



# SCHOOL OF COMMERCE

## **The Effect of Media Advertisement on Reducing Road Traffic Accidents: the case of diver's in Addis Ababa.**

**By Deborah Kassaye**

**(ID GSR/6766/12)**

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Advisor: Belaynesh Tefera (PhD)

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School of Graduate studies

Marketing Management

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**By Deborah Kassaye**

**ADVISOR**

**DATE**

**SIGNATURE**

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**INTERNAL EXAMINER**

**DATE**

**SIGNATURE**

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**EXTERNAL EXAMINER**

**DATE**

**SIGNATURE**

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## DECLARATION

I hereby declare that this research paper entitled “The effect of media advertisement on the reduction of road traffic accident; the case of drivers in Addis Ababa.” Is my original work and has not been used by others for any other requirements in any other university and all sources of information in the study have been appropriately acknowledged.

Declared by:

Deborah Kassaye	.....	(2021)
Student	Signature	Date

Certified by:

Belaynesh Tefera (PhD)	.....	(2021)
(Advisor)	Signature	Date

## ABSTRACT

*Road traffic accidents are major preventable causes of disability and death in Ethiopia, this is a serious problem in the capital city of Addis Ababa, as road traffic accidents have psychological, social and economic impact on families as well as the country as a whole. This paper discusses the effect of media advertising on reducing road traffic accidents among drivers in Addis Ababa, with particular reference to social media advertisement, billboard advertisement, radio advertisement and TV advertisement .A quantitative technique was used to collect and interpret data. The target population of this study were the residents of Addis Ababa, data was collected through a convince survey with a sample size of 400. The findings suggested that to social media advertisement, billboard advertisement and radio advertisement have a positive significant relationship with reducing road traffic accident. On the other hand, TV advertisement has a positive but an insignificant relationship with reducing road traffic accident. The study recommends the utilization of social media advertisement as the main platform to transmit messages with regards to reducing road traffic accidents among drivers.*

**Keywords:** *Road traffic accidents, social media advertisement, billboard advertisement, Radio advertisement and TV advertisement.*

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## **Acronyms**

**RTA**= Road Traffic Accident

**TVA**= TV Advertisement

**RA**= Radio Advertisement

**BA**= Billboard Advertisement

**SMA**= Social Media Advertisement

**WHO**= World Health Organization

**CDC**= Center for Disease Control

**MOT**= Ministry of transport

**SPSS**= Statistical Package for Social Sciences

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# CHAPTER ONE

## **Introduction**

*This presents an introduction to the research area. Topics like the background of the study; the statement of the problem, objectives of the study, research question, and delimitation of the scope of the study, the significance of the study, definitions of key terms, and the organization of the study have been discussed.*

## **Background of the study**

By facilitating the movement of goods and people, road transportation benefits both nations and individuals. It improves access to jobs, economic markets, education, recreation, and health, all of which have direct and indirect positive effects on population health. However, the increase in road transportation has imposed a significant burden on people's health, in the form of road traffic injuries and the health consequences of a decrease in physical activity (Beyene, 2019).

According to the publication made on injury prevention and control by the Centres for Disease Control and Prevention (*Road Traffic Injuries and Deaths—A Global Problem*, 2020), each year 1.35 million people die on roadways due to road traffic accidents around the world. Every day, almost 3,700 people die in road traffic crashes all around the globe, involving cars, buses, motorcycles, bicycles, trucks, or pedestrians. More than half of those killed on the road are pedestrians, motorcyclists, and cyclists (*Road Traffic Injuries and Deaths—A Global Problem*, 2020).

According to a report from world health organization (WHO, 2020), It is estimated that road traffic injuries are the eighth leading cause of death in all age groups worldwide, and the leading cause of death for children and young people aged 5-29. More people are now killed in traffic accidents than from HIV/AIDS (WHO, 2020). Countries with low and middle-income account for 93 percent of the world's road traffic deaths, despite having only 60 percent of the world's registered vehicles; it makes the road traffic death rate three times higher than high-income countries (WHO, 2020),

In Ethiopia road traffic accident (RTA) is a common public health problem according to a report from the World Health Organization report, Ethiopia is considered one of the worst countries in the world with a high rate of fatality and injury caused by road traffic accidents (WHO, 2020). In Ethiopia RTA fatalities and injuries affect a large number of road users every year, nearly 2000

people die due to road traffic accidents, and from those 48% are pedestrians, 45% passengers, and 7% drivers, and over 400 to 500 Million ETB is lost yearly (WHO, 2020).

Road traffic injuries were projected to be the third leading cause of disability in the world by 2020 (WHO, 2020), but the occurrence of the worldwide pandemic COVID19 changed that. Because many countries were on lockdown, citizens were instructed to stay at home and only necessary movements were permitted, resulting in a reduction in road congestion and collision all over the world (IEA, 2020). In Ethiopia, according to the report that the ministry of transport (Bekele, 2020) put out the number of death caused by road traffic accidents has decreased by 10.09%. Although the decrease of fatality and overall collision has shown a significant decrease RTA is still a major concern in the country, the number of road accidents is slowly climbing as the normalcy of life is restored and as people are carrying out their usual routine in life.

The major cause of road traffic accidents is population growth, lack of awareness, poor road design and condition, increased vehicle density and increased number of vehicles, over speeding, rash and negligent driving, bad pedestrian crossing behavior, incompetent drivers and driving under the influence of alcohol or drugs, and violation of the rules (Abera, 2019).

Advertising is powerful communication force and an important tool. It helps the modern day marketers to sell goods, ideas and images by providing information and persuading people. Advertising has become an integral part in every society. Everybody encounters advertising every day, whenever we open newspapers go through a magazine, listen to radio, watch television, open letters play castle or walk down a busy street, we are exposed commercial messages. Popularly known as advertising therefore it is virtually impossible for any of us to escape contact with some form of advertising or the other (Sahu and Raut, 2003). Russell and Lane (1993) stated that advertising is an unavoidable component of our everyday lives. No matter where we are, advertising is with us – educating us, enticing us to buy new products and services, begging us to stop activity such as drug use, and persuade us to support some worthy cause or political candidate.

The study of road traffic accidents in Addis Ababa has been primarily limited to other fields of natural science and social science, this study aims to assess the effect of media advertising on the reduction of road traffic accidents by targeting drivers that reside in Addis Ababa.

## **1.2 Statement of the problem**

In a low-income country like Ethiopia, traveling from one place to another is necessary to carry out day-to-day work, and the best way to do that is using road transportation. However, according to different studies and reports road transportation in Ethiopia specifically the capital city Addis Ababa is very challenging because many injuries and deaths occur on the road.

According to the ministry of transport's report (Bekele, 2020), Ethiopia had only 1.2 million vehicles, but between the years 2019-2020, 4,133 people died in road transport accidents, more than 12,000 people sustained heavy and light physical injuries, and more than 34 deaths are reported per 10,000 vehicles. As a result, Ethiopia is among the countries with the highest accident rates.

A very recent study in Addis Ababa showed that the fatality rate because of road traffic accidents in the city was 16.1%, according to previous studies the fatality and injury rate of such accidents has been continually increasing at an alarming rate each year (Abera, 2019).

To address these issues, the government and other concerned parties have drafted, revised, and implemented various traffic-related legislation over the years. The ministry of transport to raise awareness and influence behavior change has also introduced different marketing campaigns. They have also been working closely with the ministry of education to incorporate road safety education (Bekele, 2020).

Ministry of transport gave a report in 2020, which disclosed that the number of death caused by road accidents in Ethiopia has dropped to a 10.09%. However the decrease in the number of deaths, injuries (both high and low) is very small, road traffic accidents is growing as the restriction of movement that has been set on citizens due to the outbreak of the world wide pandemic COVID19, is lifted and as things go back to normal (Bekele, 2020).

Speeding, impaired driving, pedestrian recklessness and drunk driving, running a red light, not giving priority to pedestrians, the condition of the road, the weather, and the technical functionality of the vehicle, and an increase in population are all factors that contribute to such accidents (Abera, 2019) These factors play a role in accidents, but previous studies show that the majority of road traffic accidents are caused by behavioral issues on both the driver's and pedestrian's sides.

Road traffic accident in Ethiopia is a serious problem leading to the death and physical injuries of many young citizens that needs to be addressed. However the studies conducted in reducing road traffic accidents with in the marketing perspective is lacking especially in the context of Ethiopia.

Therefore, this study is important to determine the effectiveness of Advertising Medias in reducing road traffic accident. This study analysed the effect of media advertising on the reduction of road traffic accidents among driver's in Addis Ababa to fill in the knowledge gap.

### **1.3 Research questions**

In light of the above statement of the problem, the study tries to answer the following basic research questions

1. What is the effect of TV Advertisement on road traffic accidents?
2. What is the effect of Billboard Advertisement on road traffic accidents?
3. What is the effect of Radio Advertisement on road traffic accidents?
4. What is the effect of Social Media Advertisement on road traffic accidents?

### **1.4 Research objectives**

#### ***1.4.1 General objective***

The general objective of the study is to evaluate the effect of social marketing's promotion Medias on road traffic accidents in Addis Ababa, Ethiopia.

#### ***1.4.2 Specific objective***

1. To investigate the effect of TV Advertisement road traffic accidents.
2. To investigate the effect of Billboard Advertisement road traffic accidents.
3. To investigate the effect of Radio Advertisement on road traffic accidents.
4. To investigate the effect of Social Media Advertisement on road traffic accidents.

