ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

INSTITUTE FOR PEACE AND SECURITY STUDIES (IPSS)

ROAD TRAFFIC ACCIDENT AND ITS IMPLICATIONS ON HUMAN SECURITY: THE CASE OF SENDAFA BEKE TOWN OF OROMIA NATIONAL REGIONAL STATE

BY

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ROAD TRAFFIC ACCIDENT AND ITS IMPLICATIONS ON HUMAN SECURITY: THE CASE OF SENDAFA BEKE TOWN OF OROMIA NATIONAL REGIONAL STATE

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Declaration

I, Asmare Zelelew Ambie, declare that the thesis entitled *"**Road traffic accident and its implications on human security: the case of Sendafa Beke Town of Oromia National Regional State**"* submitted in partial fulfillment of the requirements for the award of the degree of Master of Arts in Peace and Security Studies at AAU, done by me. This thesis is my original work and all sources of materials used in the thesis have been duly acknowledged. In addition, it has not been submitted to any other universities and institution for any academic award.

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List of Acronyms and Abbreviations

CHS	Commission on Human Security
DALY	Disability Adjusted Life Year
E.C	Ethiopian Calendar
ETB	Ethiopian Birr
GDP	Gross Domestic Product
GNP	Gross National Product
Km/h	Kilometer per Hour
OECD	Organization for Economic Cooperation and Development
RTA/s	Road Traffic Accident/s
SBTA	Sendafa Beke Town Administration
SBTARTA	Sendafa Beke Town administration Road Transport Authority
SBTATPO	Sendafa Beke Town Administration Traffic Police Officers
SBTPAO	Sendafa Beke Town Police Administration Office
UNDP	United Nation Development Program
UNECA	United Nation Economic Commission for Africa.
UNHDR	United Nations Human Development Report
UNTFHS	United Nations Trust Fund for Human Security

Abstract

Road traffic accident becomes the leading causes of death, disability, injuries, and property damage resulted in economic loss and other problems globally, with a greater number of occurring in developing countries. Globally, over 1.35 million people die every year in the world's roads, and between 20 and 50 million people suffer from nonfatal injuries. Developing countries account for 93% of road traffic deaths, while the same countries account for only 54% of the global vehicle. With an average death rate of 27.5 deaths per 100,000 populations, the risk is more than 3 times higher in developing countries than in developed countries where the average rate is 8.3 deaths per 100,000 populations. The objective of this thesis is to investigate the prevalence of road traffic accident, its implications on human security and measures taken by Sendafa Beke Town Administration and other stakeholders to reduce and/or prevent road traffic accident. To this end, this thesis employed mixed research with a great emphasis on a qualitative case study. The data were collected from both primary and secondary sources through questionnaire, in-depth interview and document analysis and analyzed using thematic analysis. The participants of this thesis were selected purposefully based on their knowledge, engagement, and experience in dealing with or being a victim of road traffic accidents. The results of this thesis reveal that the prevalence of road traffic accident in Sendafa Beke Town Administration has been increasing over time and that road traffic accident affects significantly the physical, economic and health security of the victims as well as the communities. Moreover, the authorities and stakeholders of by Sendafa Beke Town Administration have used awareness creation and enforcement of traffic rules and regulation as a major preventive and reduction measure of road traffic accidents.

Key Words: Human Security, Road Traffic Accident, Implication, Prevalence, Sendafa Beke Town Administration

CHAPTER ONE

INTRODUCTION

1.1 Background

Road transport serves as one of the means of transportation for human beings which provides assistances to both nations and individuals by facilitating crucial socio-economic development. It facilitates the movement of people, essential services and goods from one place to another place and increased access to markets, jobs, education, refreshment, health care, etc. Despite its significant contribution in improving the living condition of individuals and community, it causes a problem that affects the security of human beings due to the occurrence of road traffic accidents (RTAs).

Road traffic accident (RTA) is one of the global problems and occurs in every country in the world. RTAs are currently ranked the eighth (8^{th}) leading causes of death for people of all ages and every year, it takes the lives of more than a million people and disables many millions (globally, about 1.35 million people lost their lives and about 20 to 50 million people injured (World Health Organization (WHO), 2018). These deaths and injuries caused by RTAs that affected human security, victims' families, employment, communities, properties, and states negatively. In turn, these problems complicate the living condition of society. The WHO (2018) also forecasted that road traffic accidents (RTAs) will be raised to the third position in 2020, just behind ischemic heart disease and clinical depression, and ahead of cerebrovascular disease, pulmonary disease, respiratory infections, tuberculosis, war, diarrhea, and HIV. This indicates how much the problems caused by RTA increases at an alarming rate at the global level.

According to the WHO's global status report on road safety (2018), the risk of dying as a result of a road traffic injury is highest in the African region (27.5 per 100 000 population) and lowest in the European Region (8.3 per 100,000 population). The report indicates that the risk of dying as a result of road traffic injury in Africa is three times more than in the European region. Africa has a higher

rate of RTAs than the global average that accounts 93% of the total fatalities despite the fact that it has only about 54% of the global motor vehicles (WHO, 2017).

Ethiopia is facing enormous road safety crisis with increasing fatality rates having least vehicle-ownership (United Nations Economic Commission for Africa (UNECA), 2009). Each year thousands of road users are killed and the majority of them are economically active population (WHO, 2018). RTA deaths in Ethiopia reached 27,140 or 4.27% of total deaths and the prevalence of road traffic fatality rate in Ethiopia was 36.6% per 100,000 populations as well as the rate was among the highest in the world (WHO, 2017). Factors contributing to the high incidence of RTAs in Ethiopia include rampant reckless driving behaviors, poor road network, sub-standard road conditions, failure to enforce traffic laws and poor conditions of vehicles (Person, 2008 ; Haile & Fenta, 2014). In addition, the number of people injured or killed in one crash in Ethiopia is about 30 times higher than that in the USA (Person, 2008). Moreover, it is unhappy to note that fatalities due to RTAs are higher among pedestrians in countries like Ethiopia than in developed countries. For instance, 60% of the fatalities in the USA account to the car drivers, while in Ethiopia only about 5% account for drivers (Person, 2008).

1.2 Statement of the Problem

Road traffic accident (RTA) is one of the contemporary leading human security threats at a global level. Currently, it has been ranked 9th leading cause of mortality, morbidity, diseases burden, in terms of Disability Adjusted Life Years (DALYs) lost globally (WHO, 2013). It causes the loss of the lives of millions of people and the destruction of the property leading to a social and economic crisis of households. The effect it caused on human, physical and financial capital is huge (WHO, 2004). Chen, Callahan, and Sheets (2003) also argue that RTA ranks among the gravest human security challenges of the twenty-first-century face. This undeniably makes RTA was one of the serious threats to the survival of human beings and creates psychological fear on the day to day activities of the society of one country.

According to UNECA (2009) report, Ethiopia has one of the world's worst accident records, 170 fatalities per 10,000 vehicles and stands as one of the worst countries in terms of RTA fatalities with

respect to low road safety performance. This shows that in Ethiopia, the rate of RTA progressively increases with the growth in population and the number of vehicles. This is because of road transport is the major transport mechanism along with poor road infrastructure coupled with a poor attitude and safety culture of road users, rapid motorization with poor enforcement of traffic laws and regulations and other factors. Although there is some degree of activities towards combating the problem, it is insufficient by any standard relative to the worsening situation (UNECA, 2009). This indicates that strong and proportionate measures have not been taken to address the problem.

Even though Ethiopia has put in place relevant laws on traffic speed limits, the effectiveness of their overall enforcement was low (WHO, 2009). The costs of fatalities and injuries due to RTAs have a remarkable implication on human security and socio-economic development. However, public policy responses to this epidemic have been soft at Zonal, regional and national levels (Atnafseged, 2000). Based on this in SBTA, RTA is considered as one of the major human security threats.

Researches on RTA in Ethiopia focused on issues not related to human security or associated with one component of human security. For instance, Fesseha and Teshager (2014) revealed that RTA was one of the major public health problems which contribute significantly to the injury and mortality rate in Amhara National Regional State. However, because of the complex nature of RTA Fesseha and Teshager (2014) was limited to one element of human security (i.e., health security). Similarly, Yared (2014) also gives emphasis on the economic and social interaction of the victims as well as tried to link RTA with human security in Addis Ababa city administration: Cherkos sub-city. His research area is a large city having high population density with relatively better awareness about RTA, relatively high vehicle numbers and moderate road network that cannot be generalized and applicable to the context in a small town has a relatively small number of populations, less road network and less number of the vehicle. Even though he studied RTA and human security, his research focused on the implication of RTA on the general aspects of human security without emphasizing on specific elements of human security. Thus, Yared's (2014) research result can not be generalized to my study in terms of geography and content.

To my knowledge, no study was conducted on RTA and its implication on human security in SBTA, and its implications and problems on human security did not obtain much attention by the authorities of SBTA and other stakeholders. Thus, this study tried to examine the prevalence of RTA and its implication on human security.

1.3 Research Objectives

The general objective of this thesis is to study the status of RTAs and the implication of RTAs on human security in the case of SBTA. The specific objectives of this study are to: -

- Explore the prevalence of RTAs in SBTA
- Investigate the implication of RTAs on human security in SBTA
- Analyze the measures employed by SBTA authorities and stakeholders to reduce and prevent RTA

1.4 Research Questions

The central research question of this study was what implications of RTAs have on human security at SBTA? To answer this general question, the study has tried to inquire about the following specific research questions:

1. What is the prevalence of RTA in SBTA?
2. How does the RTAs affect the human security of the individuals and residents of SBTA?
3. What measures the SBTA authorities and stakeholders have taken to address RTAs in the study area?

1.5 Significance of the Study

This thesis contributes to the body of knowledge and policy in many forms. First, the report may have a reasonable contribution in terms of adding up certain new findings to the body of

knowledge concerning the implication of RTA on human security particularly on physical, economic and health security. Second, the report can serve as an input for policy formation in reducing RTAs. Third, it serves as a basis to bring attitudinal change regarding the issue of the implication of RTA on human security and road using behavior for which the community can benefit more. Fourth, this thesis may initiate other researchers to conduct further research on similar cases.

1.6 Scope of the Study

The scope of this research is delimited in terms of geographic extent, the issues concerned, and temporal coverage. Geographically, the study is limited to Sendafa Beke town. In addition, the study also confined to investigate the prevalence of RTA and its implication on physical, economic and health security. Moreover, in terms of time, the present researcher looks at the matters which are related to the implication of RTA on human security since 2000 E.C or 2008/2009 G.C. The researcher chooses this time as a point of departure because to know the trend and magnitude of RTA in a reasonable range of time. Another reason is to present and collect more recent data about the prevalence and implication of RTA which is representative of the participants of the study.

1.7 Limitation of the Study

During the research process, the study encountered various challenges. Unavailability of data was one of the challenges the researcher encountered in this study. Consequently, most of the numbers of RTA reports of the police of SBTA starting from 2008 and other reports starting from 2010 E.C. Moreover, some of the respondents were unwilling to be interviewed and to complete or fill the questioner as well as some respondents were not returned the questioner. Additionally, the constraint of language was another challenge when the researcher conducted this thesis. Due to this, the majority of the dwellers of the town were Afan Oromo language speakers but, the researcher is unable to speak and hear the language of the inhabitants. As a result, he encountered a challenge when he collected data through interview and questioner.

1.8 Organization of the Thesis

This thesis is organized into five chapters. The first chapter discusses the background of the study, statement of the problem, objectives of the study, research questions, significance of the study, the scope of the study and delimitation of the study. The second chapter of this thesis comprises review related literature which includes conceptualization of RTA, types of RTA, the prevalence of RTA, the implication of RTA on human security, measure undertaken by SBTA and other stakeholders to reduce and/or prevent RTA and the like. Chapter three deals about the methodology of the research which comprises methods/ approaches of the study, research design, sources of data, data collection instrument, sampling technique, sample size, data analysis procedure, research ethics and description of the study area. The fourth chapter discusses data analysis, presentation, and discussion part. The final chapter comprises concluding remarks and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The threat of RTA on human security is increasing at a dramatic pace in the twenty-first century beyond the ability of governmental and non-governmental organization (Chen et al., 2003). It has become a global problem. WHO (2009) forecasted that RTAs will be raised to the third position in 2020 in terms of threatening human security. There is an increased prevalence of RTA taking place in low and middle-income countries especially in Africa and Asia (WHO, 2013). RTA accompanied by its threat on the aspects of human security. This is more burdens for towns to fulfill basic security services. RTA brings physical, economic, health and other human security threats. These led to increased human security threats and problems in towns.

Therefore, this chapter seeks to review different kinds of literature related to RTA and its implication on human security written by different researchers, policymakers, and practitioners to identify the gaps of knowledge and develop the conceptual framework that serves as a lens for analyzing the data collected from the study area.

