SCHOOL OF GRADUATE STUDIES

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ASSESSMENT OF TRAFFIC ACCIDENT AND ITS IMPLICATIONS TO VICTIM HOUSEHOLDS FOOD SECURITY: A CASE OF KOLEFE KERANIYO SUBCITY, ADDIS ABABA CITY ADMINISTRATION, ETHIOPIA

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Addis Ababa, Ethiopia

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DECLARATION

This thesis is my original work and has not been presented for MA/MSc degree in any other University and that all the sources and materials used for the thesis have been properly acknowledged.

Declared By: YAFET ASSEFA

Signature: _____

Date: _____

Place: Addis Ababa University College of Development Studies, Center for Food Security Studies

This is to certify that the above declaration made by the candidate is correct to the best of my knowledge as an advisor.

Dr.TemesgenTilahum _____ _____

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Approval Page

This is to certify that the thesis proposal prepared by YafetAssefa entitled*assessment of traffic accident and its implications to victim household's food security in kolefekeraniyo sub city* Addis Ababa City Administration, Ethiopia and submitted in partial fulfilment of the requirements for the Degree of Master of Science in Food Security and Development complies with the regulations of Addis Ababa University and meets the accepted standards with respect to originality and quality.

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Acronyms

AIDS: Acquired Immune Deficiency Syndrome

CO2: Carbon Dioxide

DNA: Deoxybio Nucleic Acid

GDP: Gross Domestic Product

GIS: Geographic Information System

GRSP: Global Road Safety Project

HFIAS: Household Food Insecurity Access Scale

HH: House Hold

HIV: Human Immune Deficiency

HSE: Health and Safety Executive

LNG: Liquefied Natural Gas

NGO: Non-Governmental Organization

KII: Key Informant Interview

RTF: Road Traffic Fatalities

SPSS: Statistical Package for the Social Science

USA: United State of America

WWII: World War the Second

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Abstract

Around the world, road traffic accidents are the leading cause of human injury, death, and economic resource loss.Every year, around 1.35 million people die in road traffic accidents around the world, with about 70% of the deaths occurring in poorer nations.The majority of local research on this topic are done at a macro level, employing crash data that has been summarized. The research design for this study used both explanatory and descriptive research designs. The descriptive design was used to assess the current level of food security status of the victims' families while the explanatory research design was used to investigate the effect of traffic accident on victim's food security in general. The general objective of this research is to assess the implications of road traffic accident on the food security situation of affected households in KolefeKeraniyo Sub city, Addis Ababa, Ethiopia.

Road traffic accidents have affect households in in getting nourishment for them and their family, made them to search for helps, send their kids for looking to food sources, leave school and begin working for getting for food, to hang tight for the help of companions, they lose their employment before the mishap, they couldn't supply the food sources for their family as before the mishap and the assortment of food we are utilizing is restricted contrasted with before the accident. Therefore, road traffic accidents have a negative and significant consequence on households' food security in Kolefe Keraniyo Sub City.

Road traffic accident and safety awareness campaigns should be established for all members of society, especially pedestrians, drivers, and traffic police, as well as a gradual examination of drivers who consistently violate traffic rules and regulations. Following the occurrence of traffic accidents, adequate compensation and rehabilitation programs should be offered to the households affected by these incidents in order to secure their food security, with the help of NGOs, government bodies, and other interested parties.

Key Words: Food Security, Road Traffic accident, Household food security, Human factors, Environmental Factors, Vehicle defect factor

CHAPTER ONE

1. INTRODUCTION

1.1.Background of the study

Around the world, road traffic accidents are the leading cause of human injury, death, and economic resource loss. Every year, around 1.35 million people die in road traffic accidents around the world, with about 70% of the deaths occurring in poorer nations. Pedestrians account for 23% of all deaths, with minors accounting for 35% of those killed.Pedestrians are killed without having anything to do with cars, and new generations of countries are dying as a result of car accidents. Many countries have lost potential development prospects as a result of traffic accidents (WHO, 2018).

Developing countries bear the brunt of road traffic accident fatalities and disabilities, accounting for almost 85% of global road fatalities and nearly 90% of total disability adjusted life years lost due to road traffic injuries.In these countries, the problem is rapidly worsening. Africa accounts for 650 of the world's daily 1040 deaths, whereas all other industrialized nations such as Western Europe, North America, Japan, Australia, and New Zealand are seeing a decline (WHO, 2017).

The yearly cost of road accidents exceeds $871 billion in the United States, with an estimated cost of $110 billion in the developing world. It is difficult to calculate the exact cost of road crashes in Sub-Saharan Africa due to a lack of costing data for African countries.The cost of crashes across the continent is currently estimated to be US$ 3.7 billion per year, with South Africa accounting for 2 billion of that total. However, the anticipated expenses as a percentage of national GNP in most African nations range from around 0.8 percent in Ethiopia and 1% in South Africa to 2.3 percent in Zambia and 2.7 percent in Botswana to around 5 percent in Kenya. (Osoro, 2014).

Traffic accidents are very common in Sub-Saharan Africa. Namibia, Sudan, Congo, Malawi, and Central Africa account for the majority of the deaths reported. South Africa's statistic of over 9,000 deaths has been stable over the last two decades, whereas Nigeria's record of 6,185

deaths has decreased from a high of over 9,200 in the early 1990s. Ethiopia, Kenya, Uganda, Tanzania, and Ghana are among the other nations with high rates of road deaths. In Ethiopia alone, about 5000 people die each year as a result of traffic accidents. Every year, many homes are damaged, many people are injured, many children are separated from their parents, and many parents are separated from their children due to car accidents.(WHO, 2018).

1.2.Statement of the problem

A technological disaster is an occurrence caused by a technological failure and/or human error in the control or handling of technology. Technological catastrophes can be classified as man-made disasters because they have an identified cause. As a result of this trait, the impact on communities is frequently more negative (Goldsteen and Schorr 1982). A disaster's impact on families and people can be long-lasting and persist for years. Symptoms, on the other hand, may arise gradually and the effects may not be seen right away. Furthermore, the disaster had a wide-ranging social and economic impact, affecting populations in five coastal states.Even if there was no oil on their coast, many villages suffered consequences (Morris et al, 2013).

A unified definition of technology disaster and accidents does not exist. Despite the fact that certain studies stress the complexities of the topic of individual responsibility in technology disasters, there is a distinction to be made between natural (acts of God) and man-made (acts of man) risks. Natural risks, according to certain classifications, are threats caused by uncontrollable phenomena, whereas man-made hazards are caused by manmade (technical) elements.Natural hazards are described as “those components of the physical environment that are hazardous to man and are induced by external forces.” All atmospheric, hydrologic, geologic (particularly seismic and volcanic) and wildfire occurrences are referred to as "natural hazards," whereas "man-made risks" refers to "artificial" phenomena produced by human activity, inaction, negligence, or error. These occurrences are classified as technological risks when they are caused by technology (e.g., industrial, engineering, or transportation) and sociological hazards when they are caused by direct human motivation (i.e. crime, riots, conflicts).Hazards are inextricably linked to the concepts of risk, tragedy, and catastrophe as a threat and possible danger. Risk (from the ancient Italian risicare) refers to the probability of experiencing a negative event, loss, or danger. A disaster (from the Italian disastro, literally "unfavorable to one's stars") is an unanticipated natural or man-made event that has harmful but

transitory consequences. Disasters are defined as the result of a catastrophic incident that drastically interrupts a community's operations (Weisaeth and Tonnessen, 2003).

A disaster is defined as "tragic events over which individuals, groups, or societies have no control-situations imposed by an external force too powerful to resist." These types of disasters can result in deaths, material destruction, and serious economic losses, but they can also create moments of collective stress in a community and put a society's vulnerability to the test. Some interpretations see a disaster as a result of unusual social circumstances, while others see man-made disasters as primarily socio-technical issues, the result of a lack of foresight and a combination of technological, social, institutional, and administrative variables.(Acot, 2006).

According to the Normal Accident Theory, failures are inevitable when high complexity and tight coupling are present. Technological accidents are "inevitable and happen all the time; serious ones are inevitable but unusual; catastrophes are inevitable but exceedingly rare," according to this hypothesis, which has been integrated, empirically tested, and proven. Since the mid-1980s, some researchers have created the High Reliability Theory, which claims that it is possible to design extremely reliable systems capable of maintaining practically total security levels, starting with an approach that is diametrically opposed to that of the Normal Accident Theory.Dis astrology is a branch of science concerned with the study and prevention of disasters. This subject, which began in the early twentieth century but really took off in the second postwar period, is based on the contributions of physicists, geologists, geographers, planners, engineers, sociologists, psychologists, and historians. (Bauman et al., 1993).

Kindunology (from the Greek kindunos, which means "hazard") emerged as a new branch of this science in the 1980s. The study of ways and means for knowing, understanding, assessing, classifying, and representing many elements of risks and disasters is the emphasis of this science. A catastrophe (from the Latin catàstrofa and the ancient Greek katastrophe, meaning "to overturn") is a big disastrous occurrence with significant and irreversible consequences. The major catastrophic hazards are classified into four homogenous classes, according to various classifications.Natural disasters (such as pandemics and asteroids) that are not directly caused by technology or human labor make up the first class of catastrophic risks(Coleman,1994).