### **1.5 Significance of the study**

Now a day's traffic accident is a major health issue in Ethiopia, especially in Addis Ababa. Addis Ababa is a city that relatively has higher traffic flow as well as a high rate of traffic accidents compared to other cities of the country. This research has the following significance:

The study helps determine the extent to which social marketing promotion Medias affect road traffic accidents, this will be input for Addis Ababa Police Commission, Addis Ababa City Management Road Traffic Agency, and Addis Ababa Transport authority stakeholders and leaders, it will enable them to make more informed decisions on the area of advertisement campaigns.

This study will also help inspire further investigation on areas related to road traffic accident with in the marketing field; it will serve as an input in literature for future research.

## **1.6 Scope of the study**

Conceptually, Advertising has different Medias that are helpful in bringing awareness and influencing safe road driving behaviour, however, this study is delimited to variables that are commonly implemented in the country, such as TV Advertisements, Radio Advertisements, Billboard Advertisements, and Social Media Advertisements. The reason that this study takes on only four variables is that these are the variables that are not researched with in the marketing perspective and because it is impossible to cover every side of the phenomenon while working with a very limited time.

## **1.7 Limitations of the study**

The major restriction in the study is unavailability and insufficiency of literatures and data that are related to the effect of media advertising on road traffic accidents, especially in Ethiopia it has been extremely difficult to find research articles that are directly linked to the study.

Another limitation was the use of a convenience sampling methodology, in which data was acquired from certain driver's who were largely discovered on the internet through various social media platforms. People who are not interested in social media and do not have an email address were left out of the study.

Lastly, road traffic accidents are a nationwide problem in Ethiopia; however, the applicability of the outcome of the study is limited to the city of Addis Ababa.

## **1.8 Research Hypothesis**

The hypotheses formulated after reviewing the relevant literature were presented below:

**H1a:** TV advertising (TVA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).

**H1o:** TV advertising (TVA) has negative and statistically insignificant relationship with Reducing Road Traffic Accident (RTA).

**H2a:** Radio advertising (RA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).

**H2o:** Radio adverting (RA) has negative and statistically insignificant relationship with Reducing Road Traffic Accident (RTA).

**H3a:** Billboard advertising (BA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).

**H3o:** Billboard advertising (BA) has negative and statistically insignificant relationship with Reducing Road Traffic Accident (RTA).

**H4a:** Social Media advertising (SMA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).

**H4o:** Social Media advertising (SMA) has a negative and statistically insignificant relationship with Reducing Road Traffic Accident (RTA).

## **1.9 Definition of key terms**

**Advertising:** is any paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor Belch (2012).

**Road traffic accidents (RTA):** refers to an incident having led to personal injury or killed or damage to property that has taken place in an area intended for public transport or generally used for transport and in which at least one of the involved parties has been a moving vehicle (AbdulRahman Taiwo ajala,2016).

**Traffic:** the movement of vehicles, ships, persons, etc., in an area, along a street, through an air plane, over a water route, etc. (Collins English dictionary, 2020)

**Road traffic injury:** an injury occurred on the road with an involvement of at least one motor vehicle or bicycle (Road Safe, 2014).

**Advertising media:** various means (advertising vehicles) such as billboards, magazines, newspapers, radio, television, and internet by which promotional messages are communicated to the public using words, speech, and pictures Kotler (2000).

**Road accident death:** means the death of any person who dies within 30 days or such time period as may be specified by the National Authority, as a result of injuries sustained due to an accident in a public place. (Road Safe, 2014)

**Pedestrian:** a person who is walking, especially where vehicles go (Cambridge Dictionary, 2020).

**High-income countries:** Are countries whose Gross National Income Per capita is US\$ 12,536 or more (World Bank, 2020).

**Middle-income countries:** Are countries whose Gross National Income Per capita is between US\$ 1,036 to 12,535 (World Bank, 2020).

**Low-income countries:** Are countries whose Gross National Income Per capita is US\$ 1,035 or less (World Bank, 2020).

### **1.9 Organization of the study**

The study report is organized into five chapters, chapter one introduces the research area by presenting the background of the study, statement of the problem, objectives, limitations, and delimitations of the study. Chapter two contains explored literature and chapter three provides a methodology that describes the research approach and design, sampling methods, data sources and types, data collection procedures, and lastly the ethical consideration of the study. Chapter four provides the data analysis and findings discussion, and finally Chapter five provides the conclusion and recommendation.

## CHAPTER TWO

### LITERATURE REVIEW

*In this chapter an extensive review of the available theoretical and empirical literature to the problem under investigation and critique of the previous literature related to the study is provided.*

#### 2.1 Theoretical Review

##### 2.1.1 Concept of Advertising

According to American Marketing Association, "advertising is any paid form of non-personal presentation and promotion of ideas, goods and services by an identified sponsor". Advertising in business is a form of marketing communication used to encourage, persuade, or manipulate an audience to take or continue to take some action.

Advertising can be defined in a variety of ways, depending on the point of view; it is defined as a communication process, a marketing process, an economic and social process, a public relations process, or an information and persuasion process. Advertising is defined as the non-personal communication of information about products, services, or ideas by identified sponsors through various media (Bov'ee and Arens, 1989).

Advertising is the use of paid space in a publication; for instance, or time on television, radio, or cinema, to persuade people to take a particular action or reach a point of view. It may also be interpreted to include posters and other forms of outdoor advertising (Wilmshurst, 1985).

According to Arens (2005), advertising is a type of communication that aims to persuade an audience to buy or act on products, information, or services. Furthermore, Bulla and Scott (1994) define advertising as a type of marketing communication that is used to aid in the sale of goods and services. Typically, it communicates a message that includes the name of the product or service as well as how that product or service may benefit the consumer. Advertising is typically intended to persuade potential customers to buy or consume more of a specific brand of product or service.

Donald (2000) proposed that advertising's purpose is to encourage purchase by temporarily increasing the value of a brand. The primary goal of advertising is to convert favorable attitudes into actual purchases, to improve attitudes toward a brand, and to cultivate brand loyalty at all times.

Advertisements in print (newspapers, magazines, billboards, flyers) or broadcast (radio, television) media typically include images, headlines, product information, and, on occasion, a response coupon. Broadcast advertising, on the other hand, consists of an audio recording or video narrative, which can range from 15-second spots to longer segments referred to as Infomercials which are typically 30 to 60 minutes long (Busari, 2002).

### **2.1.2 Forms of Advertising**

According to Kotler and Armstrong, there are three types of advertising: informative, persuasive, and reminder. Informative advertising is used to inform customers about a new product or feature as well as to build the company's image (Kotler and Armstrong, 1999). Persuasive advertising is used to generate selective demand for a brand by convincing consumers that it provides the best value for their money. It persuades a customer to accept sales calls and make a purchase right away. Some persuasive advertising has evolved into comparison advertising, in which a company compares its brand directly or indirectly to one or more other brands.

### **2.1.3 Objectives of Advertising**

Many brands use advertisements to promote their products as one of their current marketing strategies. The goal of mass advertising is to draw attention to a product, ensure a long-term association with consumers, or to remind the customers about the product (Rai, 2013).

The primary goal of an advertiser is to reach out to potential customers and influence their awareness, attitudes, and purchasing behavior. They spend a lot of money in order to keep people (markets) interested in their products. To be successful, they must first understand what motivates potential customers why they act the way they do.

The advertisers' goals are to collect enough relevant market data to create accurate buyer profiles in order to identify the common group (and symbols) for communications. This entails researching consumer behavior: mental and emotional processes, as well as physical processes activities of people who buy and use goods and services to meet specific needs and desires (Arens, 1996).

To generate demand for new products by explaining their utility, to announce a new product or service, to increase sales by attracting new customers, to develop brand preferences, to expand the market for new buyers, to assist salespeople in their selling efforts, and to warn the public

against imitation of the firm's product, to prepare the ground for new products, to prohibit new products to prepare the ground for new products, to prevent new entrants, to make special offers through sales promotion, to neutralize competitors' advertising, and to boost the firm's goodwill.

The goal of any advertising is to inform prospective customers about the 10 products and services. The general goals of advertising are to inform customers about the features and applications of the product (Helina, 2012).

Advertising is related and starts with a foundation of raising awareness and strengthening a company's position or image. Advertising is what makes the companies known. The second role is to foster a favourable environment for salespeople.

Customers may order directly from advertisements in some cases, so the ultimate goal of advertising is to generate sales (Dwyer and Tanner, 2002). Furthermore, they define mass media advertising as "non-personal, paid announcements made by an identified sponsor to reach large audiences, create brand awareness, help position brands, and build brand images." (Dwyer and Tanner, 2002).

Advertising is also an effective tool for increasing company or brand equity because it provides consumers with information while also influencing their perceptions. Advertising can be used to create favorable and distinct images and associations for a brand, which is especially important for businesses selling products or services that are difficult to differentiate based on functional attributes. Companies selling products and services to the consumer market, as well as retailers and 15 other local merchants, rely heavily on advertising to communicate with their target audiences. Advertising is also widely used by businesses and professionals in the business and professional markets to reach current and potential customers (Belch & Belch, 2009).

In today's market, the variety of products and services is so vast that it is impossible to remember or purchase them all. The primary goal of advertising a specific product or service is to capture the customer's attention and analyze the impact of advertising on the customer's behavior, which is determined by a variety of cognitive, emotional, and behavioral factors as well as behavioral aspects. The customer is at the heart of advertising, and his or her psychology is influenced by a variety of factors, including the advertising itself, which aims to arouse the customer's desire to acquire the advertised product, and, most importantly, to achieve the act of buying a product (Jaktien, Susnien, and Narbutas, 2008).