2.2 Conceptualization of RTA

There is no commonly agreed definition for traffic. Traffic is defined in a broad sense as the movement resulting from transport of people along roads, railways, sea roads, navigable internal waterways, and air routes (Goodall, 1987; Scanlon and Cantilli, 1987). Similarly, traffic means a movement of vehicles, pedestrians, and animals on the road or street (Fanuel, 2006). These two definitions are commonly used in most literature. Transport is the movement of people and goods from one place to another (Peters, 1982). But, according to (Belachew, 1997 and Hassen, 2010) transport comprises movement of information, people and properties over the surrounding environment. The type of transport which displays accident that severely affects the wellbeing of the

people and economy of the nations is the one which involves the movement of people and goods from one place to another place. Several RTA incidences occur throughout the world at every fraction of times in a day (WHO, 2013). Whatever the reason, where ever the scene and whoever the victim is, RTAs remain as the headache of everyone.

The definition of RTA which is given by the United Nation Economic Commission for Europe (UNECE, 1997), which is widely accepted in most countries of the world, is described as "RTAs are those which occur or originate on a way or street open to traffic, which resulted in one or more persons being killed or injured and in which at least one moving vehicle involved (p.74). It is also defined as an occasion occurring presently, unpredictably and accidentally under unexpected circumstances occurring in a public highway or private location and may be unintentional (Ogden, 1996; Ajit and Ripunjoy, 2004).

The most shocking and emerging reality of RTA is that it will continue affecting the survival of several lives across the planet. Consequently, the United Nation Economic Commission of Africa (UNECA, 2009), remains negative in RTA cases where it projected that RTAs will be the fifth(5^{th}) leading cause of death globally by 2030.

2.3. Types of RTA

The major RTAs that occur on the main highway and streets can be grouped into motor and non-motor vehicle accidents (Legault, 1960). Motor vehicle accident is any motor vehicle accident occurring on the highways and streets involving only one car, more than one car, car-pedestrian and car-bicycle accidents (Legault, 1960), whereas, non-motor vehicle accidents are accidents that involve collision between a pedestrian and a bicycle on a sidewalk (Transport Research Laboratory) (TRL), 1997).

2.4 Causes of RTA

Every RTA is not usually caused by a single cause but it is caused by a combination of multiple factors associated with the road and environment deficiencies, vehicle problems and road user errors and the way they interact together. Among the most prominent factors, human factors take the majority of the causes of RTA. Some of the major contributing factors for the occurrence of RTAs are described as follows.

2.4.1 Human Related Causes

Human factors are without hesitation the most challenging factors for the occurrence of RTAs. The majority of RTA is the involvement of the misbehavior of a driver. According to the Economic Cooperation and Development (OECD, 1978), about 80-90% of the RTAs were attributed to the faults of the driver. The common driving errors are lack of observation or ineffectiveness, driving very fast, lack of alertness, misperception and anxiety reaction from the inexperienced. In the same study, young and inexperienced drivers were found to be more likely to cause RTA than older and experienced drivers. In contrary to the above study with regards to drivers driving experience Mekonnen (2007) argues that the highly experienced drivers are engaged in frequent RTA scenarios than the least experienced ones in Addis Ababa. In the USA, the age group 16-24 years contains 22% of the driver population and this group was involved in 35% of fatal and 39% of all injury accidents. And overall accident rates are lowest for those in the age groups 30-60 years (Hobbs, 1979).

Human factors, especially in developing countries, have been considered as the most significant contributing factor for the occurrences of RTAs and always have been the focusing area of attention and the subject of investigation for related experts. A study points out that different countries have stated that the level of education is an important human factor which has a high effect on RTAs (Ashkan, Ghasem, Arman, Mohammad, Navid, Seyed, and Kamran, 2013). Some of the human-related causes of RTA include speed, age and use of mobile while driving.

Speed affects both RTA threats and accident magnitude. Based on this, different studies point out that when speed increase, the number, and severity of injuries also increases. For instance, a report by WHO (2004) demonstrates that if there is a higher speed of the car, then there is a greater probability of grave and deadly injury. Likewise, WHO (2009) stated that a 5% increase in average speed leads to an approximately 10% increase in RTAs that cause injuries, and a 20% increase in fatal RTAs. Related to speed, drink driving is one contributing factor to the occurrence of RTA in many countries (Tsumokawo and Hoban, 1997).

In relation to age, Lisa (2005) argued that crash rates of male drivers aged 16–20 years were at least three times the estimated crash rate of male drivers aged 25 years and above. He also, argues that youngsters are significantly more probably to be involved in a deadly accident than older drivers. He also stated young drivers are five times prone to the risk of RTAs compared to the drivers aged above 30. Moreover, WHO (2004) stated that the use of hand-held mobile telephones can harmfully affect the behavior of a driver as regards physical as well as perceptual and decision-making abilities. The process of calling influences a driver's ability to keep to the way on the road

2.4.2 Road Related Causes

Since the entire process of road transport is conducted on roads, the quality, size and engineering characteristics of the roads would have a considerable contribution to the increase or decrease of RTA risks (Fanuel, 2006). The design, lighting, and surfacing of roads can affect injury rate. In many developing countries, both the vehicles and pedestrians are forced to share the available roads or a street, which contributes to high RTAs in those countries (WHO 2010). The relationships of road width, curve and straight distance all have noticeable effects on the occurrence of accidents (Hobbs, 1979). The absence of road lights increases the occurrences of RTA by 20 to 50% (Sandra, 2000). Similarly, the condition of the road surface that is the damaged and uncomfortable road surface is most likely to increase the probability of incidence of RTAs (Terje, 1998).

2.4.3 Vehicle-Related Causes

Ung (2007) stated that vehicles have caused RTA because their owners did not properly maintain and regularly inspect the vehicle during the movement. An older vehicle with mechanical defects and poor maintenance cause higher fatal RTAs and property damage (Hobbs, 1979).

2.4.4 Environmental Related Causes

Environmental conditions such as weather and time of a day influence the occurrences of RTAs. Out of the total RTAs about 1%, 2%, and 15% occur in a foggy, snowy and rainy weather respectively (WHO, 2013). Supporting this idea Alister and Simon (2011) argued, for example, rainy asphalt reduces friction between vehicle and road and consequently caused RTAs. The day of a week has its own contribution to the prevalence of RTAs in a given area. In this regard, Mekonnen (2007) stated that there is a high prevalence of RTAs in market days than non-market days in the city of Addis Ababa. This indicates that in market days RTAs causes a significant number of causalities in different degree of severity class.

2.5 Conceptualization of Human Security

The term human security is defined differently by different scholars and academicians and there is no approved definition for human security. The definitions of human security differ from individual to individual or from one nation to another nation (Kanti, 2000).

The Commission on Human Security defines human security as:

> *Human security means protecting fundamental freedoms: freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and aspirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood, and dignity* (CHS, 2003, p.4).

In another way, human security can be defined as the protection of the life and dignity of individual human beings (UNDP, 1994 and Acharya, 2001). It has two main features. First, it is concerned about safety from such chronic threats as hunger, disease, and repression. Second, it means protection from unexpected and hurtful disorders in the patterns of daily life whether in homes, in jobs or in communities.

Kanti (2000) and McDonald (2002) stated that the term human security has a recent concept and increasingly wide usage in the different organization working in the area of security and development issues. Since it was first proposed in the 1990s, there has been an infinite debate between its proponents and critics and even among its supporters over the meaning and utility of the concept.

There is an ongoing debate over the concept and the function of human security between academicians, scholars, and policymakers. Human security was widely celebrated as a long painful humanist alternative to conservative representations of security when UNDP Program officially announced the concept of human security in 1994. “Today, human security is a motto for describing the complex challenges that individuals and communities face in achieving safety and wellbeing in an insecure world.” (Hideaki, 2004). Similarly, Shahrbanou, (2005) describes that currently, human security is both a standard term in the development policy issue and a reference point for a broad understanding of security. Many international political actors, in particular from the developed world, have incorporated human security as a part of their mandate and policy agenda (Alexandra, 2015).

Human security in its broadest sense includes far more than the nonexistence of violent conflict. Based on this Kanti (2000) and Acharya (2001) states that human security includes the protection of human rights, good governance, access to education and health care and ensuring that each individual has opportunities and choices to fulfill his or her own potential. Freedom from want, freedom from fear and the freedom of future generations to get a healthy natural environment are the interconnected building blocks of human security and therefore it enables to achieve stable national security (CHS, 2003). On the other hand, human security recognizes that people and communities

are extremely endangered by events largely beyond their control: a financial crisis, a violent conflict, chronic poverty, a terrorist attack, HIV/AIDS, underinvestment in health care, water shortages, pollution from a distant land (Tadjbakhsh and Chenoy 2007).

The 1994 UNDP report introduced seven components of human security, which includes economic, food, health, environmental, personal, community and political security. As my study did not cover all the components of human security, only the economic, physical, and health security are reviewed as follows.

Firstly, economic security is one of the basic components of human security which is necessary for the survival of human beings. Due to its contested nature, economic security is exposed to a number of definitions and explanations. According to UNDP, (1994) economic security is defined as assured basic income, access to employment and resources. Whereas (International Labor Organization [ILO], 2004) stated that economic security is basic security in which everyone should claim as a right and an ideal to which all policies and institutions should consider (p. 4). As basic security and claim, it must encompass *freedom from morbidity, freedom from fear, control of own development, and sustainable self-respect.*

Furthermore, (International Committee of the Red Cross [ICRC], 2012) defined economic security as the condition of individuals, households or communities able to cover their essential needs and necessary expenditures in a sustainable manner and with dignity. According to it economic security concentrates on one of the following "key livelihood outcomes."

1. Food consumption: What are people eating? Does their diet cover their nutritional requirements?
2. Food production: Are people able to hunt, fish, produce food or forage as they normally would?
3. Income: Do people earn or obtain enough money to cover their basic expenses?
4. Living conditions: Are people protected against bad weather? Do they have the means to cook food? Can they maintain basic standards of hygiene?

5. Capacity: Can the government, civil society, National Red Cross or Red Crescent Societies and others help meet people's economic security needs?

Thus, economic security can be defined in a number of ways such as economic security as ability to meet basic needs, as economic wellbeing, as basic security and as assured basic income, access to employment and resources. But for the purpose of this study, the researcher tried to see the definition given by UNDP i.e. "Economic security is assuring basic income, access to employment and resources."

Secondly, physical security can be defined as protecting human lives from threats of various kinds of violence by states and other external states or groups (UNDP, 1994). Its purpose is to secure sustainable reductions in crime and the fear of crime in local communities. In another way, personal security is a general condition that occurs after adequate efforts are taken to deter, delay, and provide a warning before the possible crime is happening. The concept of personal security involves protection from personal harm (CHS, 2003). Perhaps no other aspect of human security is so vital for people as their security from physical violence (UNTFHS, 2016). In poor or rich nations human life is increasingly threatened by sudden and unpredictable violence (CHS, 2003).

Lastly, UNDP, (1994) defined health security is avoiding early death by building the capacity of individuals, communities, and societies to maintain a healthy lifestyle. In an increasingly interdependent world, threats to health security anywhere in the world can impact social, political, and economic stability of the society. This is evident from many recent events, such as the Ebola epidemic in West Africa and the emergence and spread of other transmitted diseases. In this sense (WHO,2007), the report reveals that global public health security is defined as activities required both proactive and reactive action to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries.

Generally, the researcher tried to study the implication of RTA on these three elements of human security: physical, economic and health security as RTA affects these elements of security immediately and the effect is inseparable.

2.6 Implication of RTA on Human Security

Human security is faced with threats of a different nature. One of the major threats is RTA which takes the lives of millions of people around the globe. RTAs have a worsening effect on human security. It causes the loss of the largest life of human beings and tends to be the most serious problem all over the world (Anh and Dao, 2005). Although the implications of RTA on human security vary from one country to the other, it should be every body's concern. Because RTA becomes a high threat to the survival of individuals human security and the society of one country at large. The major impacts of RTA on economic, physical, and health security discussed in the following sub-sections.

2.6.1 Implication of RTA on Economic security

RTAs are currently diminishing the financial wealth of many nations. The financial influences of RTAs are equally shocking and costing billions of dollars of the world economy in medical treatment, healthcare and other results of human suffering. In this regard, (WHO, 2013) states that, in economic terms, the cost of RTAs is estimated at roughly 1% of Gross National Product (GNP) in less developed countries, 1.5% in developing countries and 2% in developed countries. For instance, Naci, Chislom, and Baker (2008) indicated that the economic cost of RTA has been estimated to be as much as US$ 24.5 billion in Asia, US$ 19 Billion in Latin America and the Caribbean, US$ 9.9 Billion in Central and East Europe, US$ 7.4 Billion in the Middle East and US$ 3.7 Billion in Africa.