Scientific hazards are classified as "laboratory or other scientific incidents involving particle accelerators, nanotechnology, or artificial intelligence" in the second category. These catastrophic risks are directly generated by technology, as opposed to the first-class dangers. The third category includes unintended man-made disasters that cause phenomena like "natural resource exhaustion," "global warming," and "biodiversity loss." Finally, intentional or "deliberately perpetrated" disasters such as "nuclear winter, bio weapons, cyberterrorism, and digital surveillance and encryption" fall into the fourth category of catastrophic dangers.These are combat dangers that can be regarded intentional acts of violence rather than unintentional acts of violence, despite the fact that they are dictated by the employment of technology. Hazards are physical or chemical substances that can harm people, property, animals, plants, or other natural resources, according to the International Society for Environmental Protection classification. Technical, social, organizational, or operational shortcomings produce technological accidents, which can range from minor (i.e. single toxic chemicals) to big (i.e. several toxic agents) incidents (industrial, chemical or nuclear accidents).Others define technological accidents as "accidental design or management failures relating to large-scale structures, transportation systems, or industrial processes that may result in loss of life, injury, property, or environmental damage on a community scale." Chronic technological disaster occurs when these events have long-term consequences. According to some research, there are seven major categories of technological hazards, each of which is ranked on a three-point severity scale. The numerous extreme dangers, according to this classification, are the most serious technical threats (i.e. nuclear war, recombinant DNA, pesticides).Extreme hazards, such as those caused by intentional biocides (chainsaws, antibiotics, vaccines), persistent teratogens (i.e. uranium mining, rubber manufacturing), rare catastrophes (i.e. LNG explosions, commercial aviation crashes), common killers (i.e. auto crashes, coal-mining diseases such as black lung), and diffuse global threats, are all present at the second level of the scale (i.e. fossil fuel and CO2 release, ozone depletion). The so-called simple technological dangers are found on the third and lower level (Dynes, 1970).

Although some technological dangers may be traced back to ancient times, it was during the nineteenth and the beginning of the twentieth centuries that technological growth and the industrialization process raised the issue of technology management and the potential for disaster. During these years, there was a significant shift in how these concerns were

approached: from disasters being unavoidable to the adoption of prevention and risk management programs.As a result of this significant shift, public institutions (national governments, agencies, and authorities) now play a larger role in the control, prevention, and emergency management of technology disasters. Scientists, experts, and technicians who were obliged to "predict" technology disasters using their unique knowledge became central figures under this new strategy. This new and modern attitude toward technology threats gained full development during the first postwar years, marking a significant turning point.The development of new technologies, aided by industrialization and the emergence of the period of mass consumption, generated a new discipline that attempted to address and handle various elements of technological dangers using various methodologies. The dis astrology and in general measures to protect safety, which were born in the postwar period, gained a systematic application after WWII (Gerhard, 1899).

The rising complexity of certain technologies employed in industry, energy production, and transportation, as well as the potentially catastrophic repercussions of technical mishaps, necessitated a greater investment in emergency regulation, prevention, and management. In other circumstances, such as atomic energy for civilian use, national and international agencies established during this time period played an increasingly important role.Several catastrophic incidents (Three Mile Island, Seveso, Bhopal, Chernobyl, the environmental disasters caused by oil tankers) have highlighted the need for rule standardization and stronger international cooperation since the 1970s, particularly in the following decade. The globalization of technical dangers during the so-called "risk society" prompted a more interdisciplinary approach to technological disaster issues. Furthermore, the growing availability of new hazardous compounds and materials, as well as the potential for human mistake associated with their usage, has resulted in an increase in technological mishaps.All of these considerations, as well as the increasingly blurred lines between natural and man-made disasters, have necessitated increased efforts at the national and international levels to harmonize policies to maintain collective security, public health, and environmental protection (ibid).

In underdeveloped countries, the influence of traffic accidents on economic performance is less well recognized. A number of accident-related empirical research in these nations are hampered by a lack of data and inconsistent database updates. Nonetheless, the socio-economic

consequences of road accidents are becoming a major source of worry around the world, as road accidents are viewed as a major public health issue that affects people all over the world. According to the World Health Organization, 1.25 million people die in traffic accidents each year, and between 20 and 50 million people suffer non-fatal injuries, the majority of which result in disability. Traffic accidents will be the sixth greatest cause of death by 2030, according to the report, and 90 percent of global fatalities occur in low- and middle-income nations, despite the fact that these countries own 54 percent of the world's vehicles. Asia, in particular, is one of the places where road-related fatalities have consistently climbed over the last few decades (Nitin and Adnan, 2006).

The majority of local research on this topic are done at a macro level, employing crash data that has been summarized. More precise research at lower levels is required to close the gap and find unknown facts. This study looks at crash data from KolfeKeranyo, which is one of the city's districts with a high rate of road traffic accidents. The risk factors for RTF fatal victims have been thoroughly studied, but there have been little studies on the household burden of RTF. As a result, this study examines the post-crash effects on the food security of RTF victims' households in the KolfeKeraniyo sub-city.

1.3.Research Questions

From the objective and the problem of the study the following questions were attempted to be addressed by the researcher.

- What are the major changes on food security strategies of affected households before and after the accidents on the targeted households?
- To what extent does road traffic accident affect food security of affected households?
- What is the current level of household food insecurity from access perspective using household food insecurity access scale (HFIAS)

1.4.Objectives of the study

1.4.1. General Objective

The general objective of this research is to assess the implications of road traffic accident on the food security situation of affected households in KolefeKeraniyo Subcity, Addis Ababa, Ethiopia.

1.4.2. Specific Objectives

The specific objectives of this research;

- Analyze the changes on food security strategies of affected households before and after the accidents on the targeted households
- Investigate the effect of road traffic accident on food security of affected households
- To describe the current level of household food insecurity from access perspective using household food insecurity access scale (HFIAS)

1.5.Significance of the Study

The researcher answer the following research problems on assess the implications of road traffic accident on the food security situation of affected households in KolefeKeraniyoSub city, Addis Ababa, Ethiopia. The study has tried to add knowledge on understanding what risk factors contribute to the occurrence of road traffic accidents and related injuries in a restricted risk area inAddisAbabainKolefeKeraniyo sub city. The data obtained in this study, can be used by the road safety authorities for planning and evaluating road safety measures. The recommendations given if considered are going to benefit the public at large on prevention of road accidents and increasing safety performance.

1.6.Scope of the study

Conceptually, there are a lot of factors for traffic accident as well as a multitude of effects on the victims as well as their families, however, the main delimitation of this research is to study implications of road traffic accident on the food security situation of affected households.

Geographically, this research is delimited in one sub city of Addis Ababa City administration due to various requirements such as time and financial resources.

1.7.Limitation of the Study

This study may have limitation with regard to data acquisition (in amount and time horizon) as a result of limited available financial and time resources. Thus, this research being one of the few preliminary works, it has limitation in generalizing findings to broader scope.During the course of the survey, I encountered problems with some families of traffic accident victims who were reluctant to provide information. I also had a hard time finding key informants who could point me in the right direction of RTA victim households.

1.8.Organization of the study

The Research is organized with the view to provide readers with consistent information on the study conducted. Accordingly, the paper is organized from five main chapters. The first chapter is the introduction part of the study which contains; background of the study, problem statement, research questions, objective of the study, significance and scope of the study, the extent to which the study was undertaken or (delimitation of the study) and with its potential problems or limitations that come across while the study is conducted. Chapter two presents a literature review on various aspects of traffic accidents and food security. Chapter three explains the research method used in the study. In chapter four, analysis is applied as well as findings are discussed. Finally, in chapter five general conclusions are drawn, possible recommendations to the problems are suggested.

CHAPTER TWO

2. RELATED LITERATURES

2.1.Theoretical Related Literature

2.1.1. Basic Theories of Accident Causation

An accident is defined as a brief, unexpected, and unfavorable occurrence or incident that results in a negative and bad conclusion. As a result, the accident isn't usually foreseen and can have unfavorable outcomes, such as fatalities, wounds, close calls, damaged materials, or broken nerves. Accident causation models were primarily developed with the goal of assisting persons who planned to investigate word-related accidents.Knowing how accidents are caused is also crucial from a proactive standpoint, with the ultimate goal of recognizing what types of misunderstandings or errors are responsible for occurrences, so that steps can be taken to remedy these errors before they occur (Thierry, 2012).

Social factors have been identified as a crucial ally in 95.0 percent of car accidents, as well as a source of action danger figures and development chance acknowledgments, which can be used to estimate drivers' actions. It was discovered that a higher level of seeming danger for a specific path was linked to a lower likelihood of an individual's commitment in that direction. Working conditions of drivers, hazard recognition and accommodation to the unavoidable, driver preparation and street use behavior, nature and condition of street organization, nature and condition of commercial vehicles, and transit regulation execution are the major visible variables responsible for accidents.The recently cited subjects that arose from the dataset are, in turn, the reasons for some engine vehicle accidents. Accident avoidance has long been reliant on profiting from collisions, especially close collisions (Thierry, 2012).

By investigating every event, we may learn about the causes and take steps to direct and eliminate the causes. The problem could be that, in the lack of enough high-quality hypotheses, we haven't been able to develop inquiry tactics that can raise all of the material pieces for turning away. An intelligently favorable image of the reasons may be accommodated by evaluation. Nonetheless, this image is primarily associated with the proof under investigation. There could be a few situations and concerns that contributed to the accident that the agents don't recognize or perceive. A level of hazard can be calculated by adding the results of one

accident to a variety of scenarios. Accident causation models differ from one another in a number of ways. For example, they may differ in their application space, explanation, and primary focus. They may also be distinct in terms of their overall structure, information sources, and outputs (Ibid).

2.1.2. The Domino Theory

The first maxim dealt with accident causation, stating that "the occurrence of a physical problem is always the result of a jumbled arrangement of parts, the last remaining one being simply the accident." He also presented a model known as the 'domino theory,' which equated the accident clustering to a column of dominoes beating each other down one by one.Injury as a result of an; Accident, as a result of an; Unsafe demonstration as well as mechanical or actual risk, as a result of the; Person's; Fault, as a result of their; Ancestry and Social Environment. Individuals' dangerous demonstrations cause 88 percent of all accidents, risky activities cause 10%, and God's demonstrations cause 2%. Heinrich postulated a five-component accident sequence, with each element impelling the next stage in the manner of dominoes falling one after the other (Pawan, 2014).