All efforts to create an advertisement are focused solely on making it so effective and persuading in a natural way to serve the goal of meeting the positively affects the consumer psyche (Rai, 2013).

#### **2.1.4 The Importance of Advertising**

Advertising can serve a variety of functions for any business when used correctly, and the results can be dramatic. It aids in the identification of products and their sources, as well as their differentiation from others, and it communicates information about the products, their features, and their point of sale; it aids in the attempt to induce new products and to advocate for reusing them. It has the potential to increase the distribution of goods and services on a local or global scale (Arens, Schaefer & Weigol, 2009).

Advertising can assist businesses in raising consumer awareness of an unmet need or introducing a product that consumers may find valuable. When new products enter the market, this influence is often present. Customer awareness of these items is frequently low until companies promote them and attempt to drive customer demand through advertising (Dinu & Dinu, 2012).

The role of advertising shifts depending on what the organization wants them to do. Advertising is used by a company to help it survive the effects of economic trends. Nonetheless, economists believe that advertising has a significant impact on consumer behavior and that, in the long run, advertising can lead to competition. Based on the understanding of advertising, the approach is rooted in the organization's search for the correct answer on the impact of competition. As a result, the accepted basic role of advertising is to provide consumers with the appropriate amount of information about the product or services, which is related to the competition's goal of delivering the consumer satisfaction.

According to Rahman (2012), advertising is critical in the process of moving goods/services from producers to consumers. The GDP (Gross Domestic Product) may increase significantly if mass marketing is used to distribute the output of production. Advertising aids in mass marketing by assisting the consumer in making choices and preferences from among the various products and services available for his selection and option. In other words, advertising is simply an economic movement with one goal in mind to increase consumer demand for the product as well as sales volumes.

Advertisements are typically highly informative, presenting the customer with a number of important product attributes or features that will lead to favorable attitudes and can serve as the foundation for rational brand preference (Arens, 1996).

Advertising is a form of communication as well. It is a highly structured form of applied communication that employs both verbal and nonverbal elements that are composed to fill a specific space and time determined by the sponsor. Consumers are more likely to buy a brand if they receive effective communication through advertising (Belch & Belch, 1998).

Whatever else advertising tries to accomplish, whether through words or images, the goal is always to convey information. However, the information is not always about a product or service. Advertising is used to convey messages ranging from politics to social consciousness. Advertising, according to Lancaster and Massingham (2011), has three goals:

- I. **Informative Advertising:** Figures prominently in the early stages of a product category, where the goal is to generate primary demand, such as: informing the market about a new product; suggesting new uses for the product; informing the market of a price describing how the product works; describing available services; and correcting false impressions; assuaging buyers' fears; and establishing a company image (Monga, and Sighn 2009).
- II. **Persuasive Advertising:** This becomes important during the competitive stage, when a company's goal is to create selective demand for a specific brand. Some persuasive advertising has shifted into the comparative advertising category, which seeks to establish the superiority of one brand through specific comparison of one or more brands more attributes in common with one or more other brands in the product category (Agegnehu and Ahmed 2007).
- III. **Reminder Advertising:** This is especially important with mature products. Expensive four-color Coca-Cola advertisements in magazines serve the purpose of reminding people to buy it rather than informing or persuading them (Perreault, and McCarthy 1998).

### 2.1.5 Media Advertising

Advertisers create and place advertisements for a variety of reasons. Some of the most fundamental types of advertising are based on functional goals, or what the advertiser is attempting to achieve. Primary and selective demand stimulation, direct and delayed response advertising, and corporate advertising are all functional goals for advertising (O'Guinn, Allen, and Semenik, 2000).

Advertising can be done in a variety of ways, including visual, audio, and print media. The use of visual media Television, billboards, posters, prices with the company's product name, and brochures' Newspapers, brochures, stickers, magazines, business cards, and new letters are examples of print media as well as mobile vehicles. Other advertising methods include infomercials, event sponsorship, participation in trade shows, celebrity advertising, email advertising, and social network advertising (Kumar, and Mittal 2001).

- i. **Print Media Advertising:** Print advertising is a form of marketing that uses physically printed media to reach customers on a broad scale. Advertisements are printed in hard copy across different types of publications such as newspapers, magazines, brochures, or direct mail; it is common practice to advertise products in newspapers or magazines. People who read newspapers or other publications have a habit of perusing the print advertisements they come across. The decision to purchase the product may not be instantaneous, but it is lodged in their subconscious mind. They are tempted to purchase the product the next time they see it on the market.

Magazines and newspapers have been used as advertising mediums for over two centuries, and for many years they were the only major media available to advertisers. With the growth of broadcast media, particularly television, reading habit has declined, more consumers turned to television viewing not only for entertainment but also for news and information. Nonetheless, despite competition from broadcast media, newspapers and magazines have remained media vehicles that are important to both consumers and advertisers.

- ii. **Outdoor Advertising:** Outdoor advertising, also known as out-of-home advertising, reaches consumers when they are outside their homes. According to the Outdoor Advertising Association of America, this is where consumers spend 70% of their time. Outdoor advertising is a popular form of advertising in the modern era. This makes use of a variety of tools and techniques to attract customers outside. Billboards, kiosks, banners, and a variety of events, tradeshows and promotions are the most common forms of outdoor advertising put on by the company.

Billboard advertising is very popular; however, it must be very brief and catchy in order to capture the attention of passers-by. The kiosks not only provide a convenient outlet for the company's products, but they also serve as an effective advertising tool to publicize the company's products. Organizing or sponsoring a number of events provides an excellent

opportunity for advertising. For product promotion, the company can organize trade shows or even exhibitions. Outdoor advertising specifically billboard advertising is important to help create awareness about road traffic awareness, since people spend the majority of their time travelling outdoors; they are very likely to notice the billboard advertisements along the road.

According to (Gadek, 2020), people respond more favourably to outdoor media than in-home media. This is due to the flood of digital advertisements to which they are exposed, or because in-home advertisements can feel intrusive and unwelcome, outdoor advertising is acceptable by the customer, and in some cases, such as when people view a billboard from their vehicle, they are more likely to respond.

In addition, more than 60% of consumers are more likely to respond to outdoor advertising (Gadek, 2020, a response to an advertisement can include things like visiting a website displayed on the advertisement, having a conversation about the advertisement, or calling a phone provided by that advertisement.

- iii. **Broadcast Advertising:** Radio and television commercials are examples of broadcast advertising. Broadcast media reaches a large number of people. Because radio and television broadcast, marketing can reach national or even global audiences, it is referred to as mass marketing.

The cost of television advertising is frequently determined by the length of the advertisement, the time of broadcast (prime time/peak time), and, of course, the popularity of the television channel on which the advertisement will be broadcasted. The radio may have lost its allure as a result of new media, but it remains a popular medium for small-scale advertisers. Radio jingles are a popular advertising medium that has a large impact on the audience. A radio commercial must be played several times before it becomes ingrained in the minds of the listeners. As a result, the frequency of the advertisement is critical, the target audience's demographic is also important.

Internet or online advertising makes use of the Internet or the World Wide Web to entice customers to buy their products and services. Advertisements on search engine result pages, rich media ads, banner ads, advertising on social networks, email marketing and so on are examples of this type of advertising. Online advertising has advantages, one of which is the immediate publication of the commercial and its availability to a global audience. However, along with the advantages, there are drawbacks. Advertisers nowadays

use distracting flashing banners or send out mass email spam messages to people. This can irritate customers, and even legitimate advertisements may be ignored as a result.

Television or TV advertisement is important to grab the attention of viewers by combining light and sound this is especially important to promote road safety because it allows the viewers to hear and see the message that is being transmitted this leads to a better understanding of the message that is being broadcasted.

According to (Bean-Mellinger, 2018) TV advertisements are intrusive, capable of interrupting whatever else a viewer might be doing to watch and listen to the message that is being broadcasted. TV advertisements are also excellent tools that help foster emotion and empathy, because it can incorporate the right visual actions, proper emphasis and pauses for emotions.

Radio advertisement is important because it can reach many audience at once, when people are not reading , watching TV or scrolling through social media, they listen to the radio, this is very important when it comes to advertising about road traffic accidents to drivers, they are more likely to listen to the radio while driving.

According to (Hetherington, 2020), Radio allows messages to be specifically created and localized to each audience. Advertisers can target their message to specific demographics and communities, geographic areas, and around events and genres in a market. Each radio station is operated with specific market segments in mind, so after a careful selection process, the intended message will be Advertised to the audience that has been targeted.

(Hetherington, 2020), also stated that Advertising works by repetition, the target audience may well need to hear the commercial three or four times before they respond to the call to action. To reach this level of frequency, radio advertising is usually more cost-effective than other media. People choose to listen to the radio and they listen on average to almost 15 hours of commercial radio each week.

According to (Newberry, 2021) social media is important to grab the attention of the youth, as they spend majority of their time on different social media platforms, it allows direct connection with the audience, and this in turn allows the advertiser to know their audience better and to make the content more personalized to the audience. This is very important in advertising about road traffic accidents to different target groups.

According to (Newberry, 2021) Social media posts have the ability to go viral, as people start liking, commenting on, and sharing on the social posts, the content is exposed to new audiences meaning their friends and followers. As people share the content with their networks, and their networks follow suit, the content spreads across the internet, getting thousands or even millions of shares.