In Ethiopia, the implication of RTA on the economic issue is even worse. The impact of RTA puts its own black spot on the society of Ethiopia. In this issue, Persson (2008) have discussed that the impact of RTAs on the economic issue is big for Ethiopians as the annual cost is estimated to be around 40 million Pounds. Besides, studies have also shown that RTAs seriously affect national economies and lead to a decrease in the gross national product (GNP) of countries. Many families are also driven in too deep poverty due to the loss of economically active groups (Bitew, 2002). Moreover, Hassen (2010) states that people suffer from permanent disabilities such as paraplegia (paralysis of the lower half of the body) and quadriplegia (paralysis of all four limbs). This causes

unable to achieve even simple objectives, which results in dependency on other people for economic support and routine physical care for their day to day activities (Osoro, Ng'ang' a, and Yitambe, 2015).

Among the economically active age group, RTAs are the third cause of death in developing countries (Agbeboh and Osarumwense, 2013). It is not only limited to the accident victim(s) disability but also limits the number of work days lost either to recovery or to average retirement age in the case of medical treatment. Even some of those injured will not return to their jobs and may also lose their jobs and will also spend additional time looking for new employment (Anh and Dao, 2005). Thus, there is not only lost working time to take into account but, also reduced income after restarting employment. When a family member is injured, the whole family gets involved; those on daily wages may lose their job, children may not go to school and older members may spend less time caring for infants (Chen, Callahan, & Sheets, 2003).

RTA may cause economic insecurity for ordinary people at the household level because households affected by RTAs are likely to experience a reduced earning capacity and decreased productivity as a member are unable to work or are tied down to caring for the affected family members (Chen et al., 2003). They added, RTAs at the same time generate new costs such as memorial expenditure costs, legal costs, administrative cost, medical costs, etc. and households exposed to serious problems to survive economically thereby it affects the national economy of a country.

2.6.2 Implication of RTA on Health Security

In another way, RTAs are the major public health security threat in the contemporary world. WHO (2004), indicate that road traffic injuries are a major cause of death and disability globally, with unequal number occurring in developing countries. It is one of the most leading health problems along with diseases such as Diarrhea, Malaria, HIV/AIDS and Tuberculosis especially in less developed countries (WHO, 2013).

The psycho-social effect of RTA on victims is another consequence. According to WHO (2013) report, RTA account for 30 to 86% of the trauma admissions to hospitals in less developed and

developed countries. It is a major cause of early death and injuries, people often suffer from physical pain and emotional pain that is beyond any economic compensation WHO (2013). Relatives or family members of victims experience continuous absence from work, sorrow, suicidal feelings and anxiety attacks (Berhanu, 2000). In many developing countries, the costs of prolonged medical care, the loss of the family breadwinner, the cost of a funeral, and the loss of income due to disability can push families into poverty; this, in turn, creates health problems and a new social status or meaning to survivors (WHO, 2013).

RTAs also incur medical costs of casualties' costs, rehabilitation costs, fire brigade costs, medical care costs for first aid employees and inputs and administrative costs (Lisa, 2005), which includes police, legal and insurance administration expenses to prosecute and investigate RTA offenders (De Leon, Cal, and Sigua 2005). According to Ethiopia Insurance Corporation, from 2008-2010 the administrative costs attributable to motor accidents is 16,993,243.90 ETB. Similarly, WHO (2009) reports that over 90% of the world's sufferers on the streets happen in low- and middle-income countries, although these countries only have about 48% of the world's registered vehicles and RTAs affect many sectors of society: individuals, families, communities, and countries.

RTAs one of the world's most pressing contemporary health security threats (WHO, 2017). It is a health security threat because it increases the number of people search for health services and victims with curable injury may not have access to hospitals, especially in developing countries and the costs of providing medical care are also increasing (Hassen, 2010). Another serious human security threat of RTAs on health security is psychological problems on the victims of RTAs and on their families which causes feelings of discrimination, exclusion, and depression (WHO, 2013).

Thus, as RTAs are the major public health challenges in the modern world, comprehensive and holistic efforts are required to reduce through operational and workable prevention and controlling mechanisms.

2.6.3 Implication of RTA on Physical Security

The implication of RTAs on physical security is widespread. It restricts political and social interactions because the victims feel unsafe, victimized by someone else and fear of crime. The injury and loss of body parts, damage to property and the sorrow it leaves in the human mind are profound (WHO, 2004). It caused the substantial cost to society especially when the loss of active men and women who would have been involved in productive economic activities, loss of resources to government and families, the cost to insurance companies and damage to properties, etc. are incalculable (Agbeboh and Osarumwense, 2013).

In the aspects of physical security RTA causes reversible and irreversible disability. Permanent disability, such as paraplegia, quadriplegia, loss of eyesight or brain damage, can deprive an individual the ability to achieve even simple objectives and can result in dependence on others for financial support and routine physical care. Less serious injuries can result in chronic physical pain and limit the injured person's physical activity for lengthy periods. Serious burns, contusions or cuts can lead to emotional trauma associated with permanent deformity (WHO, 2004). Around the globe, people who are affected by RTA face physical and psychological violence which is commonly called direct violence (Anh and Dao, 2005). In the worst-case consequence, such physical and psychological violence can lead to early death and permanent injuries (Hassen, 2010). For example, head and spinal injury of victims may be incapable to return to their normal lives and this may require full care all the time WHO (2004).

2.7. Existing Measures for Preventing RTAs

The situation of RTA is so complex in which various intervention and prevention strategies are needed to block it. Road safety measures and road incident reduction relates to many other fields of activity including education, driver training, publicity campaigns, police enforcement, road traffic policing, the court system, the integrative national health service delivery system and vehicle engineering (Ndung'u, Bonface and Mwai, 2015). RTA rates also reduced by improving road engineering, re-training drivers of public service vehicles, adopting the right driving behavior,

promoting the use of safety equipment, observing traffic rules and timely medical services (Evans, 2003 and Osoro, Ng'ang, Yitambe 2015).

Like in other developed nations, many African countries have established road safety agencies in a form of National Road Safety Council or Road Safety Committee since the early 1980s, mostly within Ministries of Transport and Roads, with the aim of preventing "RTAs" (Bitew, 2002). They are intersectoral in structure, with membership derived from both governmental and non-governmental sectors, and operate mainly at the national level. They Perform activities like; Ensuring law enforcement, collecting road accident statistics, revising traffic legislation, promotion of road safety education, ensuring adequate provision of medical facilities for traffic injury victims, undertaking research in road safety and coordination of all road safety activities (Fanuel, 2006). In general, according to Fanuel (2006) in Ethiopia, these sectors have largely been ineffective, as they do not have the capacity to function effectively. As a result, a more effective central agency for road safety, with adequate resources and trained personnel are needed in each Region. Some of the intervention strategies which contributes to the reduction of RTAs argue as follows

2.7.1 Setting and Enforcing Speed Limits

Many research and international experience point out that the effectiveness of setting and enforcing speed limits reducing the frequency and severity of RTAs (Finch, 1994). Setting road speed limits are closely associated with road function and road design. Osoro et al., (2015) argues that physical measures related to the road and the vehicle, as well as law enforcement by the police, radar and speed cameras all, contribute in ensuring compliance with a maximum posted speed limits and to the choice of an appropriate speed for the existing conditions. In another way, speed limitation devices in vehicles can assist the process of controlling the maximum speed a vehicle can travel through devices which are able to set limits of speed variable (Perez, Mari-Dell'Olmo, Tobias & Borrell, 2007).

2.7.2 Enforcement

Police enforcement plays a vital role in addressing the problem of RTAs. The police need greater powers to increase driver's blood alcohol test ability thorough alcohol test detector and to increase penalties against drunk driving. Moreover, enforcing the speed limit is critical for reducing the severity of RTAs

It is essential for police enforcement organizations to analyze public attitudes towards RTA and traffic safety in order to determine if any change has occurred. This requires the public to understand the aim of the activities of police and to cooperate with the police in order to achieve road safety. A study was carried out by (Constant, Salmi, Lafont, Chiron & Lagarde, 2009), in a large gas company of France to establish the main risks that drivers take. The researchers found that police enforcement and traffic campaigns are very effective in preventing drivers from speeding and using mobile phones while driving.

2.7.3 Providing Valuable Education on Road Safety Issues

Education campaigns and programs can have a huge impact on raising awareness of road safety matters. In this sense, aggressive promotional campaigns and road safety education could address the problem of noncompliance of pedestrians with crossing regulations and other traffic regulations (Truong, Hill & Cole, 2013). Similarly, in the prevention of pedestrian injuries, educational measures to teach pedestrians about how to cope with the traffic environment are considered to be an essential component of any prevention strategy and pedestrian education has been recommended (Who, 2013).

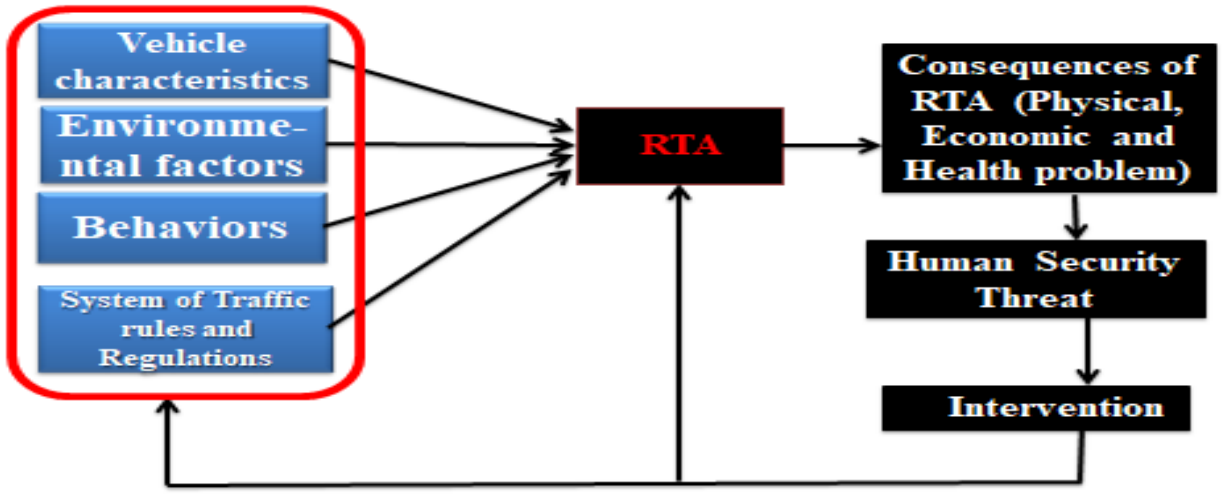
Governments of a given nation should, therefore, provide traffic safety education programs in all schools so that road safety awareness creation for children and teenagers can be achieved through these programs. Education will help reduce traffic hazards, especially for people who break the law. Broadcasting the causes, the implication of RTAs on human security and suggesting measures to reduce RTAs to the viewers is included in the programs. This gives insights concerning RTAs to viewers (Truong *et al.*, 2013). In addition to the actions to create awareness about RTAs through

mass-media and magazine (*Police ena Ermejaw Gazetha*), printing and distributing pamphlets on the subject of RTAs is another measure (Segni, 2007).

2.8 Conceptual Framework for RTAs and Human Security

The conceptual framework adopted in this study attempted to address the different factors which influence RTAs, the implication of RTA on human security and the involvement of stakeholders on the prevention and/or reduction of RTA. RTAs stand strong elements of man-environment adjustments and maladjustment of a well-known approach in geography (Muhlrad and Lassarre, 2005). Based on the logic of a modified human environmental model of a disease the approach can be transferred to studies of RTAs. A conceptual framework for RTA as inspired by the ecological model of disease was developed by Jorgensen and Abane (1999), who made an investigative adjustment of this basic model to suit the investigation of the prevalence of RTA and its implication on human security. The prevalence's of RTA and its implication on human security can be reverted and reduced through the intervention and involvement of stakeholders who have invested their own resources in mitigating RTA.

Figure- 2.1: A conceptual framework for RTA and human security



Source: Developed by the researcher slightly adjusted from Jorgensen and Abane, 1999

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

Methodology is a means to understand the assumptions underlying various methods and techniques used to solve the research question (Khotari, 2004). Methodologically I employed a mixed research approach with a great emphasis on the qualitative one. Research approaches, research designs, and research methods offer information in a successive way from broad constructions of research to the narrow procedures of methods to conduct a study (Creswell, 2009). Accordingly, I used qualitative research approaches to gather and analyze the data about the implication of RTA on human security where as the quantitative one is used in less manner to describe the prevalence of RTA.

3.2. Research Approach

Mixed approach provides an opportunity for the researcher to collect both quantitative and qualitative data, to triangulate both primary and secondary data, to empower individuals to share their stories, hear their voices and minimize the power relationships that often exist between the researcher and the participants in a study (Creswell, 2009). Thus, this study employed a mixed research approach with a great emphasis on qualitative research as my study focused on the prevalence of RTA and its implication on human security.