2.1.3. Role of Human Error in Accident Theory

Despite the fact that the role of human error in accident causation has been recognized for many years, it is only recently that a great deal of coordinated effort has been put into specific analysis of human error in accidents. Recognize the particular difficulties, but two broad themes emerged indisputably from the investigations into these accidents: the impact of human error in the sequence of events that led to the tragedy; and administration and security relationship breakdowns. People can cause or contribute to accidents (or reduce the outcomes) in a variety of ways (HSE, 1999). For the most part, security improvements have been receptive, with investigators cramming accident assessments for the primary aim of avoiding recurring events. Part of this stemmed from an overly simplistic approach to accident causation, with a focus on the possibility of a single key explanation: either an unsafe demonstration or a dangerous circumstance (as a delayed consequence of the domino hypothesis) Traditional models of accident causation place a strong emphasis on human factors.When human aspects were included, they were treated as if they were tied to an error that occurred during the sequence of events that led to the catastrophe. Our capacity to make expectations in regards to those pieces of human blunders, as well as collaborators to avoid accidents, will be enhanced by a hitter

consideration how, why, and when human errors become involved with accidents. Various models have been developed in order to show the significant aspects that human errors accept as a result of accidents (Thierry, 2012).

2.1.4. Road Safety and Risk Homeostasis Theory

Homeostasis is a flexible method that compensates for disrupted external control to keep the outcome close to the goal. The term "homeostasis" refers to a special type of unique interaction that matches generally yield to an objective, rather than a fixed and constant end impact or an unchangeable fix status of connections. Unless the objective degree of danger is adjusted, hazard homeostasis is defined as the level of hazard execution and the measure of misfortune caused by accidents and manner of life subordinate infection remaining constant throughout time.From what has been discussed so far, it is clear that attributing the cause of accident misfortune in the country to a homeostatic cycle is incorrect. The degree of auto accident risk that a specific individual maintains at any one time comes from three sources: The individual's post-rush-hour traffic experience. The individual's assessment of the accident potential of the immediate situation (Gerald, 2014).

The degree of confidence a person has in their ability to adjust to the situation by preparing the key dynamic and vehicle-care expertise. Individual dread, stirring events, traffic clashes, near accidents, restricted getaways, remembering others' accidents, conversation for other people, something similar to accident, show to accident reports: these encounters clear out those drivers for an overall sensation of the level of street hazard. Because these occurrences are commonplace and are linked to accident measurements given by law enforcement and the government, there is no reason to believe that for homeostasis to occur, people must have more than a shaky understanding of authority insights. The current situation includes the current street environment, the driver's own speed and direction, as well as the direction and speed of other r Risk Homeostasis in Everyday Life (Gerald, 2014).

2.2.EmpiricalRelated Literature

According to a new Global Road Safety Project report, about 10% of worldwide street passing’s occurred in Sub-Saharan Africa in 1999, despite the fact that only 4% of global vehicles are enrolled. On the other hand, in the developed world, where 60 percent of all vehicles are

enlisted, just 14 percent of street death occur. In any event, given the widely observed issue of under-detailing of street passing's in Africa (as in the rest of the developing world), the true figures are likely to be far higher, as the police are likely to be. Traffic recreation reported street fatalities address only the tip of the injury pyramid, according to an analysis of street auto collisions in Addis Ababa.According to the GRSP analysis, the revised real measure of total street passing's for all Sub-Saharan African countries for the year 2000, based on police records, ranges between 68,500 and 82,200. However, based on medical care data, the estimated casualty total of 190,191 for Sub-Saharan Africa given in the 2004 World Report is far higher, and reflects the level of under-detailing in police statistics (Chitere, et al,. 2012).

There should be a lot that can be done to reduce the number of roadway accidents. Certainly, some high-income countries had the opportunity to reduce their traffic-related injury problems by up to 50% in the last few years. Despite the fact that the total number of reported accidents has decreased in recent years, security remains one of the most problematic concerns in Ethiopia's transportation industry. The established factual accident rate model will provide benchmark assessments of public rates of outright accident hazard based on kind and office. A car accident occurs as a result of a combination of factors, and it is common for more than one variable to be involved. Accidents occur when a number of factors come together, including roadway and traffic characteristics. According to most researches, human error is to blame for 70% to 80% of all car accidents.In any case, the term "human error" is often debatable. It doesn't accurately depict the large number of injuries and deaths that occur in public as a result of driving errors when impaired by alcohol or pharmaceuticals, lack of involvement, or the need for attention circulation (Chen, 2009).

Entire accidents in Addis Ababa, according to Addis Ababa police reports, have been caused by human error. Drivers were also found to be responsible for approximately 74 percent of the accidents caused by human error. Drivers' failure to provide a passage for pedestrians, excessive speed, and failure to maintain a safe distance were all among the most often observed and reported errors.The actions of walkers are also resulting in a high death toll and extensive property damage. People in the city concentrate on traffic due to a lack of experience and information on a comprehensive traffic guideline, as well as a lack of mindfulness about how to function appropriately in the engine traffic framework (World Health Organization, 2018).

The number of street car accidents has increased all across the world, making street safety a major concern. According to the World Health Organization, in 2018, 1.35 million people died as a result of street traffic accidents, making it the eighth leading cause of death worldwide. Most traffic organizations regard pedestrians, cyclists, and motorcyclists as weak clients since they bear the brunt of these incidents, which account for the vast majority of global street traffic fatalities. In the vehicle framework, walkers are considered the most vulnerable street clients.In comparison to other sidewalk clients, they are in the most danger because to their delicacy, moderate speed, and lack of security. For a long time in Europe, the safety of a pedestrian has been a challenge. Although the total number of fatalities has decreased significantly between 2006 and 2016, the activities implemented to reduce bystander crashes have been significantly less impressive than those performed to reduce total auto accidents. In 2016, 5320 pedestrians were killed in street accidents in the European Union, accounting for 21% of all fatalities on the streets (World Health Organization, 2018).

2.2.1. Road traffic accident and economic security

Road traffic accidents have a negative economic impact on individuals, families, and national income, especially in developing countries, by causing disability (physical loss) or disease, which has a negative economic impact on the individual, family, and national income. The loss of a victim's active economic productive age group might push a family into poverty. The increased cost of caring for family members who are disabled as a result of traffic accidents has a significant influence on the victims' and their families' financial security. In developing nations, road traffic injuries constitute the third leading cause of death among the economically active age group (Söderlund et al., 1995).

It not only applies to the impairment of the collision victim(s), but also to the number of work days missed due to recuperation or, in the event of medical treatment, to average retirement age. Some of those who have been hurt will not be able to return to work, may lose their jobs, and will have to spend more time seeking for new jobs (search for other jobs). As a result, not only do you have to account for lost working time, but you also have to account for lower earnings whenever you get back to work.The revenue lost by caregivers should be factored into the lost production. When a member of a poor family is hurt, the entire family is affected; those on daily

wages may lose their jobs, youngsters may miss school, and older family members may spend less time caring for newborns (Söderlund et al., 1995).

Ordinary people may face financial instability as a result of road accidents. This is because families affected by traffic accidents are more likely to have a lower earning capacity and lower productivity because members are unable to work or are obligated to care for the injured family members (Chen et al., 2003). Furthermore, road traffic accidents produce new costs such as funeral expenses, legal fees, administrative fees, medical fees, and so on (ibid). Furthermore, households may encounter significant financial difficulties as a result of such health shocks. Household economic security is jeopardized as a result of these repercussions.Unlike many other worldwide human security risks, road traffic accidents harm not only the young and the old, but also the economically productive portions of the population and the economic elites, such as corporate leaders, managers, skilled workers, academicians, and students. This means that the economy will bear direct costs as a result of higher employee pension contributions, as well as loss of life, disability, and medical benefit systems (Anh and Dao, 2005).Similarly, increasing absenteeism, additional recruiting and training of new workers to replace sick (disabled) or dead employees result in a slew of hidden costs for economic income (ibid).The cost of destruction of property in a traffic accident has a significant impact on both individual's financial stability and the overall economy of countries. Property damage, such as repairs, replacement of infrastructural components, and vehicle parts, that occur while damaged vehicles are out of service have a significant influence on the victims' income as well as national economies (Chen et al., 2003).

Street auto collisions are killing a large number of people and destroying property, resulting in a social and financial crisis (Peden et al., 2004). It has a massive impact on human, physical, and monetary capital. It is far from posing a threat to many countries' efforts at public development. Several studies have found that street car crashes have a significant impact on public economies and result in a reduction in nation-wide (GDP) development(World Health Organization, 2018).

Street crashes may also have an impact on public macroeconomic development because they may modify the example set by the government, which may need to shift away from more profitable speculative assets and toward social and medical care arrangements (Chen et al., 2003). For example, providing clinical sorts of support to persons who have been damaged has

a significant impact on the public economy, especially given the impact of street setbacks on clinical area assets.Accident-related medical costs range from on-the-scene to recovery, or death, and include emergency treatment and salvage services (rescue vehicle), medical clinic costs (food and bed, activities, x-rays, medications, specialists' services), and restoration costs (therapy and prosthetics). These costs have a negative impact on the public economy as well as individual pay (Chen et al., 2003).

Street traffic accidents put a substantial strain on the global and public economy, as well as the wages of the people involved and their families. Due to a lack of monetarily dynamic collection, many families have been thrown into deep poverty (generally alludes to the youngsters who are the providers of their families). Furthermore, the added weight of truly focusing on individuals handicapped by street traffic wounds has a negative impact on the families' economics (Söderlund et al., 1995).