- iv. **Public Service Advertising:** Public service advertising is a method of using advertising as an effective communication medium to convey socially relevant messages about important issues and social welfare causes such as AIDS, energy conservation, political integrity, deforestation, illiteracy, and poverty, to name a few. Today, public service advertising is increasingly being used in non-commercial settings in a variety of countries around the world to promote a variety of social causes.
- v. **Celebrity Advertising:** Although the audience is becoming smarter and the modern-day consumer is becoming immune to the exaggerated claims made in the majority of advertisements, there is still a segment of advertisers who rely on celebrities and their popularity to promote their products. Using celebrities for advertising entails signing celebrities up for advertising campaigns that include all types of advertising, such as television commercials or even print advertisements.

#### **2.1.6 Classification of Advertising**

The nature and purpose of advertising differ from one industry to the next and/or from situation to situation. The targets of an organization's advertising efforts frequently change, as do the role and function of advertising in the marketing program. One advertiser may want to elicit an immediate response or action from the customer, whereas another may want to build awareness or a positive image for its product or service over time.

Marketers use national and retail/local advertising to reach the consumer market, which can stimulate primary or selective demand. They use business-to-business, professional, and trade advertising for business/professional markets (Belch & Belch, 1998).

**National Advertising:** is advertising carried out on a national or regional scale by large corporations. The majority of advertisements for well-known companies and brands seen on prime-time television or in other major national or regional media are for well-known companies and brands these are some examples of national advertising.

National advertisers' goals are to inform or remind consumers of the company or brand and its features, benefits, advantages, or uses, as well as to create or reinforce its image so that consumers will be inclined to purchase (Belch & Belch, 2006).

**Local Advertising:** is advertising done by retailers or local merchants to entice customers to shop at a specific store, use a local service, or patronize a specific establishment. Retail or local advertising tends to emphasize specific patronage motives such as price, hours of operation, service, atmosphere, image, or merchandise assortment. Retailers are concerned with building store traffic, so their promotions often take the form of direct-action advertising designed to produce immediate store traffic and sales (Belch & Belch, 2009).

**Business-to- Business Advertising:** is advertising aimed at individuals who purchase or influence the purchase of industrial goods or services for their businesses. There are three basic categories of Business-to-Business advertising: Industrial advertising targeted at individuals in businesses who buy or influence the purchase of industrial goods or other services. Industrial goods are products that either become a physical part of another product (raw material or component parts), are used in manufacturing other goods (machinery), or are used to help a company conduct its business. Business services such as banks, insurance, travel services, and health care are also included in this category. Professional Advertising is advertising targeted to professionals such as doctors, lawyers, dentists, engineers, professors to encourage them to use a company's product in their business operations. It might also be used to encourage professionals to recommend or specify the use of a company's product by end-users. Trade Advertising- is advertising targeted to marketing channel members such as wholesalers, distributors, and retailers. The goal is to encourage channel members to stock, promote, and resell the manufacturer's branded products to their customers (Belch & Belch, 1990).

### **2.1.7 The importance of Advertising in Road Traffic accidents**

Road traffic accidents are a vital public concern and one that affects each of us every day. We all have a social responsibility to ensure safety on our roads. Road traffic accidents, fatalities and disabilities have increased to the point that authorities have reacted to the increase in the latter. Creating awareness when it comes to safety in road traffic accidents is very essential where enough control of threats, physical, material and moral needs to be exercised.

Individuals, organizations and communities to achieve that ultimate goal of bringing awareness of safety when it comes to road traffic accidents have used various advertisements as a promotion tactic to organize efforts. Behavior changes, whether they are structural, or attitudinal, all aim at

creating sustained supportive physical, social, cultural, technological, political, economic, and organizational environments for safety. The aim of promotion when it comes to road traffic accident is to change attitudes and behavior as a means to achieve a milieu and a social environment with built-in safety.

When it comes to bringing safety amongst the community or creating awareness, the main promotional strategy that was used is advertisement.

Nowadays, we all have firm beliefs about what advertising is, as well as strong emotions and judgments about it. Advertising has several different definitions. It could be described as a communication, marketing, or sales process, an economic and social process, a public relations process, or an information and communication technology process. Depending on the perspective of different people.

A modern definition of advertising, according to Wijaya (2012), covers additional essential variables such as media, audience, and goals. The publication defines advertising as a paid kind of persuasive communication that employs mass and interactive media to reach a large audience in order to link a known sponsor with potential customers and provide information about product.

## **2.2 Empirical Review**

### **2.2.1 Impact of Road Traffic Accidents**

The effects of injuries and fatalities due to road traffic accidents (RTAs) have a tremendous impact on socio-economic development of a country. RTAs causing an estimated 1.2 million deaths and 50 million injuries per year (World Health Organization, 2004) are one of the most threatening issues to a government. The major states that contribute to the development of country in various aspects, encounters serious threat of RTAs.

According to a study that was done in Mekelle city from February to June 2015, a binary logistic regression was used to identify factors associated with RTA. The results were as follows:

The magnitude of RTA was found to be 23.17%. According to the drivers' perceived cause of the accident, 22 (38.60%) of the accident was due to violation of traffic rules and regulations. The majority of the victims were pedestrians, 19 (33.33%). Drivers who were driving a governmental vehicle were 4.16 (adjusted OR (AOR) 4.16; 95% CI 1.48 to 11.70) times more likely to have RTA compared with those who drive private vehicles. Drivers who used alcohol were 2.29 (AOR 2.29;

95% CI 1.08 to 4.85) times more likely to have RTA compared with those drivers who did not consume alcohol.

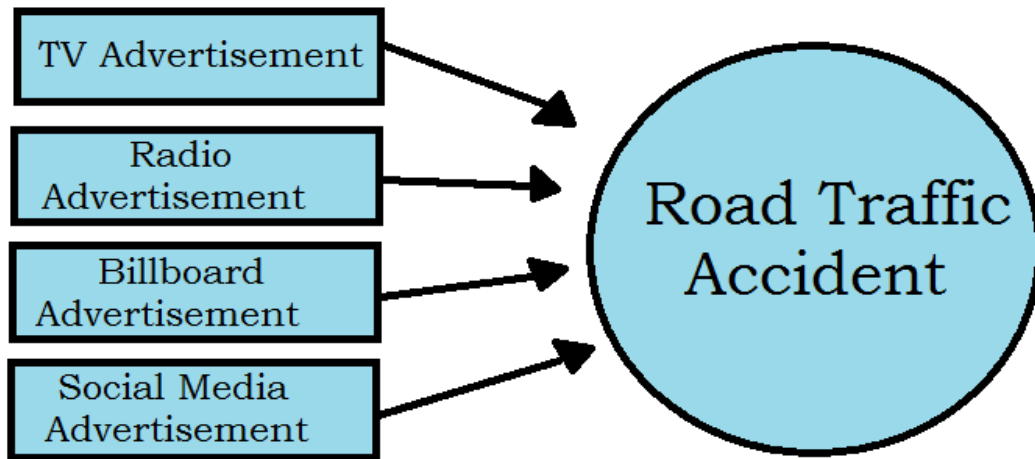
### **2.2.2 The application of advertisements in reducing road traffic accidents**

According to a research paper on road safety, an investigation was done using physical fear threat appeals. The system of penalty points was introduced in Ireland in 2003 and this saw the lowest figure killed on Irish roads since 1964 (336 deaths in 2003). There seems to be dramatic improvement fatal collisions in Ireland between 1972 and 2004. In 1973, there were over 600 people killed on Irish roads, 30 years later in 2003, this figure had dramatically declined to 336. Experience in 2007 shows that, keeping road deaths down remains a constant battle, but road deaths still managed to decline with 338 deaths in 2007, from 365 in 2006. This represents a significant improvement given the increasing volumes of traffic on Irish roads. In 1977, there were 748 000 registered vehicles on Irish roads - this had increased to 1.94 million in 2003 (NRA, 2004). The system of penalty points shows that driver behavior can be changed. Road fatality figures fell to 338 fatalities on Irish roads in 2007 (Note 1). While fatality figures have been the primary focus of the media, many more people are injured on Irish roads. In 2006, there were 28,417 Garda (Note 2)-recorded traffic collisions resulting in 8 575 persons injured on Irish roads. If road statistics from 1961 - 2002 are examined it is found that, on average, for every life lost on Irish roads another 20 people are injured. Some of these injuries are severe, life altering injuries (RSA, 2007).

Having evaluated the pros and cons of various channels of communication, Cameron and Harrison (1998) concluded that television is widely considered by experts to be the most persuasive medium for road safety campaigns. Television was found to be the most effective medium for conveying emotion. Research by Anderson (1978), Griep (1970) and Robertson et al (1972) has provided evidence to suggest that generic road safety campaigns are of limited benefit. Despite possibly increasing awareness levels, these types of road safety campaigns have proved an inefficient means of instigating behavior change. Donovan et al (1995) contend that the specific demographics of the target audience should determine the campaign style and execution. They suggest that targeting the core motives of the intended audience is vital when producing an effective road safety advert.

### 2.3 Conceptual framework

Figure 1: Advertising Medias that affect road traffic accidents



*Source: Adopted from (Management Study Guide, 2013) and (Degisso, 2018)*

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

*In this chapter research design, sample size determination, sources of data, instrument of data collection along with the descriptions of tools and techniques used to analyse and process data with ethical considerations are discussed.*

#### **3.1 Description of the study area**

Addis Ababa is the capital city, and the largest city in Ethiopia, each year the city keeps on expanding in size and population. According to the forecast made by the United Nations in 2020, the population of Addis Ababa is estimated to be 4,749,000, in 2020. With a large population like this, it is obvious that the city faces road traffic congestion as well as a high rate of traffic accidents; due to this fact, the city of Addis Ababa is found to be the appropriate study area for this study.