3.3. Research Design

As Kothari (2004) stated that, research design enables the researcher yielding maximum information with minimal expenditure of effort, time and money. Thus, the researcher employed a descriptive research design in order to describe what a particular phenomenon, program, and state of affairs exists in a particular context and to provide a descriptive feature of the implication of RTA on human security in the study area. This study also uses the case study as a strategy to investigate the contemporary phenomenon in detail with real-life context, (Creswell, 2009),

3.4 Source of Data

The collection of data refers to a purposive gathering of information which is relevant to the subject matter of the study from the units under investigation. For this particular type of thesis qualitative and quantitative data were collected. For the study purpose, both primary and secondary data were used. Primary data was obtained by the utilized questioner with traffic police officers, victims of RTA, road transport authority workers, drivers, and pedestrians. Interview data collection instrument was employed only with police officers, victims of RTA and road transport authority workers to collect primary data. Secondary sources were collected from document analysis, official annual reports and other written materials which have relevance for the successful accomplishments of the thesis.

3.5. Data Collection Tools

There are several ways of data collection tools/instruments. Among the many types of data collection tools, the researcher has used interview, questionnaire and document review. The rationale behind using multiple types of data collection instruments are for the purpose of triangulating and ensuring the reliability of data.

3.5.1 In-depth Interview

An In-depth interview is the most commonly used data collection instrument in qualitative dominating research. Therefore, to have sufficient and available information about the issue the researcher was conducted an in-depth interview with purposely selected six (6) police personnel's, six (6) victims of RTA and four (4) road transport authority workers. Totally, sixteen (16) participants were interviewed by the researcher. The researcher not engaged critical in-depth interview with drivers rather the researcher highly engaged and focused on the victims of RTA to get more rich data about the implication of RTA on human security. Furthermore, to gate a general picture of road traffic problems, informal interviews were conducted with drivers and dwellers of the town. They were interviewed at different times from those groups of participants.

3.5.2 Questionnaire

The researcher utilized open and close-ended questionnaire for the sake of obtaining both qualitative and quantitative data and giving the opportunity for respondents to explain their thoughts and feelings towards the prevalence of RTA in SBTA and the implication of RTA on human security on the residents of the town. The respondents of questioner were selected based on the familiarity about RTA, the skill, knowledge, and experience of those authorized persons in the area of preventing, controlling and investigating RTA in the study area. The researcher has distributed the questionnaire to 58(fifty-eight) purposively selected respondents from different sections of the community. The reason behind that was selecting 58 respondents is to gather data within a minimum period of time and to generate more representative data.

3.5.3 Document Review

The researcher also used document review collected from the relevant police department and road transport authority records, legal documents, and annual official reports, and documents concerning about RTAs were reviewed to understand the overall conditions of the implication of RTAs on human security in the study area. Existing records of information on documents offer insights into a setting or provide information which is not easily available in other methods.

3.6. Population and Sampling Size

Population refers to a group of individuals in which the required sample for a given issue has been taken. The target populations for this particular thesis are all residents of SBTA. The size of a sample refers to selected units of the population that should neither be excessively large nor too small and generally, it must be optimum. The sample size for this particular study was 74 peoples in SBTA with the rationale to generate data which is more representative to a larger population, to avoid bias, to avoid overload of information and to gather the required data within a reasonable time limit. Among this total number, 16 participants were selected for an in-depth interview, while the remaining 58 participants were selected for the questioner.

3.7. Sampling Technique

For this particular study, a non-probability purposive/ judgmental sampling was used because this technique was feasible and allows the researcher to select respondents based on their skill, knowledge, and experience about the problem/issue. In addition, snow-boll sampling was employed in this study because this technique of sampling is appropriate when the members of a special population are difficult to find in exact places, such as criminals, victims, offenders, homeless individuals, migrant workers, or undocumented immigrants (Earl, 2008). This technique enables the researcher to start with one participant and referred by the first participant for others. In this study, pedestrians, drivers, victims of RTAs, police officers, road transport authority workers working in the area of RTA were participating in this research. The selection and exclusion criteria of the research participants conducted based on the skills, experiences, knowledge, and exposures of research participants to the problem.

3.8. Data Analysis Procedure

The qualitative research analysis is usually based on an interpretative philosophy, to examine the meaningful and symbolic content of qualitative data. The collected data for this particular thesis was mostly analyzed qualitatively by describing the prevalence of RTA and its implication on human security in the study area. Data analysis is inductively building from specific to general subjects and the researcher making interpretations of the meaning of the data. After collecting the necessary data by employed the identified data collection tools, the next task done by the researcher was interpreting, categorizing, and analyzing the collected data manually from the perspective of the human security approach. The quantitative approach was used to describe the prevalence of RTA by using simple percentage description to substantiate the qualitative one.

Thematic analysis was employed to analyze the primary data and the data was presented in a descriptive manner based on the research questions and objectives of the research. Before the actual analysis of the data, the collected data from different sources were systematically organized, categorized, articulated and summarized in accordance to its source and type to point out the

required issues by carrying out a series of tasks. The first task which was done by the researcher is a transcription of all data from Amharic to English which was obtained through in-depth interviews and questioner. In addition, the researcher was made filtered documents in an accurate manner. The researcher then carefully goes by the transcription to get more sense about the collected data. Dominantly tables were used to clarify and substantiate explanations.

3.9. Ethical Consideration

The ethical issues were considered in the overall process of the research. All respondents were selected based on their consent and all issue concerning the respondents were based on confidentiality and transparency. Before administering the interview or questioner to the participants of this research I was asked the respondents consent or interest of participation. While the researcher collected data the ethical and cultural background of the respondents were recognized by the researcher. In this regard, a researcher considered the ethical values of the host community on which the research is conducted and the study was conducted based on respecting all respondents irrespective of their religion, gender, and age. Finally, any kind of harm (physical or psychological) was not applicable to respondents.

3.10. Description of the Study Area

SBTA is one among the many town administration which is located in the Oromia Special Zone Surrounding Finfinne of the Oromia Region, particularly in North Shewa Zone of Oromia Regional state. Astronomically, it is located at 9.15° North latitude, 39.03° East longitude, and 2538 meters elevation above the sea level and it is characterized by plain area. Regarding the weather condition, the town has a medium level of cold weather condition.

SBTA is a separate town administration which is found in central Ethiopia. The name Sendafa is taken from the Oromo name for a kind of dense and jointed grass which grows in muddy or swampy areas as the municipal office of the town administration was stated. According to the municipal office of SBTA administration (2011 E.C), the total number of populations inhabited in SBTA is 54,734. From this total number of populations inhabited in the study area, 26,452 are male, whereas

the remaining 28,282 are female. Based on the 2007 national census conducted by the Central Statistical Agency of Ethiopia (CSA), the majority of the inhabitants said they practiced Ethiopian Orthodox Christianity, with 84.15% of the population reporting they practiced that belief, 11.38% were Muslim (CSA,2007). The Administration is organized into three kebelle. Trade, agriculture and other works are the main sources of the live hood to the community found in SBTA. There are about some major public and private institution found in SBTA.

The road which passes through SBTA is a cross country road that connects Addis Ababa with Mekelle. SBTA is bounded by *Aleltu* from the northeast, *legetafo* and *legedadi* from the west, *Chefe* in the south and *Enkulal* Mountain from the north. Formerly it is the capital city of *Bereh wereda*. SBTA is far from the capital city of Addis Ababa 39 km and it far from *Debre-Berhan* (the town of *Shewa Zone* of *Amhara* regional State) about 80 km. I selected this study area because of the following reasons. First, it is a place ranked second in RTA prevalence in *Finfine* surrounding Oromia Special Zone. Secondly, the number of the population becomes increasing due to the immigration of people from Addis Ababa and the surrounding rural woredas. Third, Since I am the resident of the town, Sendafa Beke Town is time and cost-effective in terms of data collection because of the familiarity of the study area and sensing the prevalence of RTA and its implication on human security like the victim on the study area. Due to the above reasons, the researcher select SBTA as a study area rather than selecting *Sululta* town administration.

CHAPTER FOUR

ANALYSIS: ROAD TRAFFIC ACCIDENT AS A THREAT TO HUMAN SECURITY

4.1 Introduction

Under this chapter, the researcher is going to discuss and analyze the collected data which was obtained from secondary as well as primary sources. Accordingly, this discussion and analysis presented the prevalence of RTA at SBTA, the implications of RTA on human security of residents of the town and finally the strategies used by SBTA authorities and stakeholders to prevent RTA in the study area.

4.2 The Prevalence of RTA in SBTA

Before directly investigating at the prevalence of RTA in SBTA the situation and the prevalence of RTA at National level should be described based on the available data. Ethiopia is one of the highest in RTA death rates recorded in the world, over 1700 people being died annually and every day, some 5 people have been killed on Ethiopian roads (Jacobs and Thomas, 2000). This death rate has been maintained and sometimes exceeded since 1963 when official traffic regulation and figure began (Berhanu, 2000). Likewise recently 27,140 people died annually (WHO,2017). The distribution of road traffic accidents between the regional states of Ethiopia varies considerably and which is higher in urbanized regions than elsewhere.

Different studies indicated that RTAs in Ethiopia can be taken as the worst example compared that of other countries of the world (Jacobs and Thomas, 2000; UNECA, 2009; WHO, 2018). All the writers and reports state that Ethiopia has had relatively high accident records in the world within the average high fatality rate.

Table 4.1: Regional RTA distribution and situation in Ethiopia (2000- Half years of 2011 E.C)

No	Region	Accident year												Total	% share
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
1	Addis Ababa	8169	7523	6285	9134	11529	15815	17904	20433	22939	26945	28361	14839	**189,903**	**62.3**
2	Oromia	2194	1785	2181	4015	4569	4333	4012	5033	3940	3900	4386	1975	**38,423**	**12.6**
3	Amhara	2075	2080	2106	2619	2584	2784	3070	2798	2783	3030	3032	1275	**30,236**	**9.9**
4	SNNPRS	1009	664	942	814	978	935	1135	1261	1198	1467	1543	664	**12,610**	**4.1**
5	Tigray	684	845	1389	1264	978	831	800	1016	1088	1186	1407	695	**12,183**	**4.0**
6	Dire Dawa	290	196	307	315	365	397	512	454	516	542	585	371	**4,850**	**1.6**
7	Harari	204	392	45	-	167	226	295	374	243	551	765	165	**3,427**	**1.2**
8	Afar	184	184	189	141	157	198	251	223	274	355	154	99	**2,409**	**0.9**
9	Beni. Gumuz	83	87	164	107	108	271	167	159	218	287	266	165	**2,082**	**0.8**
10	Somali	47	69	69	60	73	132	167	124	147	321	410	86	**1,705**	**0.7**
11	Gambella	147	197	-	-	160	78	126	145	201	153	89	48	**1,344**	**0.6**
	Total	**15,086**	**15,695**	**13,677**	**18,469**	**21,668**	**26,000**	**28,439**	**32,020**	**33,547**	**38,737**	**40,998**	**20,382**	**304,718**	**100**

Source: Federal Traffic Police RTA data recording file and analysis office (2011 E.C)

As indicated in table 4.1 the percentage share of RTAs is concentrated in a few of the regions. Five regions, Addis Ababa, Oromia, Amhara, SNNPRS[1] and Tigray, account for 92.9 percent of the total RTAs in the country. The table also shows that there are about 304,718 RTA occurrences in the last eleven(11) years in Ethiopia across all over Nine regions and two city administrations and all accidents in different severity class have increased over the last eleven(11) fiscal years of Ethiopia, which caused a great loss of human and economic resources in Ethiopia . This problem is worsening from year to year at an alarming rate with the rapid increase of population and the number of vehicles (Girma, 2000). Thus from this, we can infer that the prevalence of RTAs at national level increases from year to year and found in alarming trend.

When we come to SBTA the prevalence and occurrence of RTAs can be put in different categories and also the prevalence rate is also increasing similar to the prevalence of RTA at the national level. It can be put in terms of sex, age of drivers, driving experience of drivers, vehicle ownership characteristics, time and day of a week in SBTA. This prevalence of RTAs in SBTA caused by different man-made and natural variables. The prevalence and occurrence of RTA in SBTA show variation in terms of drivers' sex. As stated by IP-04 (PC, March 28, 2019), the number of male drivers' in the prevalence of RTAs involvement in the town is greatly more than females in SBTA. On the contrary, female drivers did not cause RTA as he expressed by the interviewee. Therefore, from this one can understand that male drivers contribute a lot for the prevalence of RTAs in SBTA. In a very similar result, Segni (2007) have proved that male drivers are the main contributors to RTAs than females in Addis Ababa. However, with this conclusive remark, we cannot made a generalization about male drivers are greatly involved in the prevalence of RTAs in SBTA due to the different proportions of male against female drivers.

In another dimension (WHO, 2013) has been viewed that the age of drivers has a greater influence over the prevalence of RTA occurrences. This is due to the fact that the age of drivers has their own sound effects over their driving behavior, concentration, attention, sense of responsibility and patience at the time of driving a car. Based on this, drivers found in the age group between 18 and 30

[1] Southern Nations, Nationalities and Peoples' Regional State

(young drivers) in the town are more frequently involved in the prevalence of RTAs than drivers aged 31 to 50 in SBTA as expressed by IP-02 (PC, March 27, 2019). This result is similar to, the findings of Lisa, (2005) states that young drivers are significantly more likely to be involved in a fatal RTA than older drivers. In addition to this, he stated that young drivers are five times susceptible to the risk of RTAs compared to the drivers aged above 30.