A street accident can result in a wide range of expenditures, including both property and human loss. For example, it leads to the loss of mobility options and increased spending on new vehicles or repairs to damaged ones. The property damage expenses also include repairs and replacement of framework segments and vehicle parts, as well as a production price for the time that injured automobiles are unavailable. These limited resources could be put to better use somewhere else (Bitew, 2002).

Another cost of a street auto collision is the loss of human life. It is the pain, misery, and enduring that is added to the general gauge of accident expenses and has an impact on the public economy as well as the economy of the victims' families. Individual casualties' personal pleasure is also influenced by anguish, depression, and perseverance. The human value, which reflects anguish, sadness, and endurance, is specified to be added to the total expenses for each severity of collision. The to-be-added item could be viewed as a social aim that has an impact on personal pleasure (Söderlund et al., 1995).

2.2.2. Road traffic accident and health security

Since road traffic accident increases the number of persons seeking medical help, a road traffic collision poses a health security risk. Because of this overstretching of resources, many road

traffic accident victims may experience a variety of health issues, particularly if they arrive at the hospital late in their disease cycle (Anh and Dao, 2005).

Furthermore, other people with treatable ailments, particularly in developing countries, may not have access to hospitals. Medical care is becoming increasingly expensive. This resulted in a scarcity of medical resources and an increase in demand for health-care services, both of which have a detrimental influence on medical service supply (Hassen, 2010).

These indirect consequences of the problem, together with the high number of people who die each year as a direct result of the disease, make global road traffic accidents one of the world's most significant health security threats today.In addition, road accidents limit access to medical resources, resulting in health insecurity. This is because the number of persons seeking medical help is increasing as a result of the increasing number of road traffic accidents. Medical resources will be threatened as the number of people who require medical assistance grows. It also has an impact on access to a healthy food, employment, and recreation. Furthermore, the emotional well-being of victims' families and individuals will be impacted(Hassan, 2010).

Psychological disorders, which can have a major impact on road traffic accident victims and their families, are another serious human security hazard posed by road traffic accidents. Discrimination, rejection, and sadness are common reactions, especially among the elderly. This may also cause victims to feel stigmatized as a result of their illness. Psychiatric disorders caused by traffic accidents are the subject of many studies. Some of these studies look at the immediate and long-term effects on survivors.After a road traffic accident, victims and their relatives, particularly small children, may experience mental issues. Victims may lose their sense of purpose and attachment to their surroundings (Hassan, 2010).

Around the world, road traffic injuries and deaths are becoming a growing general medical problem. Road traffic injuries are a leading cause of mortality and disability worldwide, according to studies, with an uneven amount occurring in agricultural countries. It is one of the most prevalent medical problems, among illnesses such as diarrhoea, malaria, HIV/AIDS, and tuberculosis, particularly in low- and middle-income countries (WHO, 2013).

The psychosocial effect of road traffic accident on casualties is another result. Road traffic injuries represents 30 to 86% of the injury admissions to emergency clinics in low pay and

center pay nations. It's anything but another result is the emotional impact of road traffic accidents on victims. Road traffic accidents account for 30 to 86 percent of injury admissions to emergency clinics in poor and middle-income countries. Individuals often suffer the adverse consequences of true agony and intense misery that is beyond any cash remuneration, which is anything but a significant cause of early mortality and injuries (World Health Organization, 2018).

2.2.3. Road traffic accident: A human security threat

Threats to human security can take many forms. Violent conflict (war), terrorism, and road accidents, for example, are all hazards that claim the lives of millions of people all over the world. The immediate and indirect consequences of road traffic accidents pose a threat to human security. According to Chen et al., (2003), one of the most serious human security threats in the twenty-first century is road traffic accidents. It is one of the world's most serious threats today, alongside terrorism, HIV/AIDS, tuberculosis, and other diseases.This is because the early and avoidable loss of life is possibly the biggest human vulnerability faced by millions of individuals around the world who are victims of road traffic accidents. As a result, road traffic accidents are unquestionably one of the most serious hazards to human survival around the world, as well as one of the greatest contemporary human security threats (Chen et al., 2003).

The societal impact of road traffic accidents is likewise wide spread. Because the victims feel unsafe, inferior, alone, and economically dependent on their family and community, it restricts social interactions. The loss of lives, property damage, and the grief it causes in people's minds are all significant (Peden et al., 2004). It came at a high cost to society, especially since the loss of able-bodied men and women who would have been engaged in constructive economic activity, intellectuals, government and family resources, insurance companies' losses, and property destruction, among other things, are incalculable (Agbeboh and Osarumwense, 2013).

2.2.4. Road traffic accident and food security

Road traffic accidents are a threat to food security because they result in the death of heads of households and lower the capacity and ability of those who can produce food, limiting access to

basic food for specific persons and groups. Malnutrition could result as a result. To put it another way, road traffic accidents have a significant detrimental impact on food security since they target the same capabilities that allow individuals to withstand hunger. It kills young adults, particularly women, who are the ones whose labor is most needed, leaving the family hungry (Hassan, 2010).For instance, a person who is disabled as a result of a car accident may have poorer efficiency, activity, and economic productivity for providing food than someone who is not disabled, resulting in individuals starving due to a shortage of food and facing food insecurity. This could result in a loss of work force capable of producing food for themselves and their family. As a result, these conditions could lead to famine and hunger, which are two of the most serious risks to food security.

2.2.5. Road traffic accident and personal security

People who are victims of traffic accidents experience terrible abuse all around the world, including physically and psychologically aggression, also known as direct violence (Galtung 1964).

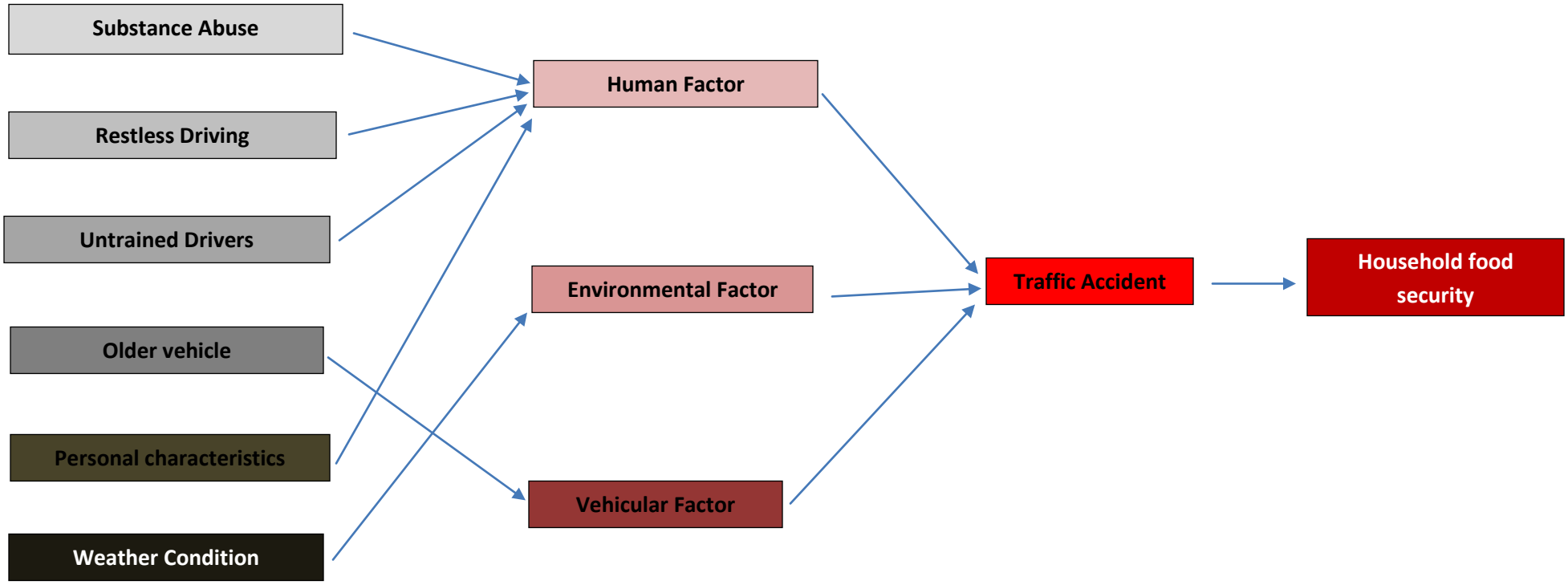
Under the worst situation, such physical and psychological abuse can result in people dying prematurely or being injured. Human security is threatened by people's bodily and psychological aggression as a result of road traffic accidents. It resulted in physical violence, which resulted in injuries (mostly disabilities) and deaths. Death is the final stage of human function and production, and it is the most serious result of irreversible physical loss of human life, whereas injuries can be both temporary and permanent. “Deaths from road traffic injuries account for roughly 25% of all injury deaths,” according to the WHO (2004).Disability is another personal security issue posed by automobile accidents. Head and spinal damage victims may never be able to return to their usual lifestyles. They may even necessitate round-the-clock attention (ibid). The severity of physical infirmity varies. Physical incapacity equates to a loss of productive capacity. Another personal security concern is the sorrow, agony, and grief inflicted to victims, which has an impact on the victims' and their families' personal well-being. This had a mental, physical, and psychological influence on the victims' and their families' personalities (Hassan, 2010).

2.2.6. Road traffic accident and community security

Road traffic accidents are among the most serious dangers to community security, having a significant impact on the victims' psychosocial relationships with their families and communities. They could have trouble interacting freely with others. It has the potential to sour the victims' relationships with their families and communities. Because the victims may feel marginalized and discriminated against in their families and cultures, this is the case. They may also experience feelings of inadequacy and alone. They may also believe they are less successful and financially reliant on others (Onakomaiya, 1991). There in absence of familial support, this may lead to victims merely exposing themselves to abuse and sexual exploitation; they are frequently left to offer sexual services in exchange for essential goods such as shelter, food, physical protection, and money (Hassan, 2010).