#### **3.2 Research design and approach**

Research design is a plan for achieving research objectives and answering research questions (Anol Bhattacharjee, 2012). It describes and justifies the type and method of data collection, the source of information, the sampling strategy, and the time and cost constraints (Saunders, 2012).

In order to describe and analyse the effect of social marketing promotion mediums on road traffic accidents, the study followed explanatory type of research design. Quantitative research method has been employed in the research in order to develop the study.

#### **3.3 Population of the study**

The target population for this study were male and female driver's, due to the outbreak of corona virus, there is a significant amount of movement restriction as a result different social Medias such as Telegram, Facebook and Instagram were chosen as a place of contact with respondents. The researcher selected the respondents out of the total population of Addis Ababa residents through convenience sampling. Convenience sampling which also called accidental or opportunity is sampling is a non-probability sampling technique in which a sample is drawn from that part of the population that is close to hand, readily available, or convenient (Bhattacharjeend 2012).

### 3.4 Sampling design

#### 3.4.1 Sampling technique and sample size

##### Sampling technique:

The study took in a non-random sampling technique to conduct a survey; under this convenience, sampling was used and convenience sampling refers to the sampling procedure of obtaining those people or units those are most conveniently available zikmund (2003), even though a convenience sampling has shortcomings of being less representative of the entire population and bias, this method is common in marketing but due to ease of usage, accessibility, economical and time advantages this sampling method was used.

##### Sample size:

Due to the infinite number of population in Addis Ababa, which is estimated to be 4,749,000, the sample size was calculated based on Cochran's method. According to Cochran (1963), a large population's sample size can be calculated by using the formula:

$$n = \frac{Z^2(pq)}{e^2}$$

Where n- is the sample size

Z –Value at specified confidence interval (1.96)

p –Probability of inclusion positive response (0.5)

q = Probability of negative response =1-p= (0.5)

$$\begin{aligned} e \text{ –Desired level of precision } (\pm 5\%), \quad n &= \frac{Z^2(pq)}{e^2} = \\ &= \frac{1.96^2(0.5*0.5)}{0.05^2} = 384.16 \approx \\ &= 384 \end{aligned}$$

The final sample size for this study is 400 samples; this is done by taking into consideration the possibility of invalid responses and non-response and by looking at what other researchers such as Israel (2013) and kothari (2004) and how they decided on the sample size.

### 3.4 Data sources and types

Due to the current situation with regard to Corona virus, the primary data for this study has been obtained through an online survey of residents of Addis Ababa. Links to the questionnaire was distributed through different social media outlets. In addition, the Secondary data was acquired from journal articles, other research papers, Journal Articles, books and reports from the ministry of transport.

### 3.5 Data Analysis

All data that was gathered was analyzed through a quantitative research approach, the data was collected using structured survey/quantitative approach, it was edited, coded, cleaned and entered and then it was analyzed by using SPSS version 23. For the purpose of the study descriptive statistics, correlation analysis, regression analysis, multi collinearity tests and reliability tests have been used to analyse the responses.

#### 3.5.1 Model Specification

$$Y = B_0 + B_1x_i + B_2x_{ii} + B_3x_{iii} + B_4x_{iV} + B_5x_V + e_1$$

$Y$ ; Dependent variable

$B_0$ : Interface i.e., is a constant result where other variable effect is zero

$B_1, B_2, B_3, B_4$ : Coefficient i, e. implies one unit change in independent result for a unit change in

$x_i$ 's: Independent variables

$e_1$ : error term

so, the model will be:

$$RTA = B_0 + B_1TVA + B_2RA + B_3BA + B_4SMA + e_1$$

$RTA$ = Road traffic accident

$TVA$ = TV Advertisement

$RA$ = Radio Advertisement

$BA$ = Billboard Advertisement

$SMA$ = Social Media Advertisement

### **3.6 Data Validity and Reliability**

Theoretical or empirical approaches can be used to assess validity. Theoretical validity assessment focuses on how well a theoretical construct's idea is translated into or represented in an operational measure (Anol, 2012). In this regard, the current study's validity was addressed through a review of related literatures and the adaptation of instruments used in previous research.

The most important criterion is validity, which indicates how well an instrument measures what it is supposed to measure. It can also be thought of in terms of utility. In other words, validity is the extent to which differences discovered with a measuring instrument can be explained reflect genuine differences between those being tested (Kothari, 2004). A measure is considered reliable if it produces the same results each time it is used, assuming that the variable being measured has not changed significantly. In other words, reliable measures do not fluctuate and produce consistent results (Ruane, 2005). With this being said, the study measured the reliability and validity of the research instruments by using Cronbach Alpha with the help of the SPSS software.

### **3.7 Ethical consideration**

Consent from participants as well as governmental organizations to obtain primary data is assured by the researcher. Respondents have been well informed about the nature of the study and the researcher insured their willingness to participate in the study so that they will be free from the fear of psychological and physical fear and the data obtained from primary participants is held confidentially.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Chapter Overview

This study investigated the effect of social marketing's promotion on road traffic accident among drivers in Addis Ababa, Ethiopia. The chapter presents the finding of the research extracted from the statistical analysis and is organized as follows: Section 4.2 provides reliability of data, 4.3 presents the basic profile of the respondents; section 4.4 presents the assessment of the effect that social marketing has on road traffic accidents. To simplify the discussions, the researcher provided tables that summarize the collective reactions of the respondents. The findings are presented according to the research objectives and discussed using reviewed literature as a benchmark.

#### 4.2 Reliability of Data

To test for reliability of obtained data, this study used the reliability test/ the Cronbach's alpha where the measured variables are considered reliable if the alpha values are 0.7 for early stage of a research. (Nunnally, 1978).

**Table 4.1 Reliability Analysis**

Variables	N.items	Cronbach's alpha
TV advertisement(TVA)	3	.704
Radio advertisement(RA)	3	.761
Billboard advertisement(BA)	3	.806
Social Media advertisement (SMA)	3	.783
Road Traffic Accident(RTA)	2	.767
All variables	14	.905

*Source: (Own Survey, 2021)*

In this study, reliability is measured and is accepted as an important indicator of a study's quality. Thus, the researcher used Cronbach's Alpha with the help of SPSS software to assess the internal consistency and reliability of the instrument. Cronbach Alpha is the most used measurement for reliability especially in social sciences and the acceptance level is of higher than 0.7 (Wright & Bonett, 2014). Based on Table-1 above, the results show that instruments used in this research is reliable.

### 4.3 Basic Profile of Respondents

The study sample comprised respondents who vary on such characteristics as gender, age and level of education. As mentioned earlier, the study targeted 400 potential respondents. A total of 387 questionnaires were returned, four (4) questionnaires were removed from the sample due to a large amount of missing data; leaving 383 useful questionnaires which were the base for computing the results of the study.

#### 4.3.1 Respondents Gender

**Table 4.2: Respondents Gender**

GENDER		
	Frequency	Percent
male	302	79.0
female	81	21.0
Total	383	100.0

*Source: Survey 2021*

Table 4.2 presents a summary of the gender of the sampled respondents. The results revealed that, male respondents 302 (79.0%) were more than the female respondents 81 (21.0%). This implies that, there is gender inequality in the sample.

#### 4.3 Age of Respondents

**Table 4.3: Age of the Study Respondents**

	Frequency	Percent
<25 years	197	51.4
26-35 years	123	32.1
36-45 years	31	8.1
above 45	32	8.4
Total	383	100.0

*Source: Survey 2021*

Table 4.3 presents a summary of the age of the sampled respondents. The results revealed that, 123(32.7%) of the 383 respondents were aged between 26-35 years, 197(51.4%) were aged less than or equal to 25 years, 31 (8.1%) were aged between 36-45 years, and 32(8.4%) was aged above 45.

Great majority of the respondents were aged between 26-35 years and account for 83.6% of all respondents. This is the age range within which people have more social interactions in terms of work family or friendship engagements in which they have a higher tendency of moving from place to place much frequently than people in the other age categories.

#### 4.4 Education Status

**Table 4.4: Educational Status**

	Frequency	Percent
Student	63	18.3
Diploma	26	6.8
BA/BSC	224	58.5
MBA/MS	70	16.4
Total	383	100.0

*Source: Survey 2021*

Table 4.4 presents a summary of the level of education of the sampled respondents. The results revealed that, 63(16.4%) of the 383 respondents are students, 26(6.8%) have diplomas, 224 (58.5%) have BA/BSC, 63(16.4%) have MBA/MSc degrees.

Most of the respondents have a BA/BSC or are college graduates, representing 224 (58.5%), followed by MBA/MSC or post graduate studies graduates 70(18.3%) of all respondents which can be inferred that individuals under this category are well educated and can be safely assumed that they are rational when it comes to the advertisement mediums they pay attention to.

#### 4.5 Driving Experience in years

**Table 4.5: Driving Experience in years**

	Frequency	Percent
1-5 years	85	22.1
6-10 years	226	58.7
less than a year	39	10.1
11-20 years	23	6.0
21 years and above	10	3.1
Total	385	100.0

*Source: Survey 2021*

Table 4.5 presents a summary of the driving experience of the sampled respondents. The results revealed that, 85(22.1%) of the 383 respondents have 1-5 years of driving experience, 226(58.7%) have 6-10 years of driving experience, 39 (10.7%) have a driving experience of less than a year, 23(6.0%) 11-20 years of driving experience, and 12(3.1%) of respondents have 21 years and above years of driving experience.