It is observable RTA in SBTA is prevalent in a greater degree of amount. This prevalent rate is highly increased from time to time according to personal communication held with IP-01(PC, March 27, 2019). Similarly, IP-06 (PC, March 30, 2019) said that the prevalence of RTA in the study area is ranked second next to *Sululta* town administration and the RTA that occurred in the night time is higher and caused fatal injury than day time accidents. This statement is consistent with Hoobs's(1979) finding that night time accident rates are about 50% greater than day time accidents. Therefore, I deduced that though the prevalence rate of RTA in SBTA become increased from time to time, the rate of the prevalence and the magnitude of injuries occurred at night time are the most pressing.

Table 4.2: Types of RTA in SBTA in different degree of severity class (2000 – Half years of 2011 E.C)

Accident Year	Types of an accident in different degree of severity class				Total	%
	Death	Severe body injury	Light Body Injury	Property Damage		
2000	4	1	2	4	11	3.8
2001	3	1	2	4	10	3.4
2002	1	4	1	3	9	3.1
2003	-	-	2	10	12	4.1
2004	6	1	9	10	26	8.9
2005	6	3	11	11	31	10.6
2006	1	9	14	9	33	11.3
2007	8	3	23	13	47	16.1
2008	10	6	10	7	33	11.3
2009	14	6	7	1	28	9.6
2010	15	8	8	6	37	12.7
2011	3	4	6	2	15	5.1
Total	71	46	95	80	292	100

Source: Compiled from SBTATPO (2000-2011 E.C)

Table 4.2 depicts that the prevalence of RTAs increases from year to year with the exhibition of some fluctuation in some specified years. The table also indicates that the prevalence of RTAs occurred in the areas of SBTA shows temporal variation and has been recorded in different degree of severity class in the study area. Further, the table demonstrates that the prevalence of RTA in SBTA is found in an alarming trend with some variation in each year and totally 292 RTA have occurred in the study area. This prevalence rate is increasing from year to year like the increasing prevalence rate of RTA at national level which is indicated in table 4.1.

Depending on table 4.2, many reasons have been mentioned to explain the increasing prevalence of RTA from year to year in SBTA. According to the personal communication held with IT-04 (PC, April 07, 2019), one reason is the relative migration of people from rural to urban areas of SBTA with the subsequent increase of the volume of vehicles, particularly three-wheel vehicles what we call it "locally known as Bajaj" and horse-drawn carts. The second reason is the expansion of the town into different dimension contributed much to the increasing prevalence of RTA existence in SBTA in the subsequent years. This creates a hazardous condition regarding the traffic movements of the town. He also expressed that the relatively vulnerable nature of horse-drawn carts and pedestrians to traffic flow, highly aggravate the prevalence RTA in the town particularly in the market place and market day of the town. This idea is also true according to the personal communication held with IT-01 (PC, April 01, 2019) clarifies that the highest prevalence of RTA in SBTA exhibited in weekend days when compared with any other days particularly in Friday, market places and the eve of other market days of the week. He also stated that horse-drawn carts increase from year to year. According to him these horse-drawn carts increase as a result of unemployed persons and other persons come from the rural areas that run their livelihood in different work looks an opportunity for employment than other job opportunities. Therefore, from the above-presented data, one can understand that the prevalence of RTA in SBTA increases due to different factors.

Table 4.3: The prevalence of RTA based on the perspectives of the community

Community members	Responses							
	A big problem		A medium problem		Low problem		Not a problem	
	NO.	%	NO.	%	NO.	%	NO.	%
Pedestrians	3	18.8	12	75	1	6.3	-	-
Police officers	4	50	4	50	-	-	-	-
Victims of RTA	8	57.1	5	35.7	1	7.1	-	-
Road transport authority workers	2	22.2	5	55.5	2	22.2	-	-
Drivers	2	40	3	60	-	-	-	-

Source: Researchers own field survey data from respondents of the questioner

Table 4.3 indicates that the majority of respondents agreed that the current prevalence of RTAs is medium in SBTA. This shows that the perception of respondents about the level of problems experienced is medium. Hence, the study identified that the prevalence of RTA in the study area is found in an increasing trend. As a result, this increasing prevalence of RTAs has a direct threat to physical, economic and health security the community in SBTA.

4.3 Types of RTAs in SBTA

The major types of RTA in SBTA are shown in table 4.3 as follows. The data about types of RTA is available only the years of 2010 and 2011. Therefore, the analysis is done based on the available data for these two years.

Table 4.4: Types of RTA in SBTA (2010-2011 E.C)

Types of RTAs	Number of accidents		Total
	2010	2011	
Vehicle to vehicle	15	11	26
Vehicle to Pedestrian	7	12	19
Vehicle to Material	6	7	13
Horse Cart to Pedestrian	5	2	7
Horse Cart to Vehicle	7	3	10
Motor bicycle accident	1	3	4
Motor bicycle to Vehicle	3	2	5
Accident of Pick up having the capacity of holding 10 quntals	4	2	6
Vehicle to Motor bicycle	2	3	5
Total	51	48	95

Source: Compiled from SBTATPO (2010-2011 E.C)

Table 4.4 indicates that the prevalence of RTA occurred in SBTA are varied in types and their contribution to the threat of human security is also vary significantly. The vehicle to vehicle accident

contains significantly the major proportion of all types of RTAs in SBTA followed by vehicle to pedestrian accidents. The remaining types of RTAs were occurring in different number as a result of different causation. Therefore, I inferred that the vehicle to vehicle and vehicle to the pedestrian accident are the major sources of physical, economic and health security threats.

Table 4.5: Frequently occurred types of RTA based on the responses of the pedestrian.

	Responses											
	A motor vehicle with motor vehicle		A motor vehicle with pedestrian		A motor vehicle with a static object		Bicycle with a bicycle		Bi/motorcycle with pedestrians		A horse-drawn cart with pedestrians	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Pedestrians	8	50	1	6.3	1	6.3	1	6.3	1	6.3	4	25

Source: Researchers own field survey data from pedestrians

Table 4.5 demonstrates that motor vehicle with motor vehicle types of RTA is highly prevalent followed by a horse-drawn cart with pedestrians in the study area in the eyes of pedestrians.

4.4. Causes of RTAs in SBTA

Accidents commonly have multiple causes, in that they originate from a number of adverse multifaceted conditions. According to personal communication conducted with traffic police officer IT- 06 (PC, March 30, 2019) said that, drivers' negligence, failure of pedestrians in using zebra crosses while crossing ways, the movement of animals on the road, athletes who run in the entrance and exit of the town road for the purpose of training and lesser awareness of the society about RTAs are the major causes of RTA occurrences in the town. Beside he expressed that, lack of visible zebra lines in the road, insufficient number of road traffic symbols, the preference of drivers to drive or work in the night time and the movement of horse-driven carts without *Targa* number have played a critical role in aggravating the occurrence of RTAs in the town.

Table 4.6: Causes of RTA in SBTA (2010-2011 E.C)

Accident reason	Number of casualties in accident year (E.C)			Percent (%)
	2010	2011	Total	
Drink drive	1	-	1	0.8
Not driving in the right-hand side or Failure to respect the right-hand rule or driving in the wrong side	2	-	2	1.8
Failure to give way for vehicle	3	2	5	4.4
Failure to give way for pedestrian	19	6	25	21.9
Not driving by keeping the right distance.	3	8	11	9.6
Speed Driving	25	5	30	26.5
Improper over-taking	-	13	13	11.4
Improper turning	-	1	1	0.8
Not respecting traffic control about giving priority	-	1	1	0.8
Improper parking	2	-	2	1.8
Total	**66**	**48**	**114**	**100**

Source: Compiled from SBTATPO (2010-2011 E.C).

As shown in table 4.6, speed driving, failure to give way for pedestrians, improper over-taking and not driving by keeping the right distance shared the major causes of RTAs in SBTA. These major causes of RTA result in huge property damages and severe implication on the human security of SBTA residents. Consequently, we can understand that the causes and prevalence's of RTAs in the town are mainly characterized by the involvement of drivers' error in the study area. Moreover, personal communication held with IT-02 and IT-03 (PC, April 03, 2019) confirms that few drivers are prepared to stop or even slow down for pedestrians while crossing roads. Thus, he notifies that pedestrians who totally depend on their right at crossing points/zebra lines can be at great risk because of drivers being less likely to stop the car while driving.

Furthermore, personal communication held with IT-01and IT-05 (PC, April 01, 2019) and IP-03(PC, March 28, 2019) express that now a day private driving license institution give 2nd,3rd, 4th or 5th level of license without respecting the order of driving license. They also said that previously driving license is given for drivers step by step by checking the ability and skill of drivers in driving vehicle. Additionally, they preferred the previous driving license certification procedure than the current one. As a result, based on table 4.5 and the explanations of IT-01and IT-05 (PC, April 01, 2019) and IP-03(PC, March 28, 2019) drivers are the major causes of RTA.

Table 4.7: The causes of RTA in SBTA based on the views of the respondents

	Responses							
	Vehicle Characteristics		Environmental factors		The behavior of human beings		weak System of traffic rules and regulation	
	NO.	%	NO.	%	NO.	%	NO.	%
Pedestrian	1	6.25	-	-	10	62.5	5	31.25
Police officers	-	-	2		4	22.2	3	33.3
Victims	3	21.4	-	-	10	71.4	1	7.1
Road transport authority workers	6	66.6	-	-	1	11.1	2	22.2
Drivers	-	-	-	-	4	80	1	20

Source: Researchers own field survey data from respondents of the questioner

The majority of respondents assumed that the behaviors of human beings are the profound problem that causes the major RTAs in the study area (See table 4.7). Additionally, next to human behaviors, a weak system of traffic rules and regulations are the major cause of RTA according to table 4.6.

Generally, from table 4.6 and 4.7 one can infer that human beings (example, the behavior of drivers, pedestrians or passengers) are the leading causes for the increasing of RTAs in the study area and this implies that human beings are a threat to their own security

4.5. The Implications of RTAs on Human Security in SBTA

RTA threatens the security of people in many aspects. Among others, the implications of RTA on physical, economic and health security are pressing. Especially in developing countries, RTAs are the major security threats of their people. In SBTA, the implications of RTAs threaten securities of the people significantly.

Table 4.8: The implication of RTA on human security based on the views of the respondents

	Responses							
	High		Medium		Low		Not known	
	No.	%	No.	%	No.	%	No.	%
Pedestrian	10	62.5	5	31.3	-	-	1	6.3
Drivers	4	80	1	10	-	-	-	-
Police officers	7	87.5	1	12.5	-	-	-	-
Road transport authority workers	3	77.8	4	44.4	2	22.2	-	-

Source: Researchers own field survey data from respondents of the questioner

The majority of respondents agreed that RTA causes a high effect on human security in SBTA (See table 4.8). In agreement with this, RTA victims IV-01 and IV-02 (PC, March 22, 2019) expressed that the accident has created a high burden on their physical, economic and health security.

Table 4.9: The effect of RTA on victims' human security based on their perspective

	Responses									
	Severe		High		Medium		Low		Not known	
Victims of RTA	No.	%	No.	%	No.	%	No.	%	No.	%
	6	42.9	4	28.6	2	14.3	1	7.1	1	7.1

Source: Researchers own field survey data from victims of RTA

Even if the implication of RTA on the human security of the victims varies depending on the effect, table 4.9 depicted that more victims of RTA are affected severely in their physical, economic and health security that RTA has severe implication on the human security of the individuals.

4.5.1 Implication of RTAs on Physical Security

RTA has its own implication on the physical and psychological wellbeing of an individual or groups For instance, the victims of RTAs faced leg, eye, head, spinal cord and other parts of body injury and disabilities which may be unable to return to their normal lives and stay at the hospital for a long period of time (Hassen, 2010). For him, RTA has its own implication on physical security, such as disability and deaths. Consistent with Hassen's (2010) result, a respondent from police officer IP-01(PC, March 27, 2019) stated that RTAs causes reversible and irreversible physical injury (like leg, head and eye injury) on the victims. He also said that this injury exposed the victims to different problems like unable to move from one place to another place easily, unable to read without the help of magnifier, the separation of family, unable to participate in different social activities due to marginalization by the neighborhood and unable to work high labor demanding works. Likewise, RTA victim IV-04 (PC, March 30, 2019) noted that loss of eyesight and brain injury led to high dependence on families for routine physical care and financial support. He also said that unable to perform physical activity for a long period of time as a result of brain injury and permanent injury on his eyes and legs.