Families and communities could also lose their leaders. This results in family dissolution and member separation. As a result, individuals may experience issues such as sexual violence and become infected with diseases like HIV/AIDS and other sexually transmitted infections. They may also engage in criminal actions such as stealing and robbery (Agbeboh and Osabuohien, 2013).

2.3.Conceptual Framework



Source: Self-developed based on the literature review (2021)

RTAs are caused by a variety of circumstances, which can be divided into three categories: human factor, environmental, and vehicular factor (Cornelissen et al, 2013).

Human factors:-Human factors – the actions of the individuals involved – include deliberate risk-taking, distraction (cell phones, music, mates), fatigue (resulting in poor concentration), driving while intoxicated or under the influence of drugs, lateness (resulting in exceeding the speed limit), disregard for traffic rules, untrained drivers and choosing the riskier option.

Drinking and driving is a well-known risk factor for car accidents, injuries, and deaths.Drinking alcohol diminishes a driver's capacity to see long distance objects by 25% and reduces response time by 10% to 30%. (Institute of Alcohol Studies, 2010).

Environmental factors: Visibility issues (including low-light situations; heavy rain, snowfall, or mist; and so-called "blind" corners) Temperature in the environment (temperatures high enough to induce heat stress or low enough to lead to cold stress) Humidity relative to the temperature. Sound pollution is a problem.

Vehicular factors: This refers to the state of the vehicles can result the road traffic accident. The model of the vehicle, the age of vehicle, and the service year of vehicles are among the critical vehicular factors that result the road traffic accident, which the study need to address its relationship with the food security issues of the victims.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1.Description of the Study Area

KolfeKeranyo is the most inhabited sub city, followed by Nifas Silk and Bole sub cities, according to the sub city atlas (2014). It shares borders with Oromia in the north, south, and west, Lideta sub city in the east, Addis Ketema sub city and Gulele sub city in the north east, and Nifas silk lafto sub city in the south east, with a total area of around 6510.4 ha.The majority of the land (39%) is categorized as a residential area. The sub city's road coverage is 40.4 kilometers per kilometer asphalt paved, with the remainder being gravel and earth roads. The ring road is the most extensive of the asphalt highways, covering the majority of the sub city. The ring road, which was built in 2004, divides Kolfe on the west and east sides and spans 12.5 kilometers (AACRA, 2016).Despite the fact that the ring road has reduced traffic jams in the area, it is thought that the ring road has cut off the community from its markets, schools, churches, and clinics. Locals have also been forced to cross the highway and jump over forbidden zones due to the lack of nearby footbridges, putting them at danger of traffic

accidents.

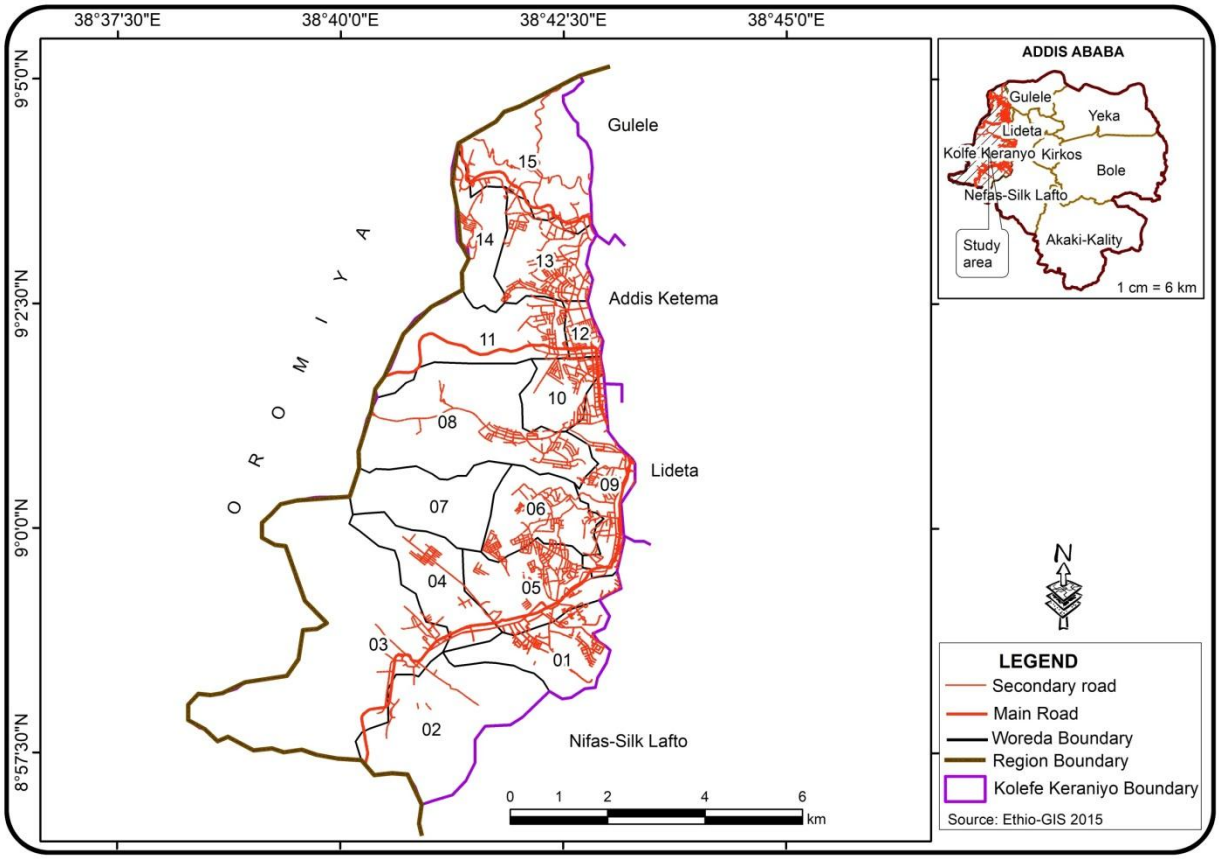


Figure 4.1 Map of KolefeKeraniyo Sub CitySource:Ethio-GIS 2015

3.2.Research design

Research methodology is a way to systematically solve the research problem and research methodology shall identify the research basis, research hypothesis or questions, research design and research analysis (Kothari, 2004). The research design for this study used both explanatory and descriptive research designs. The descriptive design was used to assess the current level of food security status of the victims' families while the explanatory research design was used to investigate the effect of traffic accident on victim's food security in general.

3.3.Research Approach

In this research the approach was used both qualitative & quantitative techniques. According to Jennifer Wisdom (2013) the term approach refers to an emergent methodology of research that advances the systematic integration, or mixing, of quantitative and qualitative data within a

single investigation or sustained program of inquiry. The basic premise of this methodology is that such integration permits a more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis.

Therefore, this study used mixed approach to integrate both quantifiable and qualitative data on this study. It employed both a mixed approach where quantitative and qualitative methods are used to collect relevant data from sample respondents. Data will be properly collected, analyzed and tabulated so that it gives meaning and draw conclusion.

3.4.Sampling Techniques

The research sampling frame is households that are affected by road traffic accidents affected households. Therefore, the researcher used a purposive sampling method where sample respondents are identified based on researcher's access to affected households. Traffic police department for preliminary information to locate affected households. The research did not consider age, gender, status of a person who is direct victim of road traffic accident. The study considers any household where there is one or more people who have been affected by road traffic accidents in the past years. By road traffic accident means that households who experience low to high level of accidents including but not limited to fatal road traffic accidents. The sampling techniques is selected given the challenges to identify potential respondents and willingness to participate to this research.

3.5.Sampling size determination

The sample size was determined thorough analysis of the type of the study population. The study population is clearly known. According to the Kolefekeranio sub-city Road traffic accident investigation office,106 road traffic accident victims were registered in the sub-city by 2020. 84 of these victims were sampled using the yamene formula. The researcher believed that the population not very big which is an important aspect to decide on the sample size. Yamane (1967) provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample sizes. A 95% confidence level, and with a population of 106 traffic accident occurred in the study area.(Kolefekeraniyo sub-city road traffic accident investigation team, 2020)

3.6.The sample size can be determined using the formula

$$n = \frac{N}{1 + N(e)^2}$$ ……. *(Yamane,. 1967)*

Where

- n- is the sample size,
- N - the population size (total members), and
- e - is the level of precision.

Thus, N=106, e=0.05, n= 84, the survey was done on 84 households victims of traffic accident.

3.7.Data Source and Collection Tools

Different primary and secondary data sources were used for the purpose of investigating the different dimensions of the research objective. These different data were collected using different techniques. A combination of the following techniques were employed in study.

3.7.1. Review of Secondary Data

The researcher conducted a though review of related literatures including police records to further analyses existing knowledge about the subject of the study. The secondary data also included journal articles, police documents, reports, and minutes that are available with different stakeholders.

3.7.2. Questionnaire-based survey

A questionnaire based survey were deployed to collect quantitative data from households affected by road traffic accidents. The questionnaire-based survey was not only be deployed for affected drivers, but also any households in the selected woreda where there is one or more persons affected by traffic accidents. The survey questionnaire was distributed to the 84 sample households to collect data related to their food security situation and impact of road traffic accidents on household food security status. In this chapter, the collected data has been analyzed and interpreted. The respondents' demographic characteristics of the households; coping strategies, effect of road traffic accident on food security of affected households, compute the level of household food insecurity from access perspective using household food insecurity access scale (HFIAS), traffic accident victims Household food security qualitative questions (during last 12 months) Items of the questionnaire on service quality were Likert scaled using

five points ranging between 1=Strongly Agree to 5=Strongly Disagree. In addition, some demographic descriptions of the respondents are collected. As to the major statistical tool, mean, standard deviation and paired sample t test was used.