Most of the respondents have a 6-10 years of driving experience, representing 226(58.7%), followed by divers who have a 1-5 years of experience 85(22.1%) of all respondents which can be inferred that individuals under this category more or less have enough driving experience that allows them to give objective responses that is acceptable.

#### 4.6 Source of information

**Table 4.6: source of information**

	Frequency	Percent
various advertisements	150	39.2
family/ relatives	80	20.9
Peers	93	24.3
Other	40	10.4
Total	363	94.8
Missing System	20	5.2
Total	383	100.0

*Source: Survey 2021*

Table 4.6 reveals that, the majority of the respondents get information about road traffic accidents from various advertisements 150(39.2%), family/ relatives 80(20.9%), peers 93(24.3%), and other 40(10.4%) and 20(5.2%) were registered as missing, as the respondents has not replied to this question. These results imply that, the respondents mainly get their information from different advertisements; this is favourable to the study as the focus is the effect of social marketing Promotion Media on road traffic accident. Family or relatives comes second, this reveals that targeting families or relatives while conducting a social marketing campaign can be very helpful to get the information across easily.

## 4.7 Correlation Analysis

To assess the relationship the dependent variable (Road traffic accident) and the independent variables, (Product, price, promotion and place), Pearson correlation was computed.

According to (Tollosa A, 2020) the correlation coefficient  $r$  measures the strength and direction of a linear relationship between two variables on a scatter plot. The value of  $R$  is always between +1 and -1.

If  $r$  is;

- Exactly -1 a perfect downhill (negative) linear relationship
- -0.70. a strong downhill (negative) linear relationship
- -0.5. a moderate downhill (negative) linear relationship
- -0.3. a weak downhill (negative) linear relationship
- 0. no linear relationship
- +0.30. a weak uphill (positive) linear relationship
- +0.50. a moderate uphill (positive) linear relationship
- +0.70. a strong uphill (positive) linear relationship
- Exactly 1. A perfect uphill positive linear relationship

**Table 4.7.1 Correlations**

		TVA	RA	BA	SMA	RTA
TVA	Pearson Correlation	1	.637**	.575**	.611**	.632**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	379	379	379	379	379
RA	Pearson Correlation	.637**	1	.566**	.588**	.716**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	379	383	383	383	383
BA	Pearson Correlation	.575**	.566**	1	.672**	.692**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	379	383	383	383	383

SMA	Pearson Correlation	.611**	.588**	.672**	1	.804**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	379	383	383	383	383
RTA	Pearson Correlation	.632**	.716**	.692**	.804**	1
	Sig. (2-tailed)	.00280	.000	.000	.000	
	N	379	383	383	383	383

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Source: Survey 2021*

The researcher analyzed to which TV Advertisement has influence on Road traffic accident among drivers, in Addis Ababa. In conducting the analysis, Pearson Correlation was used to establish the relationship between TV Advertisement with reducing Road traffic accident among drivers, in Addis Ababa. The correlation analysis revealed a significant positive relationship between Road traffic accident and TV Advertisement [ $r=0.632$ ,  $p<0.05$ ]. According to (Tollosa A, 2020) TV Advertisement and Road traffic accident have a moderate uphill (positive) linear relationship. This shows that as TV advertisement increases, the rate of Road traffic accident reduction increases.

Similarly, the researcher analyzed the degree to which Radio Advertisement has influenced Road traffic accident among drivers, in Addis Ababa. In conducting the analysis, Pearson Correlation was used to establish the relationship between Radio Advertisement on influenced Road traffic accident among drivers, in Addis Ababa.

From the correlation analysis, the result showed a significant positive relationship between radio advertisement and road traffic accident [ $r=0.716$ ,  $p<0.05$ ]. According to (Tollosa A, 2020) radio advertisement and Road traffic accident have a moderate uphill (positive) linear relationship. This shows that as radio advertisement increases, the rate of Road traffic accident reduction increases.

The researcher analyzed to which Billboard advertisement has influence on road traffic accident among drivers in. In conducting the analysis, Pearson Correlation was used to establish the relationship between Billboard advertisements with road traffic accident among drivers Addis Ababa.

The correlation analysis revealed a significant positive relationship between Billboard advertisement and road traffic accident [ $r=0.692$ ,  $p<0.05$ ]. According to (Tollosa A, 2020)

Billboard advertisement and road traffic accident have a strong uphill (positive) linear relationship. This shows that as Billboard advertisement increases, the rate of Road traffic accident reduction increases.

The researcher analysed to which Social media advertisement has influence on Road traffic accident among drivers, in Addis Ababa. In conducting the analysis, Pearson Correlation was used to establish the relationship between Social media advertisement with Road traffic accident.

The correlation analysis revealed a significant positive relationship between Road traffic accident and Social media advertisement [ $r=0.804$ ,  $p<0.05$ ]. According to (Tollosa A, 2020) Social media advertisement and Road traffic accident have a moderate uphill (positive) linear relationship. This shows that as Social media advertisement increases, the rate of Road traffic accident reduction increases.

#### 4.7.2 Assumption Tests

##### 4.7.3 Diagnosis Test

Prior to running a regression analysis, some tests were conducted in order to ensure the appropriateness of data to assumptions regression analysis as follows

#### Multicollinearity Test for Multiple Linear Regressions

**Table 4.7.2 Multicollinearity Test**

##### Collinearity statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	TVA	.420	2.380
	RA	.448	2.234
	BA	.397	2.519
	SMA	.468	2.137

*Source: Survey 2021*

The above table shows that tolerance is greater than 0.2 and VIF is less than 10, indicating that there is no issue of multicollinearity. According to (Myers, 1990) and Menard (1995) the tolerance should be more than 0.2 while variance integration factor (VIF) should be less than 10.

As can be seen from table 10 the variables have a tolerance of more than 0.2 and their VIF less than 10.

#### 4.7.4 Normality Test

To test the Normality Test of study variables: product, place, price and promotion, Skewness and Kurtosis analysis were undertaken.

#### Descriptive Statistics

	N Statistic	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
TVA	379	-.890	.125	1.317	.250
RA	383	-.423	.125	-.005	.249
BA	383	-.899	.125	.956	.249
SMA	383	-1.056	.125	1.087	.249
RTA	383	-1.198	.125	.818	.249
Valid N (listwise)	379				

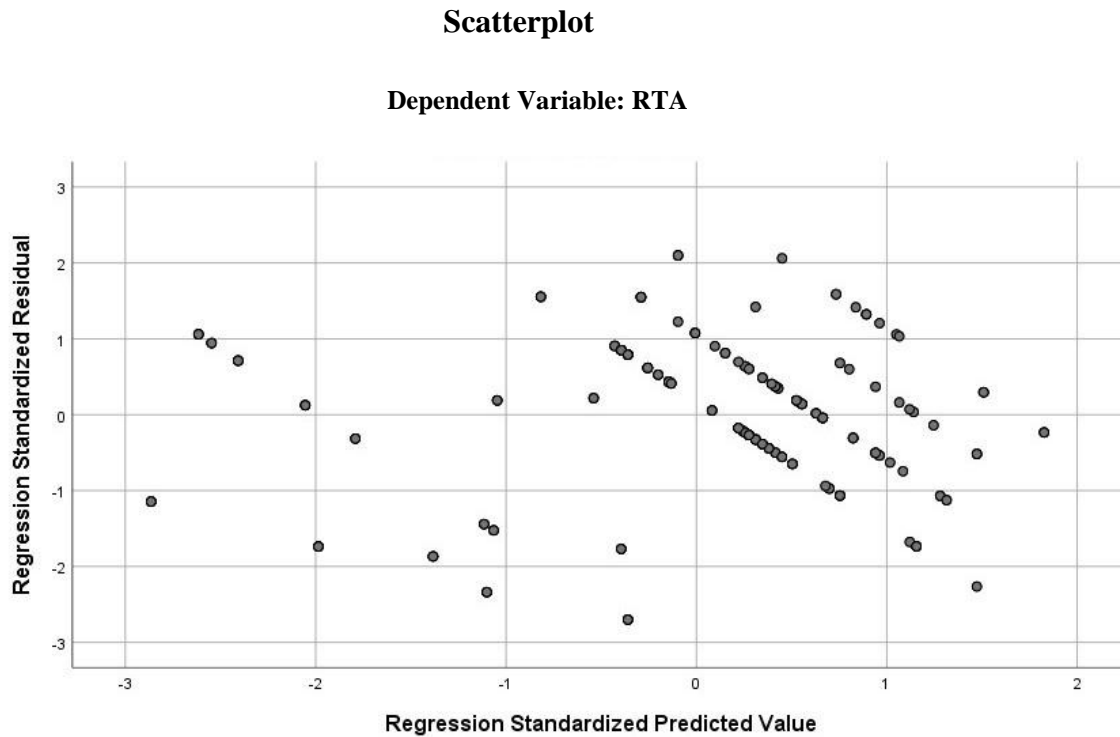
Source survey 2021

Different scholars have set the value close to zero as they set different range to test the normality of distribution. skewness and kurtosis considered a value which is between -2 and +2 to be acceptable (Torchim & Donnelly, 2006). Therefore, based on this range the skewness and kurtosis for variables: brand image, customer satisfaction, brand trust, brand promotion and price on table 11 considered acceptable, and meaning the distribution is moderately normally.