Furthermore, IV-05 (PC, April 01, 2019) states that the physical injury caused on his leg as a result of RTAs forced him to change his job from driver to waiter, unable to simply moves from place to another place and unable to perform routine daily activities without the help of others. As he further noted, RTAs causes temporary and permanent physical injury on other RTA victims. Therefore, RTAs have caused the dependency of the victim on others to carry out the day-to-day activities, the victim unable to achieve simple life objectives, isolation of the victim from the society in different social activities and created grief and scare on the victim of RTAs.

4.5.2 Implication of RTA on Economic Security

RTAs have a complicated implication on victims and their family economy. According to IT-05 (PC, April 8, 2019), the economic security of the residents of SBTA faced challenges from the occurrence of RTAs. He noted that the victims of RTAs become unable to cover the cost of their basic needs like food, housing, and cloth. He further stated that the economic benefit obtained from running their own business diminishes as a result of property damage. Therefore, RTAs have multifaceted implications over the economic security of the victims and their family in SBTA. As a result, the community of SBTA is also suffering economic loss from RTA.

Table 4.10: Estimated loss of cost due to RTA in SBTA (2008-2011, E. C)

Accident Year	RTA Estimated cost (ETB)	Average cost (ETB)	Percent (%)
2008	1,357,200	193885.7	58
2009	344,950	344,950	14.7
2010	121,000	121,000	5.2
2011	516,000	258,000	22.1
Total	2,339,150	917,835.7	100

Source: SBTATPO (2008-2011 E.C)

Table 4.10 depicts that RTA causes loss of the profound amount of money within the subsequent years in the study area. This loss of money paves the way for poverty to the residents of the town. And also the residents of town may be exposed to begging and wants out into the street as a result of

property damages caused by RTA. Therefore, from the table, I can deduce that RTA causes high loss of money which in turn complicated the living standard of the victims and their families of SBTA. And this can contribute to the stagnation of the economic activities of the town.

A victim IV-04 (PC, March 30, 2019) said that the implication of RTAs on economic security is not bounded only on him, but also affects his families severely. He explained, “after I injured by the accident I am not able to support my family financially and also in other aspects of living”. He further described that due to his permanent health problem resulted from RTA, the victim has incurred ETB 372,000 for medical care covered by the driver who caused the injury. In addition, a victim is not able to generate as enough income to cover their living cost as before his disability. He also witnessed that due to the death or injury of the heads of family, their children dropped out from school.

However, RTAs affect families of victims differently. One member of the family may be affected more than another. According to IV-01(PC, March 22, 2019), a victim who is a sole mother or father of four or five dependents have more difficulty of coping financially with the consequences of RTAs than a victim with no dependents. He also mentioned that the status of his health is not found in a good condition and perform his own day-to-day activities with the help of medical material (metal) which was implanted in his leg. As a result, he said that “my income is decreased from day to day when compared with my previous income”. The victim's description in my study is consistent with Osoro, Ng’ang’a, and Yitamb’s (2015), argument that RTA leads the victims unable to achieve even simple objectives, which results in dependency on other people for economic support.

Moreover, RTAs cause property damages (such as vehicle repair, loss of economic productivity of public utility vehicles and the service costs of pulling the car from one place to another place) which cost individuals and the state a tremendous amount of money beyond physical pain and sorrow of human beings (Bitew, 2002). Accordingly, the victim IV-04 (PC, March 30, 2019) said that he loses a three-wheel vehicle (Bajaj) and do not recover from economic crises. He further stated that the economic benefit obtained before found in a normal condition diminishes from time to time and face a challenge of economic insecurity to cover the costs of basic needs and forced to change their own

job into jobs which generate less economic income. Similarly, the victim IV-05 (PC, April 01, 2019) said that he is unable to return back to his previous work due to the injuries caused on him and the loss of his vehicle. Thus, he has forced to change into another work to run the livelihood activities. These two victims account confirmed Berhanu's (2007) assertion that RTAs victims exit the labor force or never back to work and receive disability pensions, others require retraining to a different type of work, and partially disability may work reduced hours.

In general, RTAs affects the economic aspirations and development of the victims and families at SBTA due to the loss of productive manpower, property damage and injuries caused on individuals. It remains a heavy burden of the household victims. Many families are driven into deeper poverty by the loss of breadwinners and the added burden of caring for members disabled by road traffic injuries.

4.5.3 Implication of RTAs on Health Security

RTAs affect many segments of society: individuals, groups, families, communities, and countries. WHO (2017) reported that Ethiopia is the 22nd country with the highest number of deaths due to RTA in the world. According to IP-01(PC, March 27, 2019), survivors from RTAs suffer from different types of injuries and disabilities which directly impede their normal health functioning. He also said that victims of fatal RTA die on the area in which RTAs occurred or in hospital. From this, we can understand that the victim of RTA encounters serious health security threats.

RTA has an incalculable implication on health security which is not directly observable by others or not experienced soon after RTAs occurs on individuals. Accordingly, IV-06 (PC, April 03, 2019) stated that the immeasurable implications of RTAs on health security are suffering, fear, stress, psychological discomfort, sorrow and loss of the joy of living. She said that the death of her husband caused psychological influence in which she fears vehicle and still she believes that "my husband will come again within unexpected time". In addition, she expressed that now she is nurturing and caring for her two children without their father and she is in a challenging condition to nurture her children. From this, we can understand that the effect of RTA on the health of victims is very critical.

In addition, IP-05 (PC, March 29, 2019) described that following RTA it was difficult for the victim to take care of himself, talk to his family, and may stay in comma or unconscious situation. Similarly, the families of RTA victim IV-02 (PC, March 22, 2019) denotes that, the health implication and suffering of RTAs is not only limited to the victims but also it goes far up to other family members. Among others the health problems family members faced include grief, feeling of loneliness, psychological traumas, and social crises. From this statement, I inferred that like the victims of RTA, family members faced serious health problems.

Moreover, IV-04 (March 30, 2019) expresses that, he was unable to easily interact socially with others as a result of brain injury caused on him and this brain injury makes himself simply emotional with minor things and still now he does not recover from health-related problems even if he is victimized by RTA before three (3) years. In addition, IV-05 (PC, April 01, 2019) in the same town noted that, he was forced to change his work from driver to waiter due to health problems occurred on legs and psychological problems (phobia to drive a car) and for the sake of administering their own family and he said that the major post RTA changes in his career or work ambitions and had subsequently set himself lower goals than before the accident. Consequently, RTA affects the psychological wellbeing of the community and paves the way for changing the job from earning better money to earning less amount of money.

RTAs victim undergone through anxiety and loss of confidence in interacting with other people and often refuse invitations. They felt that their health issues had lessened and not having the same opportunities they once had to mix with other people due to problems occurred on their health security (WHO, 2013). In agreement with the above statement, IP-06(PC, March 30, 2019) stated that victims of RTAs are suffering not only in health security issues but they also encounter psychological suffering such as short-temperness, irritability, anxiety, tension, stress, loss of motivation and interest in activities which in turn hinder their personal health and life.

As a result victim of RTAs experience behavioral change, finally, these problems produced changes in their personal life as expressed by the interviewee. Further, IP-03(PC, March 28, 2019) clarifies that victims cope with health-related problems differently with similar injuries for a variety of

reasons. Moreover, IV-03 (PC, March 30, 2019) articulated that healthy body function and structure is influenced by impairments as a result of RTAs. He feels ashamed and unable to wear some short clothes as a result of body scar and fractures of the accident.

The implication of RTAs on health security is not only limited to the victim but also it extends to the family members and/or relatives of the victims of RTAs (Blanchard and Veazey, 2001). To this end, all victims of RTAs interviewee described that their families undergo through immediate health-related problems (pain, grief, sorrow), hold major responsibility on their shoulders in order to fill the gap created due to the accidents. For example, IV-04 (PC, March 30, 2019) said that "I feel deep sorrow when I notice that my families feel sorrow due to my injury of the accident". Similarly, IV-05 (PC, April 01, 2019) asserted that he experienced fear to go from one place to another through the vehicle, as he feels affected by RTAs again when he looks a certain kind of vehicle and develops hate of a car after the accident. Generally, from the above data presented one can deduce that RTA impaired the health security of the victims under in different dimension and the society enters into different minor and critical health security problems.

4.6 Measures Undertaken by SBTA Authorities and Stake-holders to Prevent and/or Reduce RTA in SBTA

RTAs are easier to ensure through early prevention than later intervention. It is less expensive to prevent RTAs before occurring than after its occurrence. RTAs are major causes of human security threat, illness and mortality challenges that require rigorous efforts for effective and sustainable prevention (WHO, 2004). According to IP-06 (PC, March 30, 2019), the implication of RTAs on human security and the cost of RTAs in SBTA is relatively high compared to the number of vehicles found in the town. To reduce or prevent the implication of RTAs on human security some governmental institutions like SBTATPO and SBTARTA are trying to make contribution through teaching the unpleasant effects of RTAs, taking necessary administrative measures starting from identifying black spots of RTAs occurrences by regulating these areas through appointing traffic police force and enforcing violators of traffic rule and regulation by giving warning or prosecuting those violators depending on law.

Table 4.11: The prevention mechanism of RTA on the views of the residents of the town

Community Members	Responses							
	Education		Enforcement of traffic rules and regulation		Construct quality roads		Give certified training for drivers	
	No.	%	No.	%	No.	%	No.	%
Pedestrian	3	18.8	5	31.3	-	-	8	50
Police officers	4	50	3	37.5	-	-	1	12.5
Road transport authority workers	2	22.2	4	44.4	-	-	3	33.3
Victim of RTA	3	21.4	3	21.4	1	7.1	7	50
Driver	3	60	-	-	-	-	2	40

Source: Researchers personal field survey data from respondents of the questioner

Table 4.11 indicated that giving certified training for drivers, education campaign and enforcement of traffic rules and regulation are important to prevent RTAs before it occurs. From this, we can deduce that different preventative mechanisms are being taken by the authorities and stakeholders of SBTA to prevent and/or reduce the occurrence of RTA and to block its severe implication on human security in the study area.

4.6.1 Education (Creating Awareness)

Road users must acquire knowledge's regarding safe forms of travel by means of formal training and their own experiences. However, inadequate knowledge about traffic rules and regulations, traffic signs, vehicles and other elements of road traffic system may be some of the factors contributing to unsafe forms of behavior and road catastrophes (WHO, 2013). In return, road user information and operations are intended to reduce accidents. All respondents of the interviewee agree that RTA can be reduced by delivering guides of road user information and the promotion of safe forms of traffic system through education. This action enables to promote safer behavior in the area of elements of

traffic system by giving road users better knowledge and more satisfactory attitudes towards such behavior. Another objective of education is to increase the understanding of restrictive measures which are introduced to increase safety, such as speed limits for drivers.

Broadcasting issues about RTA on media gives understandings concerning about RTAs to viewers (Truong *et al.*, 2013). Police television programs which are organized by Ethiopia Federal Police Commission and Addis Ababa Police Commission; and *Guzo* Radio and Television Program which is prepared by Ethiopia Transport Authority at federal level are being transmitted in Ethiopia Radio and Television Agency; and from life board (*Kehiwet Seleda*- **ከህይወት፡ ሰሌዳ**) which is transmitted by *ebs* television tries to increase the awareness of people about the worse implication of RTAs on human security at federal level. Broadcasting the causes, its implication on human security and suggesting measures to reduce RTAs to the viewers was included in the programs. Segni (2007) stated the use of pamphlets in addition to mass-media and magazine (*Police ena Ermejaw Magazine*) to create awareness on the issue of RTA in Ethiopia.

Besides, IP-01 (PC, March 27, 2019) illustrates that some activities of awareness creation campaign have been done by the traffic police personnel's with other police departments to students in schools, and people gather for session/meeting in Kebele hall, to religious institutions and pedestrian's regarding about what kind of measures these people should undertake to save themselves from RTAs. He also said that there is ''Peace committee'' organized by SBTAPO which incorporates different sections of the society from elders, police personnel's, religious persons, influential persons, workers from road transport authority and workers from mayor's office under the head and supervision of mayors of the town. According to him, this peace committee organizes different education campaigns about the direct and indirect implication of RTAs to the community of SBTA in a different setting like in school, church, meeting and the like. From this, we can deduce that some parts of the community were working collaboratively to provide education in order to reduce the occurrence of RTAs in the town.

In addition, IP-06 (PC, March 30, 2019) noted that to reduce the adverse implication of RTAs on human security, the traffic police department of the town inform parents , school leaders, students

and other members of the society to teach children, pedestrians and other community members about how to cope with the road traffic problems and how to save themselves from the negative implications of RTAs by improving road safety knowledge and road crossing behavior of society's. He also said that efforts are being made to teach pedestrians about how can crossing the road in zebra line, how can walk in the left side of the road and how can refrain themselves from the illegal crossing of the main road in SBTA without considering traffic rules and regulation. As a result, this infers that education is practiced by traffic police officers as a means of preventing RTAs and the promotion of safe forms of road usage by road users.