3.7.3. Field observation

The purpose of the field observation is to contact well-known residents and authorities so that they locate road traffic accident victims to be included in the questionnaire based interview and other data collection methods as explained below.

3.7.4. Key Informant Interview (KII)

Key Informant Interview (KII) was one of the data collection technique for this research. Traffic accident investigation head,inspector of Police Traffic,Sub-Inspector of Police werecontacted as key informants. The researcher organized an individual-based key informant interview for at least 3person to gather qualitative data regarding the impact of road traffic accident on household food security situation.

3.8.Techniques of data analysis

After collecting information from the selected samples, the next step was toanalyze and present the data in meaningful manner. Accordingly, the data obtained from the respondents by using data collection instruments wereanalyzed in the form of tables, charts, codes and numbers by using statistical tools to present the information simply and clearly with descriptive statistics.Data analysis were undertaken using SPSS version 25. Qualitative data gathered through Key informant interview, field observation were used to substantiate the quantitative data gathered through the structured questionnaires. Additionally, descriptive statistical methods such as mean, standard deviation, percentage and frequencies were used. Prior to data analysis, the data were checked for its distribution and the presence of multi- collinearity, normality, linearity, and homoscedasticity for regression analysis. Furthermore, paired sample t test was used to compare the value of means before and after the traffic accident.

3.9.Ethical consideration

In case of data collection, ethical considerations will be seriously taken into account to ensure the protection, integrity, anonymity, consents and other human elements of the informants. The respondents will not be identified by names and their consent will be required during interview and discussions.

CHAPTER FOUR

4. DATA ANALYSIS AND INTERPRETATION

4.1.Demographic Characteristics of Respondents

Regarding the demographic variables of the respondents, their sex, age in years, their position in the household, age, average income before and after the accident were used. Accordingly, regarding the sex of the respondents, the majority of them 96.2%were females while the remaining 3.8% were male respondents. This reflects the composition of respondents, clearly showing the dominance of females in the traffic accident aftermath of the situation.

Regarding their position in the household, 97.5% of the total respondents were household heads while only 2.5% of them were not the household heads. This implies that most of this study respondents were household heads which will enable them to give appropriate responses regarding the food security situation of the family after the occurrence of the traffic accident.

Table 1 ***Demographic Characteristics of Respondents (categorical variables)***

Variable		***Frequency***	***Percentage***
Gender	Male	3	3.8%
	Female	76	96.2%
Household Head	No	2	2.5%
	Yes	77	97.5%
Total		*79*	*100%*

Concerning the age of respondents, the minimum and maximum of age of respondents were 22 and 45 years. While the mean age was 32.15years with a standard deviation 5.62 years.

Regarding the monthly income before the accident, the maximum was 3100.00 birr and 2500.00 birr. With an average monthly income of 2815.19. On the other hand, the average income after the accident was 672.78 birr.

Table 2 Demographic Characteristics of Respondents (continuous variables)

Variables	*Maximum*	*Minimum*	*Mean*	*Standard Deviation*
Age	45.00	22.00	32.15	*5.62*
HH Monthly income before the accident	3100.00	2500.00	2815.19	*168.01*
HH Monthly income after the accident	2000.00	300.00	672.78	*430.85*

Source, Own Survey, 2021

4.2.Paired sample t test Results of HH income

The following paired sample t test was computed to understand the presence or absence of a significant income difference of the household (HH) before and after the occurrence of the traffic accident. The paired sample t-test, sometimes called the dependent sample t-test, is a statistical procedure used to determine whether the mean difference between two sets of observations is zero. In a paired sample t-test, each subject or entity is measured twice, resulting in pairs of observations. Common applications of the paired sample t-test include case-control studies or repeated-measures designs.

Table 3***Paired sample t test Results***

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	HH Monthly income before the accident	2815.1899	79	168.01145	18.90277
	HH Monthly income after the accident	672.7848	79	430.84573	48.47393

	Paired Differences				t	df	Sig. (2-taile
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference			

				Mean	Lower	Upper			d)
Pair 1	B-income –A-Income	2142.40506	473.19757	53.23889	2036.41458	2248.40	40.241	78	.000

Source, Own Survey, 2021

Based on the above paired sample t- test result, HH Monthly income before the accident and HH Monthly income after the accident were evaluated to see the difference. Accordingly, the result with a p value <0.01, showed that the income of the households affected by the traffic accident was significantly decreased from 2815.1899 birr per a month to 672.7848 per a month. Therefore, the following sections of this study will deeply investigate the effects of such decrement of income on the family food security due to traffic accidents.

4.3.Coping Strategies

Based on the results; the comping strategy used based on their order of use were; Borrow food from a friend or relative (92.4%), Send household members to beg (81.0%), Send children to eat with neighbors (72.2%), Get government food aid (71.3%), Limit amount size at meal times (63.3%), Purchase food on credit (60.8%), Restrict consumption order for small children to eat (55.7%), Skip meals (55.7%), Rely on less preferred and less expensive food (31.6%) and other options (31.6%).

Table 4 ***Coping Strategies used***

Strategy	**Percentage of multiple response set**	**Ranking**
Rely on less preferred and less expensive food	31.6%	9
Borrow food from a friend or relative	92.4%	1
Purchase food on credit	60.8%	6
Get government food aid	71.3%	4
Limit amount size at meal times	63.3%	5

Restrict consumption order for small children to eat	55.7%	7
Skip meals	55.7%	8
Send children to eat with neighbors	72.2%	3
Send household members to beg	81.0%	2
Other	7.6%	10

Source, Own Survey, 2021

The above outcomes showed that the important adapting technique of families after the occurrence of the traffic accidents incorporates; acquire food from a companion or relative, send family individuals to ask, send youngsters to eat with neighbors, get government food help, limit sum size at meal times, and buy food using a credit.

4.4.Frequency of coping mechanism used

Based on the regularity of usage of managing strategies of food shortage and related matters were analyzed in the following table. Accordingly, based on the frequency of usage every day usage of relying on less preferred and less expensive foods was 55.7% followed by Hardly at all < 1 per a week usage which makes up of 36.7%.

Borrow food from a friend or relative has the highest frequency of 44.3% for all the time every day followed by 43.0% of Hardly at all < 1 per a week, while the other frequencies were distributed from Often 3-6 per week to Once in while 1-2aweek.

Get government food aid has the highest frequency of 63.3% for all the time every day followed by 25.3%of Hardly at all < 1 per a week, Even though the other frequencies were distributed from often 3-6 per week to Once in while 1-2aweek.

Table 5***Frequency of coping mechanism used***

Items	***All the time every day***	***Often 3-6 per week***	***Once in while 1-2aweek***	***Hardly at all < 1 per a week***	***Never per weeks***
	Freq. (%)	Freq.	Freq.	Freq.	Freq.
Rely on less preferred and less expensive foods	44(55.7)	1(1.3)	3(3.8)	29(36.7)	2(2.5%)
Borrow food from a friend or relative	35(44.3)	3(3.8)	4(5.1)	34(43.0)	3(3.8%)
Get government food a id	50(63.3)	2(2.5)	3(3.8)	20(25.3)	4(5.1%)
Send children to eat with neighbors	39(49.4)	2(2.5)	4(5.1)	28(35.4)	6(7.6%)
Send household members to beg	41(51.9)	2(2.5)	3(3.8)	32(40.5)	1(1.3%)
Limit amount of Meals	37(46.8)	3(3.8)	2(2.5)	35(44.3)	2(2.5%)
Restrict consumption order members of the house holds for small children to eat	23(29.)	6(7.6)	14(17.7)	34(43.0)	2(2.5%)

Source, Own Survey, 2021

4.5.Road traffic accident and food security

This section represents the respondent's perception on effect of road traffic accident on food security. Research participants were asked to indicate the extent to which they agreed and disagree to statements relating to the variables under the study of five-point Likert scale (5= strongly agree to 1= strongly disagree).

A mean of 3.0 is considered to measure neutrality on the test of variables. Standard deviation was used to indicate variation from the mean. A low standard deviation indicate that points tend

to be very close to the mean, whereas high standard deviation indicates that the data is spread over a large range of values.

Descriptive statistics in the form of mean and standard deviation were presented to illustrate the level of agreement of the respondents with their implications of the company. The responses of the respondents for the variables indicated below were measured on five point Likert scale with: 1= strongly disagree, 2= disagree, 3 = neutral, 4= agree and 5= strongly agree. However, while making interpretation of the results of mean the scales were reassigned as follows to make the interpretation easy and clear.

This formula is adapted from (Vichea, 2005), with 5 point scales, the interval for breaking the range in measuring each variable id calculated by $5-1/5= 0.8$. It means items with scores fall between the ranges of: 4.20 – 5.00 are considered as strongly agreed; 3.40 – 4.09 as agreed: 2.60 – 3.39 as Neutral; 1.08 – 2.59 as disagree and 1.00 – 1.79 strongly disagree.