#### Heteroscedasticity

Homoscedasticity is more than simply a barrier to the correct estimate of coefficients. Attention to differences in variance can provide both an important supplement to present exploratory analysis techniques and suggest ways to evaluate theory. Quantitative models require precisely estimated coefficients, but a single-minded emphasis on curing heteroscedasticity can lead one to ignore valuable information. The suspicion that a variable may function as a necessary but not sufficient condition is no less important than knowing that it is “related” to dependent variable, (Tollosa A, 2020).

**Figure 1: Heteroscedasticity**



**(Source: Survey data, 2021)**

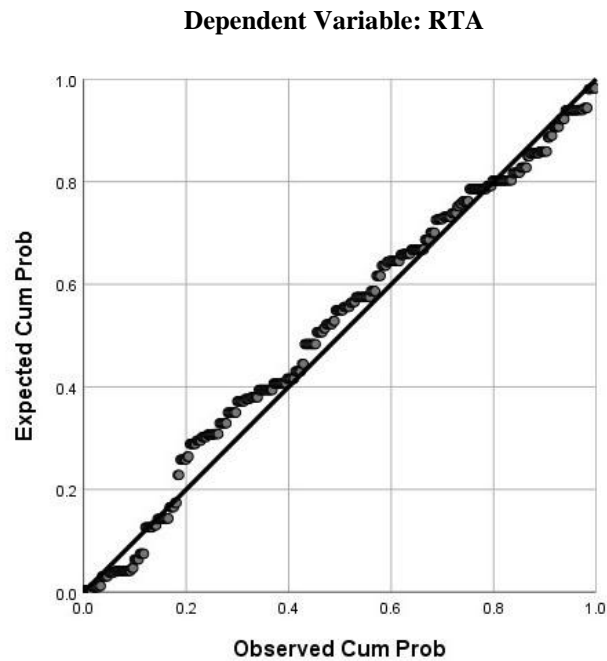
The finding of heteroscedasticity can provide a rational for questioning interaction with variables that are not included in the data set. Thus, the scatter plot of residuals shows there is no heteroscedasticity issue.

#### **4.7.4 Linearity Test**

Linearity refers to the degree to which the change within the dependent variable is related to the change in the independent variables. To see whether the link between the dependent variable, behavioral intension of drivers and the independent variables TV advertisement, Radio advertisement, social media advertisement and Billboard advertisement is linear; plots of the regression residuals through SPSS software had been used.

**Figure 2: Normal Point Plot of Standardized Residual**

**Normal P-P Plot of Regression Standardized Residual**



*Source: Survey 2021*

The plot of residuals shows no large difference in the spread of the residuals as you look from left to right on figure 2. This result suggests the relationship we are trying to predict is linear.

**4.7.5 ANOVA**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	153.130	4	38.282	262.627	.000 <sup>b</sup>
	Residual	54.517	374	.146		
	Total	207.647	378			

a. Dependent Variable: RTA

b. Predictors: (Constant), TVA, BA, SMS, RA

*Source: Survey 2021*

From the above table, calculated Sig. value 0.000 reflects that there was a statistically significant correlation between dependent variable and independent variables at 1% significant level; which means the explanatory variables; TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement to influence driver's behaviour and attitude towards road traffic accident in Addis Ababa, Ethiopia.

Thus, from an examination of the information presented in all tests the researcher concludes that there are no significant data problems that would lead to say the assumptions of multiple regressions have been seriously violated.

#### **4.8 Regression Analysis**

Regression analysis is a process, which tells the relationship between one dependent variable with other independent variables. In this section regression analysis for the effect of social marketing promotion medias on road traffic accidents among drivers in Addis Ababa, adjusted R- Squared is measured the goodness of fit of the explanatory variables in explaining Regression analysis is a process which tells the relationship between one dependent variable with other independent variables (TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement).

Regression model was applied to test how far TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement had an effect on influence on Road traffic accidents. Coefficient of determination ( $R^2$ ) is the measure of proportion of the variance of dependent variable about its mean that is explained by the independent or predictor variables (Hair et.al, 1998). Higher value of  $R^2$  represents greater explanatory power of the regression equation.

#### **Impact of independent variable on Road traffic accident**

The above table 13 shows the adjusted  $R^2$  value of 0.737. This result shows that the independent variable (TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement) accounted for 73.5 percent of the variance on road traffic accident. Thus, 73.5 percent of the variation on Road traffic accident can be explained by TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement and the other unexplored variables may explain the variation on Road traffic accident, which accounts for 26.5 percent.

## Model Summary<sup>b</sup>

Model	R	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. Change	F	Durbin-Watson
				R Square Change	F Change	df1			
1	.859 <sup>a</sup>	.737	.38180	.737	262.627	4	.000	1.946	

a. Predictors: (Constant), TVA,RA,BA,SMA

b. Dependent Variable: RTA

The results of this Analysis revealed a value of 1.886 meaning that, the dependent variable (road traffic accident) and the independent variables (TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement) are significant.

### 4.9 Multiple Regression Analysis

In this section regression, analysis has been undertaken to understand the relationship between Road traffic accidents and independent variables (TV advertisement, Radio advertisement, Billboard advertisement and Social media advertisement).

#### Multiple Regression model for Coefficient

##### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.869	.182		-10.269	.000
	TVA	.066	.048	.052	1.378	.169
	RA	.238	.051	.184	4.695	.000
	BA	.437	.053	.303	8.249	.000
	SMA	.651	.056	.460	11.558	.000

a. Dependent Variable: RTA

Source: Survey 2021

## Coefficients<sup>a</sup>

a. Dependent Variable: TVA

b. Basically,  $RTA = B_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where, RTA= Road Traffic Accident

X1= TV Advertisement

X2= Radio Advertisement

X3= Billboard Advertisement

X4= Social Media Advertisement

Here =  $B_0$  is constant and  $\beta$  is coefficient of estimate and  $\varepsilon$  is the error term.

Road Traffic Accident is dependent variable and X1 to X4 are independent variables

BL=  $-1.869 + .052X_1 + .184X_2 + .303X_3 + .460X_4$

S. Err (0.182) (0.48) (0.51) (0.53) (0.56)

T values (-10.269) \* (1.378)\* (4.695)\* (8.249)\* (11.558)

\*Sig= Significant at 95% level

The regression analysis Results of the Regression Analysis of Coefficient revealed that, the Beta of the independent variables are 0.052, 0.184, 0.303, and 0.460 for TV advertisement, Radio advertisement, Billboard advertisement, and Social media advertisement respectively.

The estimates tell us the relationship between independent variables and dependent variable. The *Beta* coefficients tells us the amount of increase in road traffic accident reduction that would be predicted by a 1 unit increase in the independent variable.

The result revealed that, Social media advertisement has the highest impact on the dependent variable Road traffic accident at (sig= 0.000) and they are positively related. As the standard coefficient of Social media advertisement shows the result is 0.460. Which indicates that the higher the quality and frequency of social media advertisements, the higher the influence on driver's behavior that will result in decrease of road traffic accident.

The result shows that Billboard Advertisement is positively related with reduction of Road traffic accident. As the standard coefficient of Billboard advertisement shows the result is 0.303 at significance level of 0.00, which indicates that the higher Billboard Advertisement is used the higher the influence of driver's behavior that will result in decrease of road traffic accident.

The result shows that Radio Advertisement is positively related with reduction of Road traffic accident. As the standard coefficient of Radio Advertisement, shows the result is 0.184 at significance level of 0.00, which indicates that the higher the radio advertisements the higher the influence of driver's behavior that will result in decrease of road traffic accident.

The independent Variable that is TV advertisement was also positively associated but, the value of the significance level is greater than 0.05 (5%) significance level that leads to the conclusion that the variable is not significant.

#### **4.10 Hypothesis Testing**

***H1: TV Advertisement (TVA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).***

Referring to Table-14 the relationship between TV Advertisement and reducing road traffic accident has a sig value of ( $p= 0.169$ )  $> 0.05$  ( $\beta = 0.052$ ). This implies that TV Advertisement has a positive relationship with reducing road traffic accident. But the relationship is not significant, hence Hypothesis 1 is rejected.

***H2: Radio Advertisement (RA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).***

Referring to Table-14 the relationship between Radio Advertisement and reducing road traffic accident has a sig value of ( $p= 0.000$ )  $> 0.05$  ( $\beta = .184$ ). This implies that Radio Advertisement has a significant and positive relationship with reducing road traffic accident, hence Hypothesis 1 is accepted.

***H3: Billboard Advertisement (BA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).***

Referring to Table-14 the relationship between Billboard Advertisement and reducing road traffic accident has a sig value of ( $p= 0.000$ )  $> 0.05$  ( $\beta = .303$ ). This implies that Billboard advertising has a significant and positive relationship with reducing road traffic accident, hence Hypothesis 1 is accepted.

**H4: Social Media Advertisement (SMA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).**

Referring to Table-14 the relationship between Social Media Advertisement and reducing road traffic accident has a sig value of ( $p= 0. 000$ )  $> 0.05$  ( $\beta = .460$ ). This implies that Social Media Advertisement has a significant and positive relationship with reducing road traffic accident, hence Hypothesis 1 is accepted.