According IP-02 (PC, March 27, 2019) in the context of SBTA, to reduce the ramification of RTAs on human security police department in collaboration with road transport authority trying to make contribution through teaching the horrific implications of RTAs, taking administrative measures on violators of traffic rules and regulation and identifying black spots in which the place where RTAs occurs frequently to regulate these areas through appointing traffic police force (for example, in SBTA, the crossroad near cooperative Bank of Oromia, Jimma Senbete Primary and secondary School and around Dire Mazoria). These places are black spot areas in which high movements of vehicles are manifested and the occurrence of RTAs are presented relative to other places of the town according to (IP-04, PC, March 27, 2019). This implies that police departments in collaboration with other authorized bodies preventing the occurrence of RTAs by identifying the areas in which RTAs mostly occur.

Aggressive promotional campaigns and road safety education could address the problem of noncompliance of pedestrians with road usage regulations (Truong *et al.*, 2013). Road safety education for pedestrians or other road users would involve alerting them to road traffic rules, and there is a similar need for drivers to understand their legal requirements, such as when pedestrians have right of way. This is only part of the answer, however, if there is insufficient infrastructure to enable pedestrians and drivers to comply with the law. IP-01 (PC, March 27, 2019) also stated that awareness creation and enforcement of traffic rules and regulation were done in collaboration with the concerned bodies of SBTA to prevent the occurrence of RTA.

Table 4.12: Education about road and traffic safety given for different community members of the town in 2010 E.C

Sex	Number of people obtained education about RTAs	Percent (%)
Male	31,857	71.0
Female	13,003	29.0
Total	44,860	100

Source: Compiled from SBTAPO (2010 E.C)

Table 4.12 indicates that education about RTA is given for the majority of the residents of the town. From this, we can understand that the contribution of awareness creation is well identified by the police serve as the reduction/prevention of the occurrence's RTAs and its implication on human security. Besides, the reports made by the police does not indicate that for which parts of the community whether for drivers, pedestrians or others are given education about road and traffic safety in the town. Therefore, the above-presented data indicates that education campaigns enable to prevent/reduce the occurrence of RTAs in SBTA. Subsequently, stakeholders and authorities of SBTA utilize education as a means of intervening for the reduction of RTAs. Accordingly, one can conclude that education is better in preventing RTAs through the promotion of road safety of road users.

4.6.2 Enforcement of Traffic Rules and Regulation in SBTA

Promoting efficient town traffic system needs appropriate legislation and law enforcement. Without appropriate traffic regulation and law enforcement alleviating the problems of RTAs is impossible. Crafting road safety rules and regulation by itself do not have its own effective contribution in reducing the implication of RTAs on human security. As a result, not only in SBTA but also in other similar towns there is a state of affairs where traffic rules and regulations are breaking by the majority of drivers and road users. Hence, in order to reduce the occurrence of RTAs and its implication on human security strict enforcement of traffic rules and regulation is essential in the study area.

Interview conducted with IP-04 & 06 (PC, March 28 & 30, 2019) expresses that traffic police departments try to enforce traffic rules and regulation when there is a violation of traffic rules and regulations especially by vehicle drivers and horse-drawn cart drivers by identifying the black spot areas of the traffic system. They also stated that the traffic police department assigns traffic police personnel's in black spot areas without the expectation of drivers to enforce traffic rules and regulation to control drivers from the violation of traffic rules and regulation as well as to educate and further to penalize violators of traffic rules and regulation. From this, we can understand the enforcement of traffic rules and regulation by traffic police plays a vital role in addressing the problem of RTAs.

SBTATPO tried to enforce the rules and regulation of traffic by penalizing, prosecuting or other means of enforcement mechanisms. In order to enforce traffic law effectively, the traffic police department identifies the places in which RTA mostly occur. As a result, SBTATPO takes some enforcement measures against traffic rule and regulation violators to preserve and maintain smooth traffic condition in the town. Based on this the following table shows that some enforcement measures which is undertaken by SBTATPO.

Table 4.13: Traffic rule and regulation enforcement mechanisms took by SBTATPO.

An accident with lifferent severity class	Number of charges by traffic police officers against traffic law violators		Total	Percent
	2010	2011		
Fatal accident	15	9	24	30
Severe accident	8	15	23	28.8
Slight accident	9	12	21	26.3
Property damage	5	7	12	15
Total	37	43	80	100

Source: Compiled from SBTATPO (2010-2011E.C)

Table 4.13 depicts that the highest number of law enforcement activities is done by traffic police officers against drivers who cause a fatal accident followed by a severe accident. The table also indicates that SBTATPO tries to enforce traffic rules and regulation by prosecuting the violators of

traffic rule and regulation in order to deter other drivers from disrespecting traffic rules and regulation as well as to prevent the occurrence of RTAs in the town. From this, I inferred that the police department enforced traffic rules and regulations to prevent further RTAs by accusing violators.

4.7. Summary of Findings

Based on the research findings, there are issues which need to be addressed as they are actually leading to a threat to human security profoundly arising from RTAs. According to IP-06 (PC, March 30, 2019), the prevalence of RTA in the study area is the second next to Sululta town administration The prevalence status of RTA in SBTA is not only found in accelerating rate but also increased the threats on human security especially on physical, economic and health securities. This prevalence of RTAs in SBTA resulted from different variables especially from human-related factors such as lack of awareness society about RTA, speed, drink driving, failure to give way for pedestrians and other vehicles, improper overtaking. In addition lack of road facilities such as invisible road traffic signs and symbols have its contribution to the increasing prevalence of RTA in the study area.

RTA threatens the human security of people in many aspects. Among others, the implications of RTA on physical, economic and health security are enumerated. RTA created physical insecurity by impairing the body function of victims. According to IV-01(PC, March 22, 2019), RTA caused temporary and permanent physical injury on him. Some of the injuries which are caused by RTA are leg injury; head injury; eye injury and other body part injury. These injuries expose the victims to different problems like unable to move from one place to another place easily, unable to read without the help of magnifier, family fragmentation, unable to participate in different social activities due to isolation by the neighborhood and unable to work high labor demanding works.

RTA creates a huge burden on the economy of households especially when the productive member of the family becomes the victim of RTA. The sudden death of a breadwinner often places major and long-term responsibilities for other family members. The direct costs incurred by the family are medical expenses, that includes pre-hospital, hospital and post-hospital for survivors, legal expenses,

cost of vehicle damage, etc. A victim expresses that he is unable to support his family financially and apparently his family becomes unable to afford for living (IV-04, PC, March 30, 2019).

RTA has an incalculable implication on health security which is not directly observable by others or not experienced soon after RTA occurs on individuals. The implications of RTAs on human security are suffering, fear, stress, psychological discomfort, sorrow and loss of the joy of living In addition, following RTA it was difficult for the victim to take care of himself, talk to his family, and may stay in comma or unconscious situation. The feeling related to the implication of RTA on health security here is that RTAs victim undergone through anxiety and loss of confidence in mixing with other people and often refuse invitations to go out. They felt that their health issues had lessened and not having the same opportunities they once had to mix with other people due to problems occurred on health security as a result of RTAs. Thus, the physical, economic and health security are inseparable that the threat or injury in one aspect has an immediate and devastating effect on the other and vice-versa. The major preventative mechanisms of RTA used by the authorities and stakeholders of SBTA are awareness creation and enforcing traffic rules and regulation.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

There is RTA wherever in the world in which the prevalence and its implication on human security are higher in developing countries like Ethiopia. Ethiopia is characterized by higher rates of RTA which have a direct and worsening effect on human security. Oromoia is one region in Ethiopia that is affected by RTA. Among the different Zones found in Oromia region, Oromia Special Zones found in surrounding Addis Ababa is the one where RTA is taken place repeatedly. And from the town administrations found in this Zone, SBTA is the one ranked 2nd in RTA status next to Sululta town administrations. The causes of RTAs emerged from different factors. However, the leading cause is related to human beings such as speed, failure to give way for pedestrians and for vehicles, drinking while driving, and improper overtaking.

The prevalence of RTA in SBTA become increasing from year to year. Due to this, the effect of RTA on human security in SBTA worsened. It imposes significant implication on physical, health and economic security in SBTA. Firstly, RTA imposes serious threats to the physical security of the victims of RTA in the town. It causes temporary and/or permanent injury on different parts of the body thus unable to perform regular activities, loss or change of job and a family breakdown. Secondly, it creates a burden on the economic security of victims and their families especially when the productive member of the family becomes the victim of RTAs. Besides, the property damage from RTA costs the individuals and the community in the town a tremendous amount of money. In such a way, RTAs contributed to the stagnation of the economic development of the communities in SBTA. The cost of RTA is estimated to be 1% - 2% of the gross national product (GNP) in low-income countries (WHO, 2010). Third, RTAs creates a threat to the health security of the resident of the town. The effect of RTA on physical security such as the loss of eyes, broken of legs and hands as well as the injury of other body parts have a direct and immediate effect on the health security of

the victim. It creates sorrow, grief, stress, anxiety and impaired body functioning. Likewise, health problems, including permanent and temporal physical injuries are the other implications of RTAs.

The effects of RTA on these three elements of human security are inseparable. That means the physical injury has a direct influence on the health and economic securities. Thus, I am confident that the implication of RTA on these three elements of human security has a vicious circle effect which in turn implied to deserve attention for this pressing issue.

At the national level, the prevention and/or reduction strategies are low on the political agenda. However, education campaigns (creating awareness) and enforcing the traffic rules and regulation are the major strategies and measures being undertaken by SBTA authorities and other stakeholders to reduce and/or prevent RTAs.

5.2. Recommendations

To prevent and/or reduce the prevalence of RTAs and its implication on human security which matches with the quality of life and to ensure an environment free from threats to human security at SBTA there must be a coordinated and integrated approach used by the SBTA authorities and stakeholders. The coordinated and integrated approaches are: school, courts, religious institutions, road transport authorities, police personnel's, basic civil societies, Non-governmental organizations and other authorized bodies, as well as stakeholders found in SBTA should work in a collaborative and team spirit manner to combat the adverse implication of RTA and the zonal, regional and federal governments should give technical support for SBTA to combat the prevalence of RTA . In addition, the community in SBTA should give special attention to RTAs to ensure their human security.

To reduce and then to prevent the vicious cycle of RTAs on the elements of human security of the residents of the town, immediate action started with self should be taken by the authorities of the town and all stakeholders.

As human beings are the leading causes of RTAs in SBTA the concerned body in the town as well as at the surrounding Kebeles should exert an endeavor effort to create awareness about the usage of

road safety and practicing it on the ground. In addition, continuous and participatory public operations concerning the use of roads should be given to road users.

The town administration cannot solve the problem alone. It is also important to give space for non-state actors such as NGOs, civil societies, community-based associations, and private organizations with a responsibility to decrease the negative implication of RTAs on human security and to control violators of traffic rule and regulation. The town administration should take a regulatory and supervisory role, to monitor the activity of those organizations.

Lastly, horse-drawn carts make congestion in the traffic flow of the town and cause the occurrence of RTAs in different course of time and a number of horse-drawn carts are found everywhere on the roads of the town. The drivers of horse-drawn carts do not have adequate skill and knowledge to drive carts in line with traffic rules and regulation. Therefore, the town administration should give training and education for horse-drawn cart drivers to enforce traffic rules and regulations properly and to enable horse-drawn cart drivers to drive by respecting traffic rule and regulation and the town administration should prepare and open specific roads which only serve horse-drawn carts and three-wheel vehicles by prohibiting the movement other vehicles from this identified roads.

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Appendixes

Addis Ababa University

School of Graduate Studies

Institute for Peace and Security Studies

Appendix 1. Questionnaires Prepared for Sample Population:

Introduction

This questionnaire is prepared for an academic purpose for the fulfillment of an MA Degree in peace and security studies. The objective of the study is to explore the status, causes, countermeasures for road traffic accidents and its implication on human security in SBTA. Your response is very valuable for the study. Your response will be used only for this study and kept confidentially. Hence, you are kindly requested to give your response by putting the sign of "√" on the box or by describing your opinion on the space provided.

"I would like to thank you in advance for your cooperation."

A. **A Questionnaire to be responded by selected pedestrians in SBTA.**

1. Sex Male ☐ Female ☐

2. Age ----------

3. Educational level

Read and write/informal ☐ Primary education (1-8) ☐

Secondary education (9-12) ☐ Diploma ☐

Degree ☐ MA/MSc ☐

4. Occupation

Student ☐ Private Worker ☐

Government employee ☐ Unemployed ☐

Other (specify) ----------

5. How do you understand the status and the prevalence of road traffic accident problems in SBTA?

A big problem ☐ A moderate problem ☐ Not a problem ☐

6. What kind of consequence occurs in the lives of the community in SBTA due to RTA?

Disability ☐ Reduction of economic income ☐

Death ☐ Disease ☐

Other (specify)……..

7. Which one is the major factor for the occurrences of RTA?

Vehicle Characteristics ☐ Environmental factors ☐

The behavior of human beings ☐ weak System of traffic rules and regulation ☐

Other (Specify)……..

