that should be met to minimize RTA and road safety campaign success?
- What do you consider the best practice in integrated communication with stakeholders?
- Do you have any recommendations about traffic accidents risk reduction? Which of these recommendations is the most important?

Addis Ababa University

College of Humanity Language Studies,

Journalism and Communication

Dear

The questionnaire is designed to collect data for the research entitled on *''The role of communication strategies in reducing road traffic accidents: the case of Addis Ababa Police Commission''* as a partial fulfillment of MA Degree in Journalism and Communication. The study is intended to explore role of communication strategies in reducing road traffic accidents in Addis Ababa city. The interview needs your exact feeling of answers, which makes my study sound and complete. Whatever you answer is considered right; so, feel free and give your true feelings on in each item. Your response will remain confidential and not transferred to other bodies. Hence, I kindly request you to fill this questionnaire honestly and genuinely. You are not required to write your name at any place in the questionnaire.

Thank you very much for your kind cooperation!!!

For Driver

PART-I: Personal Information

Instruction: Please indicate your answer by making a"√" mark or writing where it is necessary in space provided.

- Gender Male Female
- Education status Diploma Degree MA/MBA PhD
- Age in year Under 20 20-30 30-40 >40
- Working Media:_____

PART- II: Communication Channel

Instruction: The Following Questions are designed to assess in which communication channel you get information about road safety. Rate the Following questions on communication channel you get information o road safety by Putting a Tick (√) in Space Provided.

	Items	
1	**Radio**	
2	**TV**	
3	**Advertising**	
4	**Poster**	
5	**Brochure**	
6	**Billboard**	
7	**Documentary film**	
8	**Newspaper**	
9	**Social media**	

PART- III: Road Safety Advertising

Instruction: The Following Questions are designed to assess road safety advertising recalling you during driving in. Rate the Following questions on advertising effect recallingyou by Putting a Tick (√) in Space Provided.

No.	Items	Always recall	Often recall	Promoted recall
1	Drink driving			
2	speeding			
3	Seatbelt use			
4	All thems			

PART- IV: Road Safety slogan

Instruction: The Following Questions are designed to assess your ability to remember the road safety slogan messages. Rate the Following questions on you remembered road safety advertisement messages by Putting a Tick (√) in Space Provided.

No.	Items	Yes, I Remember	No, I don't Remember
1	Don't drink and drive		
2	Don't drink and walk		
3	Speed kills! Drive safely		
4	Maintaining sufficient distance between vehicles		
5	Give priority for the pedestrian		
6	Slow you speed nearby school		
7	Wear the belt and reduce 50% of accident		
8	don't phone call and drive		
9	Don't drive with fatigue		

For Pedestrian

PART-I: Personal Information

Instruction: Please indicate your answer by making a"√" mark or writing where it is necessary in space provided.

- Gender Male Female
- Education status Diploma Degree MA/MBA Phd
- Age in year Under 20 20-30 30-40 >40
- Working Media:_____

PART- II: Communication Channel

Instruction: The Following Questions are designed to assess in which communication channel you get information about road safety. Rate the Following questions on communication channel you get information o road safety by Putting a Tick (√) in Space Provided.

	Items	
1	**Radio**	
2	**TV**	
3	**Advertising**	
4	**Poster**	
5	**Brochure**	
6	**Billboard**	
7	**Documentary film**	
8	**Newspaper**	
9	**Social media**	

PART- IV: Road Safety slogan

Instruction: The Following Questions are designed to assess your behavior to implement road safety rule. Rate the Following questions on your behavior to implement road safety rule by Putting a Tick (√) in Space Provided.

No.	Items	Yes	No
1	Used a seatbelt when you are backseat		
2	Used a seatbelt when you are front seat		
3	Using mobile phone while crossing the road		
4	Crossed the road from places not designated for pedestrian crossings		

PART- IV: Road Safety slogan

Instruction: The Following Questions are designed to assess your ability to remember the road safety slogan messages. Rate the Following questions on you remembered road safety advertisement messages by Putting a Tick (√) in Space Provided.

No.	**Items**	**Yes, I** Remember	**No, I don't** Remember
1	Don't drink and drive		
2	Don't drink and walk		
3	Speed kills! Drive safely		
4	Maintaining sufficient distance between vehicles		
5	Give priority for the pedestrian		
6	Slow you speed nearby school		
7	Wear the belt and reduce 50% of accident		
8	don't phone call and drive		
9	Don't drive with fatigue		