**Table 4.10.1 summary of Hypothesis result**

Hypothesis No	Hypothesis	Outcomes
H1	TV Advertisement (TVA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).	Rejected
H2	Radio Advertisement (RA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).	Accepted
H3	Billboard Advertisement (BA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).	Accepted
H4	Social Media Advertisement (SMA) has a positive and significant relationship with Reducing Road Traffic Accident (RTA).	Accepted

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of findings

The main findings are discussed and summarized below based on the analysis results discussed in chapter four. The major findings are as follows:

- From the descriptive analysis it can be inferred that most respondents are male (79%) and female employees hold (21%), a low percentage. Moreover, it was found that most respondents (83.6%) are young in age ranging from 26-35, which shows that the drivers are young and have few years of experience. Furthermore, majority of the respondents hold a bachelor's degree and they mainly get information about road traffic accidents through media advertisements and through their friends and families years. This justifies the appropriateness of the samples for the study.
- The Pearson correlation revealed that the Pearson value for social media advertisement was [r=0.804, p<0.05] implying a strong and positive relationship to reducing road traffic accident. The Pearson value for billboard advertisement was [r=0.692, p<0.05] with Sig of implying a strong and positive relationship to reducing road traffic accident. The Pearson value for radio advertisement was [r=0.716, p<0.05] with Sig of implying a strong and positive relationship to reducing road traffic accident. The Pearson value for TV advertisement [r=0.632, p<0.05], implying a moderate and positive relationship to reducing road traffic accident.
- The ANOVA statistics presented the regression model significance. An F-significance value of at df (3, 126) with (p =0.00) < 0.05 was established showing that there is a probability of less than 0.05 of the regression models. Thus, the model was significant.
- The independent variables of the study such as (social media advertisement, radio advertisement, billboard advertisement), have a significant effect on the dependent

variable, reducing road traffic accident with different variances. TV advertisement has an insignificant relationship to reducing road traffic accident.

## **5.2 Conclusions**

The purpose of this study was to analyze the effect of media advertisement on reducing road traffic accident among drivers in Addis Ababa. Following the findings of the study, several conclusions could be made. Effective and continuous advertising is one of the most important functions of any successful marketing campaign. It is imperative that the products or service of any organization receives the proper exposure, and the way to achieve exposure is through advertising. Advertising is the means by which goods or services are promoted to the public. The advertiser's goal is to increase sales of these goods or services by drawing people's attention to them and showing them in a favorable light. The mission of advertiser is to reach target audiences and influence their awareness, attitudes and behavior. To succeed, they need to understand what makes potential audiences behave the way they do. Generally based on the discussions and analysis made the following conclusions were drawn.

The formulated objective of this study was to investigate the effect of Television advertisement (TVA), Radio advertisement (RA), Billboard advertisement (BA), Social Media advertising (SMA) on reducing road traffic accident. From the findings of the study it may concluded most of the drivers in the study are influenced by media advertisements on print media followed by television then Radio and finally online ads. Generally, it was observed that most of the drivers in this study are affected by various media advertisements in their driving behavior. Most of them use the precautionary steps that are encouraged by the advertisements they came across. Print media advertisement has more impact on customer bank preference more than other media.

All the discussions and study result showed that there is a significant relationship between Radio advertisement, Billboard advertisement, and Social media advertisement with decreasing road traffic accident. In addition, shows that there is no significant relationship between TV advertisement and decreasing road traffic accident.

For the second objective, regression analysis for determinants of decreasing road traffic accident among drivers has been undertaken to understand the relationship between decreasing road traffic accident and the explanatory variables (TV advertisement, Radio advertisement, Billboard advertisement, and Social media advertisement) were met.

As mentioned in the statement of the problem there have not been many research papers that study the topic of road traffic accidents from a marketing perspective, so comparing the findings and their significance with other research papers that include all the variables of this paper was not possible.

Therefore, in conclusion, there is a significant positive relationship between, Radio advertisement, Billboard advertisement, and Social media advertisement on Dependent variable road traffic accident. Meaning that marketers and other concerned parties can prevent and decrease road traffic accident by working towards increasing social media advertisements, by improving overall social marketing advertisement quality by making them informative and engaging.

## **5.2 Recommendation**

The following recommendations and suggestions are brought forward based on the conclusion made earlier to resolve the problems identified in the study.

- Since the majority of the youth spends more time online and on social media, using social media advertisements frequently on all available platforms would increase the advertisement reach and its capability to grab the attention of many.
- For marketers and concerned parties using social media platforms can also make the campaign very effective because the time and frequency limitation on other advertisement mediums can be avoided and social media advertisement ads are more affordable, this gives marketers the chance to come up with different types of advertisements for different target groups.
- Radio Advertisements and billboard advertisements could provide an ideal opportunity to deliver the appropriate set of message to target drivers, since most drivers listen to the radio while driving and since they are very likely to notice the billboard advertisements on the side of the roads, so marketers should put this into consideration while implementing the advertisements.
- Since road traffic accident is a health problem that involves many parties, marketers should work closely with agencies concerned with transport, health, education, law enforcement and other relevant sectors and multidisciplinary professionals involving road safety scientists, engineers, urban and regional planners, health professionals and others. The planning of advertisements and its execution must be supported by all concerned parties the government, the private sector, nongovernmental organizations, and the general public all must be involved to insure the effectiveness of the advertisements.

- At last, marketers should study and learn the practices of other countries with low rate of road traffic accidents, deep study should be conducted on how they were able to influence the behavior of their target groups in order to see if the same can be implemented in Ethiopia.

### **5.3 RECOMMENDATION FOR FUTURE RESEARCH**

This study has yielded significant results and produced substantial contributions to the existing body of knowledge; however, there are also significant limitations, which require further research to be conducted.

In this study, the researcher was forced to build up on the theoretical literature reviews from different sources and on previous works mainly from other countries. The study was conducted only on one city, since Road traffic accident is a nationwide problem the results of the study might not be generalizable to the whole country Ethiopia, thus, the researcher suggests further research to be conducted on different cities or parts of the country, which would provide a wider basis of analysis and identify more influential factors and effect of marketing ads on the behaviour of drivers.

The other thing is the behaviour of drivers might vary from one city to the other, so further research on the behaviour of individuals who drive a car should be examined.

Finally, the study focused only on the effect of social marketing media ads among drivers, the effect it has on pedestrians has not been addressed in this paper, so the researcher suggests the study of pedestrians and their attitude towards road traffic accident as well as their attitude towards advertisements intended to create awareness.

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## APPENDIX 1



### **Addis Ababa University School of Commerce**

#### **Department of Marketing management**

**Dear respondent,**

My name is Deborah Kassaye and I am carrying out an academic research on the topic of “The effect of social marketing on road traffic accident in Addis Ababa”

Your knowledge and experience is important to validate the objectives of this research, the information acquired will only be used for academic purposes, any personal information filled in this paper will be strictly held confidentially.

The study is aimed to examine the effect of social marketing on reducing road traffic accidents, your cooperation and assistance to fill out this questionnaire is highly appreciated.

Researcher’s name: Deborah kassaye, MA student AAUSC.

Address: 0986995793

Email: [deborahkassaye@gmail.com](mailto:deborahkassaye@gmail.com)

Thank you in advance!

## Part 1: Demographic information of respondents

**DIRECTION: Respondents please answer the questions by choosing the option that reflects your level of agreement with the given statement.**

1. Gender                      A) Female                      B) Male
2. Age                              A)  $\leq 25$  years                      B) 26 -35 years
- C) 36-46 years                      D) above 46 years

### 3. Educational Status

- A) Highschool                      B) Diploma
- C) BA/BSC                              D) MA/MSC                      E) PHD

### 4. How many years have you been driving?

- A. Less than one year
- B. 1-5 years
- C. 6-10
- D. 11-20
- E. 21 and above

### 5. From which do you frequently get information about road traffic accidents?

- A. From media Advertisements
- B. From peers
- C. From family/relatives
- D. Other(specify)\_\_\_\_\_

**SECTION B:** How would you rate the following attributes towards the effect that social marketing advertisements may have on road traffic accidents? Please rate them by choosing the appropriate cell using the following scale:

**1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree and**

**5 = Strongly agree.**

N.o	Measurement items	Measurement scales				
		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
		1	2	3	4	5

Answer the following questions regarding the TV Ad's you have encountered on the case of road traffic accidents.

1	I consistently come across advertisements about road traffic accidents while watching TV.					
2	The TV advertisements I have come across had enough informative content that influenced my driving behaviour.					
3	I believe TV ads have a greater impact in decreasing the number of traffic accidents as it uses a visual storytelling instrument.					

Answer the following questions regarding the Radio Ad's you have encountered on the case of road traffic accidents.

4	I consistently come across advertisements about road traffic accidents while listening to the Radio.					
5	The information from radio ads has had a positive impact on my driving behaviour.					
6	I believe radio ads have a greater impact in decreasing the number of traffic accidents as it has a wider reach since many drivers listen to the radio.					

Answer the following questions regarding the Billboard Ad's you have encountered on the case of road traffic accidents.

7	I consistently come across billboard advertisements about road traffic accidents while traveling outdoor.					
8	The advertisements I have come across on billboards have positively influenced my driving behaviour.					
9	I believe billboard ads have a greater impact in decreasing the number of traffic accidents as people spend more time traveling outdoor.					
Answer the following questions regarding the Social media Ad's you have encountered on the case of road traffic accidents.						
10	I consistently come across advertisements about road traffic accidents while using social media.					
11	The advertisements I have come across on social media have positively influenced my driving behaviour.					
12	I believe social media ads have a greater impact in decreasing the number of traffic accidents especially among the youth since they spend a lot of time on social media.					
Traffic accident ( dependent variable)						
13	I am aware that road traffic accident is a health problem.					
14	Traffic accidents can be lowered by teaching the society about its social, economic and financial effects.					

**Thank You for your participation!**