8. Which preventative mechanism is more important in preventing RTA?

Education ☐ Enforcement of traffic rules and regulation ☐

Construct quality roads ☐ certified training for drivers ☐

Other (Specify)……..

9. Which types of RTAs were highly prevalent in the town?

Motor vehicle with motor vehicle ☐ Bicycle with bicycle ☐

Motor vehicle with bi/motorcycle ☐ Bi/motor cycle with pedestrians ☐

Motor vehicle with pedestrians ☐ Bicycle with horse-drawn carts ☐

Motor vehicle with static object ☐ Horse-drawn cart with pedestrians ☐

Others (specify) ----------

10. How do you see the status and the prevalence of RTA in SBTA?

11. What are the effects of RTA on the physical well-being of the community of SBTA?

12. What are the effects of RTA on economic income of the community of SBTA?

13. What are the effects of RTA on the health issue of the community of SBTA?

14. What are the possible intervention and preventative mechanisms to reduce RTA in SBTA?

15. How stakeholders like police, health institution give response for RTA to prevent in advance?

B. **Questionnaire responded by Victims of RTA**

1. Sex Male ☐ Female ☐

2. Age_____

3. Educational background_____

4. How do you understand the status and the prevalence of road traffic accident problems in SBTA?

Severe problem ☐ big problem ☐ moderate problem ☐ low problem ☐

5. How do you rate the effects of RTA on the lives of you?

Severe ☐ High ☐ Medium ☐ Low ☐ Not known ☐

Other (specify) ----------

6. What kind of consequence occurs on the lives of you due to RTA?

Physical injury/Disability ☐ Reduction of economic income ☐

Unemployment ☐ Stress ☐

Property damage ☐

Other (specify)……..

7. Which part of your life highly victimized by RTA?

Physical well-being ☐ Health issue ☐ Economic income ☐

Other (specify)……

8. Which factor was the major one for the occurrence of RTA on you?

Vehicle Characteristics ☐ Environmental factors ☐ Your Faults ☐

Faults of drivers ☐ System of traffic rules and regulation ☐

Other (Specify)……..

9. Which preventative mechanism is more important in preventing RTA?

Education ☐ Enforcement of traffic rules and regulation ☐

Construct quality roads ☐ Giving certified training for drivers ☐

Other (Specify)……..

10. How do you express the status and prevalence rate of RTA in SBTA?

11. What are the effects of RTA on the physical well-being of you?

12. What are the effects of RTA on the economic income of you?

13. What are the effects of RTA on the health issue of you?

14. What are the main causes of RTAs depending on the accident occurred on you?

15. What measures are you taking to prevent the RTAs that occurred on you as well as other similar RTAS in advance?

C. Questionnaire to be responded by drivers

1. Sex Male ☐ Female ☐

2. Age ----------

3. Educational level

Primary education (1-8) ☐ Diploma ☐

Secondary education (9-12) ☐ Degree ☐

Other Specify----------

4. How do you understand the status and the prevalence of road traffic accident problems in SBTA?

A big problem ☐ A moderate problem ☐ Not a problem ☐

5. What do you rate the level of RTA problems in your town?

A big problem ☐ A moderate problem ☐ Not a problem ☐

6. In which aspects of the lives of the community, the effects of RTA are high?

Physical well-being ☐ Health issue ☐ Economic income ☐

Other (specify)……

7. Which factors become the major factors for the occurrences of RTA?

Vehicle Characteristics ☐ Environmental factors ☐

The behavior of human beings ☐ System of traffic rules and regulation ☐

Other (Specify)……..

8. Which preventative mechanism is more important in preventing RTA?

Education ☐ Enforcement of traffic rules and regulation ☐

Construct quality roads ☐ Retraining of drivers ☐

Other (Specify)……..

9. How do you express the status and prevalence rate of RTA in SBTA?

10. What are the effects of RTA on the physical well-being of the community of SBTA?

11. What are the effects of RTA on economic income of the community of SBTA?

12. What are the effects of RTA on the health issue of the community of SBTA?

13. What possible solutions/strategies to prevent and reduce RTAs in SBTA?

14. How do stakeholders like police, health institution and others respond proactively to prevent RTAs?

D. Questionnaire to be filled by police officers

1. Sex Male ☐ Female ☐

2. Age ----------

3. Educational level

Secondary education (9-12) ☐ Diploma ☐

Degree ☐ MA/MSc ☐

Other Specify----------

4. How do you understand the status and the prevalence of road traffic accident problems in SBTA?

A big problem ☐ A moderate problem ☐ Not a problem ☐

5. How do you rate the effects of RTA on the lives of the community?

High ☐ Medium ☐

Low ☐ Not known ☐

6. Which factors become the major factors for the occurrences of RTA?

Vehicle Characteristics ☐ Environmental factors ☐

The behavior of human beings ☐ System of traffic rules and regulation ☐

Other (Specify)……..

8. Which preventative mechanism is more important in preventing RTA?

Education ☐ Enforcement of traffic rules and regulation ☐

Construct quality roads ☐ Retraining of drivers ☐

Other (Specify)……..

9. In what way stakeholders intervene to respond RTA in your town?

Education ☐ Enforcement ☐

Giving emergency care for victims RTA ☐

Suppressing law-makers to formulate strong traffic rules and regulation ☐

10. How do you express the status and prevalence rate of RTA in SBTA?

11. What are the effects of RTA on the physical well-being of the community of SBTA?

12. What are the effects of RTA on the economic income of the community of SBTA?

13. What are the effects of RTA on the health issue of the community of SBTA?

14. What possible solutions could be proposed to prevent and reduce RTAs in SBTA?

15. How do stakeholders, like police, health institution and others, respond to prevent RTAs in advance?

N.B. Questioner which is used for police personnel is similarly used for Road transport authority employees of SBTA.

Appendixes 2: Guiding questions for interview participants

A. Interview guide questions with police officers

Personal Data

Age---------- Sex----------

Rank---------- Working experience----------

1. Do you think that road traffic accidents are a vital problem in SBTA?
2. What seems the status and the prevalence rate of RTA in SBTA?
3. How do you express the prevalence of RTA in SBTA?
4. Do you think that RTA is a threat to life or social well-being? How?
5. What do you think are the effects of RTAs on the lives of victims and family members of victims?
6. What are the implications of RTA on economic security, physical security, health security and in other securities of the community of SBTA?
7. What factors do you think to facilitate the occurrence of a road traffic accident in SBTA?
    1. In terms of Vehicles?
    2. In terms of the environment?
    3. In terms of Peoples behavior?
    4. In terms of traffic rule and regulations?
8. What preventative measures do you take to reduce traffic accidents in SBTA?
9. What are your recommendations and opinions about the intervention and preventive strategies to reduce road traffic accident in SBTA?
10. How do you evaluate the involvement of stakeholders in preventing road traffic accident in SBTA?

B. Interview guide questions for officials from the road transport authority

Personal data

Age---------- Sex----------

Responsibility---------- Working experience----------

1. Do you think that road traffic accidents are major problems in SBTA?
2. Is there any road safety policies used to reduce road traffic accident problems?
3. What seems the status and the prevalence rate of RTA in SBTA?
4. How do you express the prevalence of RTA in SBTA?
5. Do you think that RTA is a threat to life? How?
6. What do you think are the effects of RTAs on the lives of victims and family members of victims?
7. What are the implications of RTA on economic security, physical security, health security and in other securities of the community of Sendafa Beke?
8. What factors do you think to facilitate the occurrence of RTA in SBTA?
    1. In terms of Vehicles?
    2. In terms of the environment?
    3. In terms of Peoples behavior?
    4. In terms of rule and regulations?
9. What are your recommendations and opinions about the intervention and preventative strategies to reduce road traffic accident in SBTA?
10. How do you evaluate the involvement of stakeholders in preventing road traffic accident in SBTA?

C. Interview guide questions for victims of RTA.

Personal data

Age……. Occupation…….

Sex ……..

1. What seems the status and the prevalence rate of RTA in SBTA?
2. How do you express the prevalence of RTA in SBTA?
3. When you become victimized by RTA? What was/were the cause?
4. Do you think that RTA is a threat to life or social well-being? How?
5. What do you think are the implication of RTA on the life of the community?
6. What kind of effects of RTAs presented on the lives of you and your family members of victims?
7. What are the implications of RTA on economic security, physical security, health security and in other securities of the community of SBTA?
8. What factors do you think to facilitate the occurrence of RTA in Sndafa Beke town?
   1. In terms of Vehicles?
   2. In terms of the environment?
   3. In terms of Peoples behavior?
   4. In terms of traffic rule and regulations?
9. What kind of intervention and preventative strategies should be taken to reduce road traffic accidents in SBTA?
10. How do you evaluate the involvement of stakeholders to reduce RTA in Sendafa Beke town?

Appendix 3: List of Interviewees from Police Officers

No	Code	Sex	Age	Rank	Responsibility	Education-al status	Work xperience	Kebele	Place of interview	Date of interview
1	IP-01	M	57	Chief Inspector	Crime prevention partment leader	Degree	32	Sendafa	His office	March 27/2019
2	IP-02	M	51	Commander	Crime investigation team leader	Degree	24	Sendafa	His Office	March 27/2019
3	IP-03	M	45	Assistant Inspector	Indoctrination nd Discipline team leader	Degree	21	Sendafa	His Office	March 28/2019
4	IP-04	M	38	Deputy Inspector	RTA and Crime Investigation Result Statistics Data Encoder	Diploma	18	Sendafa	His Office	March 28/2019
5	IP-05	M	40	Deputy Inspector	Office Leader	Degree	22	Sendafa	His Office	March 29/2019
6	IP-06	M	53	Chief Inspector	Traffic police	Diploma	33	Sendafa	His work field	March 30/2019

Appendix 4: List of Interviewees from Road Transport Authority Staff Members

No	Code	Sex	Age	Responsibility	Educational status	Work perience	Kebele	Place of interview	Date of interview	Remark
1	IT-01	M	57	Road transport authority officer	Degree	20	Sendafa	His office	April 01/2019	
2	IT-02	M	32	Bus Station worker	Diploma	5	Sendafa	In the bus station	April 03/2019	
3	IT-03	F	29	Bus Station Worker	Diploma	3	Sendafa	Her office	April 03/2019	
4	IT-04	M	32	SBTA administration road transport office leader	Degree	1	Sendafa	Through telephone at is own house	April 7/2019	
5	IT-05	M	42	Road transport authority officer	Degree	4	Sendafa	Her office	April 8/2019	

Appendix 5: List of Interviewees from Victims of RTA

No	Code	Sex	Age	Occupation	Educational status	Work experience	Kebele	Place of interview	Date of interview	Remark
1	IV-01	M	57	Merchant	12	32	Sendafa	His work place	March 22/2019	
2	IV-02	M	52	Merchant	Diploma	20	Sendafa	His work place	March 22/2019	
3	IV-03	M		Merchant	10^{th}	33	Sendafa	His work place	March 30/2019	
4	IV-04	M		Driver	10^{th}	37	Sendaf	His work place	March 30/2019	
5	IV-05	M		Waiter	10^{th}	30	Sendafa	His work place	April 01/2019	
6	IV-06	F		Housekeeper	10th	38	Sendafa	Her home	April 03/2019	

Appendix 6: Personal Data of the Respondents of Questionnaires

Questionnaires were administered to different community members of SBTA. As shown in the table below, the research questionnaires were distributed to 58 respondents.

Respondents Personal information		Pedestrian		Police officers		Victims of RTA		Workers of Road transport authority		Drivers	
		No.	%	No.	%	No.	%	No.	%	No.	%
Sex	Male	13	81.3	7	77.8	12	85.7	8	88.9	10	100
	Female	3	18.7	2	22.2	2	14.3	1	11.1	-	-
Age	Less than18	-	-	-	-	-	-	-	-	-	-
	18-24	5	31.3	1	11.1	-	-	2	22.2	-	-
	25-34	9	56.3	1	11.1	8	57.1	4	44.4	2	40
	35-44	1	6.3	3	33.3	3	21.4	1	11.1	2	40
	45-54	1	6.3	3	33.3	1	7.1	1	11.1	1	20
	Greater than 55	-	-	1	11.1	2	14.3	1	11.1	-	-
Level of education	Illiterate	-	-	-	-	-	-	-	-	-	-
	Primary education	1	6.3	-	-	3	21.4	-	-	-	-
	Secondary education	3	18.7	3	33.3	5	35.7	1	11.1	1	20
	Diploma	6	37.5	3	33.3	2	14.3	3	33.3	3	60
	Degree	6	37.5	3	33.3	1	7.1	5	55.5	1	20
	MA/MSC	-	-	-	-	3	21.4	-	-	-	-
Occupation	Government	5	31.3	9	100	3	21.4	9	100	-	-
	Private	9	56.3	-	-	10	71.4	-	-	5	100
	Student	1	6.3	-	-	-	-	-	-	-	-
	Un employed	1	6.3	-	-	1	7.1	-	-	-	-

Source: Compiled by the researcher own (2011 E.C)