Accordingly, the results of the effects of traffic accidents has been computed for each items in terms of mean and standard deviation as follow. Based on the results, all items have gained an agreement rating from the respondents (mean > 3.4). These items were presented to assess whether the occurred traffic accident affect them in securing food for them and their family (mean = 3.7975 and SD = 1.03006), whether the occurred traffic accident made them to look for aids (mean = 3.6709and SD = 1.02183), whether the occurred traffic accident forced them to send their children for searching to foods(mean = 3.5823and SD = 1.31664) whether the occurred traffic accident made their children to leave school and start working for securing our food(mean = 3.7975and SD = 1.16992), whether the occurred traffic accident made them to look for the support of their family members(mean = 3.5316 and SD = 1.01065), whether the occurred traffic accident made them to wait for the support of friends(mean = 3.7215and SD = 1.27034), whether Because of the occurred traffic accident, they lose their job before the accident. (mean = 3.6582and SD = 1.23917), whether Because of The occurred traffic accident, they could not supply the foods for their family as before the accident (mean = 3.4937and SD = 1.39480), whether Because of The occurred traffic accident, they could not feed their family frequently as before the accident (mean = 3.4684and SD = 1.25918), and whether Because of The occurred traffic accident, the variety of food we are using is limited compared to before the accident (mean = 4.2532and SD = 1.09156)

This result implies that generally road traffic accidents have affect households in in getting nourishment for them and their family, made them to search for helps, send their kids for

looking to food sources, leave school and begin working for getting for food, to hang tight for the help of companions, they lose their employment before the mishap, they couldn't supply the food sources for their family as before the mishap and the assortment of food we are utilizing is restricted contrasted with before the accident.

Table 6**Road traffic accident and food security**

Items	N	Minimum	Maximum	Mean	Std. Deviation
The occurred traffic accident affect me in securing food for me and my family	79	1.00	5.00	3.7975	1.03006
The occurred traffic accident made me to look for aids	79	1.00	5.00	3.6709	1.02183
The occurred traffic accident forced me to send my children for searching to foods	79	1.00	5.00	3.5823	1.31664
The occurred traffic accident made my children to leave school and start working for securing our food	79	1.00	5.00	3.7975	1.16992
The occurred traffic accident made me to look for the support of my family members	79	1.00	5.00	3.5316	1.01065
The occurred traffic accident made me to wait for the support of friends	79	1.00	5.00	3.7215	1.27034
Because of The occurred traffic accident, I lose my job before the accident.	79	1.00	5.00	3.6582	1.23917
Because of The occurred traffic accident, I could not supply the foods for my family as before the accident	79	1.00	5.00	3.4937	1.39480
Because of The occurred traffic accident, I could not feed my family frequently as before the accident	79	1.00	5.00	3.4684	1.25918
Because of The occurred traffic accident, the variety of food we are using is limited compared to before the accident	79	1.00	5.00	4.2532	1.09156

Source, Own Survey, 2021

4.6.Household Food Insecurity Assessment

The Household Food Insecurity Access Scale (HFIAS) used, since itapproach for measuring the impacts of traffic accidents on the access component of household food insecurity. The results were presented as follow.

Based on the results, 53.2%of the respondents often worried about their household would not have enough food in the past four weeks. While 38.0% of them were not able to eat the kinds of foods you preferred because of a lack of resources. More than half of the respondents (59.5%)

were often have to eat a limited variety of foods due to a lack of resources. 53.2% of the respondents often have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food. Additionally, 58.2% of the respondents had to eat a smaller meal than you felt you needed because there was not enough food and often have to eat fewer meals in a day because there was not enough food. 53.2% of the respondents have also reported that they often encountered the absence of food to eat of any kind in your household because of lack of resources to get food. Lastly, 45.6% of the respondents often went to sleep at night hungry because there was not enough food as well as 57.0% of the respondents or their family member often go a whole day and night without eating anything because there was not enough food.

Table 7 ***Household Food Insecurity Assessment***

Items	Rarely Row N %	Sometimes Row N %	Often Row N %
In the past four weeks, did you worry that your household would not have enough food?	41.8%	5.1%	53.2%
In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	57.0%	5.1%	38.0%
In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	32.9%	7.6%	59.5%
In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	39.2%	7.6%	53.2%

In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	31.6%	10.1%	58.2%
In the past four weeks, did you or any household member have to eat fewer meals in a day because there was not enough food?	29.1%	12.7%	58.2%
In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	45.6%	1.3%	53.2%
In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?	50.6%	3.8%	45.6%
In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	35.4%	7.6%	57.0%

Therefore, the above Household Food Insecurity Access Scale (HFIAS) result indicated that in traffic accident affected families, there were food insecurity issues such as the worry about household would not have enough food, unable to eat the kinds of foods you preferred because of a lack of resources, eating limited variety of foods due to a lack of resources, eating some foods that you really did not want to eat because of a lack of resources to obtain other types of food, eating a smaller meal than it felt needed because there was not enough food, eating fewer meals in a day because there was not enough food and go to sleep at night hungry because there was not enough food.

4.7.Regression Result

The regression technique described below is used to estimate the relationships among variables. It allows you to assess the strength of the relationship between variables as well as the predictive power of the independent variables on the dependent variable. To put it another way, regression allows a researcher to see how much a variation in the value of the dependent variable affects the importance of the independent variables while the other independent variables remain constant. A statistical tool for detecting whether or not things have an effect is regression analysis. A statistical technique for detecting whether or not things have a consequence is regression analysis.

The basic assumption checks for the mode must be completed before moving on to doing a regression analysis. This is a need for describing the relationships between dependent and explanatory variables. Linearity Test, Homoscedasticity Test, Auto Correlation (Durbin Watson

Test), and Normality Test were all evaluated and found to be reasonably met. Each test is described in detail below:

1. Linearity Test

The linearity of relationship between the reliant and autonomous factors can be tried by taking a gander at the P-P plot for the model. The residuals are dispersed closer to normal the closer the dabs are to the slanting line. The visual analyses of the p-p plot revealed that there is a direct relationship between the reliant and free variables, as seen in the figure below.

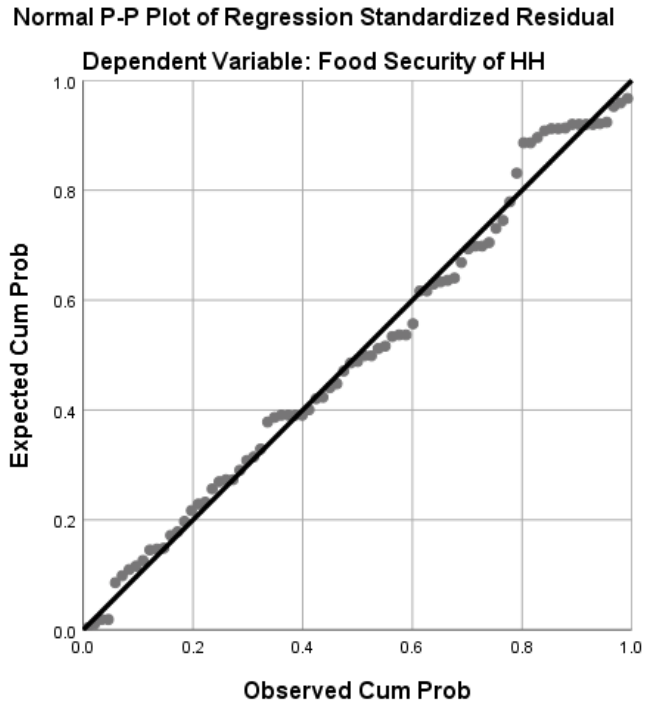


Fig 4.1: P-P Plot of Regression Standardized Residual

2. Homoscedasticity Test

The assumption of homoscedasticity refers to a difference in errors at all levels of the free factors (Osborne and Waters, 2002). This implies that it also necessitates the adoption of leftover terms or the homogeneity of blunder terms throughout the data. The visual inspection of a plot of the normalized residuals by the relapse normalized anticipated worth can be used to check for homoscedasticity (Osborne and Waters, 2002). The issue isn't adverse for investigation if the blunder terms are expressed improperly with no specific example. The

scatterplot in fig. 4.2 shows that the normalized residuals in this investigation are distributed uniformly, indicating that no infringement has occurred.

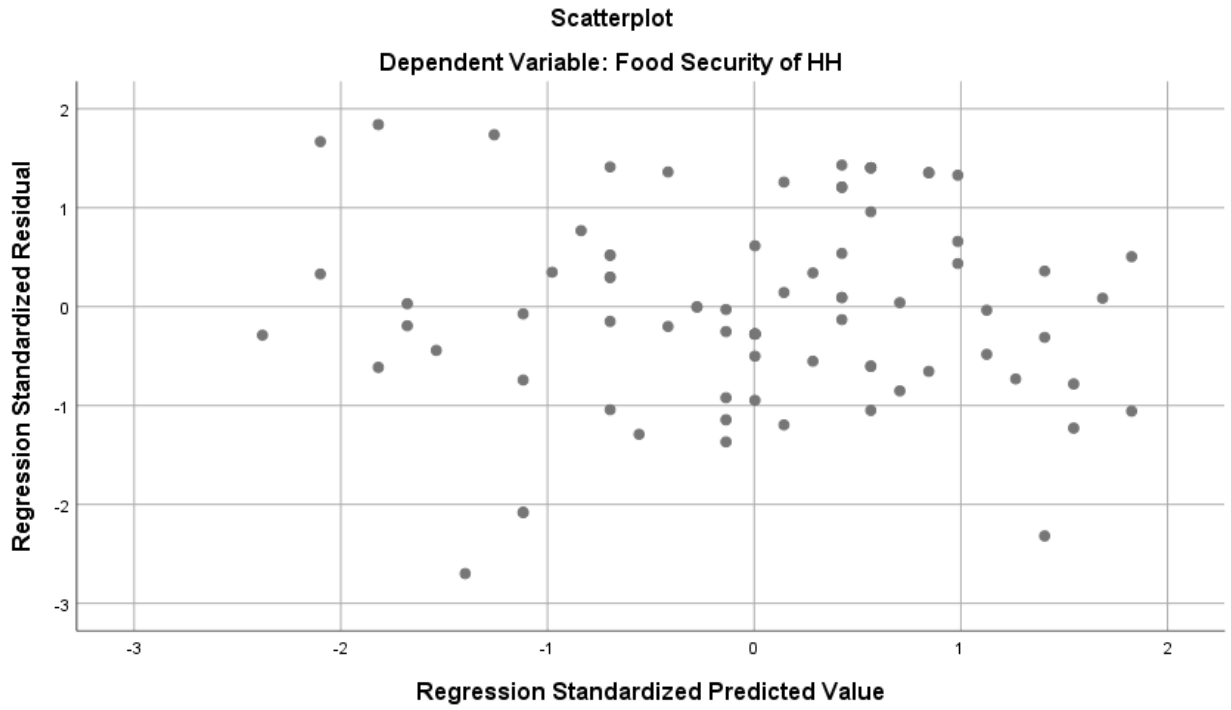


Fig 4.2: Scatterplot of standardized residuals

3. Auto Correlation (Durbin Watson Test)

The term "auto correlation" or "freedom of blunders" refers to the idea that mistakes are independent of one another, implying that subjects react independently. Durbin-Watson measurement can be utilized to test the presumption that our residuals are autonomous (or uncorrelated). This measurement can fluctuate from 0 to 4. For this expectation to be met, the Durbin-Watson esteem should be near 2 (Field, 2006). Qualities under 1 or more 3 are hazardous and reasons for concern. To check this supposition we need to take a gander at the Model Summary box introduced underneath.

Table 8**Durbin Watson statistics**

Model	Std. Error of the Estimate	Durbin-Watson
1	.82419	**2.011**

a. Predictors: (Constant), Road Traffic Accident

b. Dependent Variable: Food Security of HH

The above reveals that errors are responding independently and autocorrelation is not a concern with Durbin-Watson value of 2.011. Therefore, it is possible to say the auto-correlation test has been met.

4. Normality Test

For varied relapses, the free factors must be regularly distributed. This indicates that mistakes are evenly distributed, and a plot of the upsides of the residuals reveals a typical bend (Keith, 2006).

Dissemination of recurrences can take numerous shapes. As a result, you'll have a wide range of choices to choose from. All things considered, in an ideal world, our data would be evenly distributed around the focus point. As a result, if we draw an upward border through the focal point of the appropriation, it should seem the same on both sides. An ordinary dissemination is described by a ringer molded bend. Because of the form, the majority of the scores are centered on the center.(Field, 2006).

The ordinary circulation chart was displayed on fig 4.3 underneath and uncovered that the presumption of ordinariness of has been met.

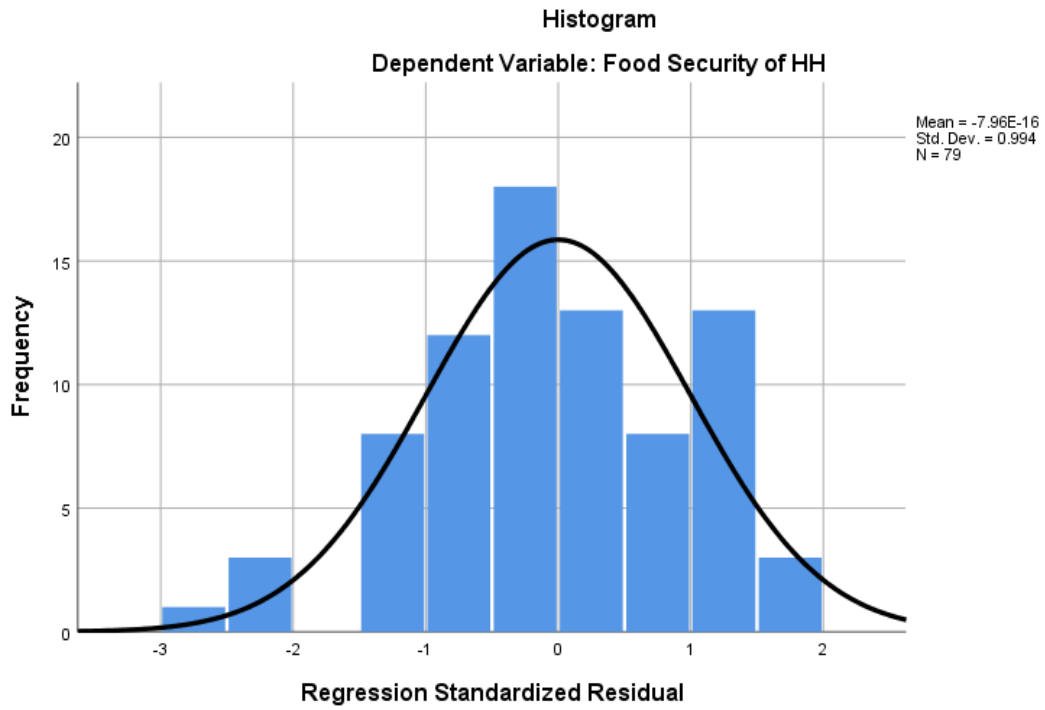


Fig 4.3 Normality Histogram

4.8.Regression Model Results

Table 9 **the regression model statistics**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.875[a]	.766	.763	**.37413**

a. Predictors: (Constant), Road Traffic Accident

b. Dependent Variable: Food Security of HH

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.267	1	35.267	251.953	**.000**
	Residual	10.778	77	.140		
	Total	46.045	78			

a. Dependent Variable: Food Security of HH

b. Predictors: (Constant), Road Traffic Accident

The above model also showed that the model is significant in predicting households food security using road traffic accident as an independent variable, and it is interpreted as 76.6% of

variance in households' food security can be explained by the impact of road traffic accidents (p value < 0.05). Whereas the remaining variability was unexplained and it can be explained by adding other variables that is not included in this model. Therefore, p-value test table shows that model is working well.

Table 10***Coefficients***

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.629	.184		3.412	.001
	Road Traffic Accident	- .851	.054	.875	15.873	.000
a. Dependent Variable: Food Security of HH						

According to the model, if the number of traffic accidents increases by one unit, family food security decreases by 0.851. With a 5% level of significance and a 95% level of confidence. The indirect association between road traffic accidents and family food security is indicated by the negative value on the coefficient level.

Furthermore, one of the KII participant (Traffic Accident investigation head) supported the above statement as:

> *Road traffic injuries cause substantial financial costs to families and individuals. The cost of healthcare, the loss of productivity and vital work schedules for sufferers and their families, the loss of skilled labor, and the sacrifice of class hours are all factors that contribute to food insecurity.Hold a positive attitude toward driving , Get as much supervised driving practice as possible, Everytime wear your seatbelt , Unauthorized drinking and drug usage are illegal , For beginners, keep it calm and careful when driving at night.*

The second KII participant (Inspector of police traffic) supported the above statement as:

> *Road traffic injuries cause substantial financial costs to families and individuals. The cost of healthcare, the loss of productivity and vital work schedules for sufferers and*

their families, the loss of skilled labor, and the sacrifice of class hours are all factors that contribute to food insecurity.Hold a positive attitude toward driving , Get as much supervised driving practice as possible, Everytime wear your seatbelt , Unauthorized drinking and drug usage are illegal , For beginners, keep it calm and careful when driving at night should be done to reduce the occurrence of traffic accident.

Similar to this conclusion, Peden et al., (2004) stated that road traffic accidents have a significant impact on national economies and cause countries' GDP growth to slow. Individual food security circumstances are also seriously harmed

Additionally,Söderlund et al., (1995) concludes that road traffic injuries caused a heavy burden not only on global and national economies but also on household income of the victims and their families. Many families are driven deeply into poverty because of the loss of economically active group (mostly refers to the young people who are the bread winners of their families). In addition, the added burden of caring for members disabled by road traffic injuries has huge negative impact on the economy of the victims' families Road accident is a cause of all kinds of costs that is, both property and human loss. For example, it leads to loss of means of transportation and fresh expenditure for purchasing new vehicles or repairing damaged ones.

According to Bitew, (2002), property damage expenses also include repairs and replacement of infrastructural components and vehicle parts, as well as charges incurred while damaged vehicles are out of service. These limited resources may be put to better use elsewhere, and it is wreaking havoc on households' food security.

Road traffic accidents have a negative economic impact on individuals, families, and national income, especially in developing countries, by inflicting disability (physical loss) or disease,

which has a negative economic impact on the individual, family, and national income. The loss of a victim's active economic productive age group might plunge a family into poverty. The increased cost of caring for family members who are disabled as a result of traffic accidents has a significant influence on the victims' and their families' financial security. In developing nations, road traffic injuries constitute the third leading cause of death among the economically active age group (Söderlund et al., 1995).

Road traffic accident may cause economic insecurity for ordinary people at the household level. This is because, households affected by road traffic accidents are likely to experience a reduced earning capacity and decreased productivity as member are unable to work, or are tied down to caring for the affected family members (Chen *et al.*, 2003).

Moreover, road traffic accidents at the same time generates new costs such as funeral expenditure costs, legal costs, administrative cost, medical costs, and so forth *(ibid).* In addition, households may also face serious problems to cope economically with such health shocks. Such consequences are serious threats of economic security of households. Unlike many other global problems of human security threats, road traffic accident affects not only the young and the old, but also the economically productive segments of the population and the economic elites including business elites, managers, skilled labor, academicians, students, and so forth. This means, the economy will face direct costs because of higher contributions to employees' pensions, as well as loss of life, disability and medical benefit schemes (Anh and Dao, 2005).

Simultaneously, there are also lots of indirect costs for economic income resulting from increased absenteeism, additional recruitment and training of new personnel to replace the sick (disabled) or deceased personnel *(ibid).*The property damage cost of road traffic accident also severely affects the economic security of individuals and the national economy of countries. The property damage such as repair, replacement of infrastructural components and vehicle parts, which are generated during the period of damaged vehicles are out of service have huge impact on the income of the victims and on the national economies (Chen et al., 2003).

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1.Conclusions

The major objective of this study was to assess the implications of road traffic accident on the food security situation of affected households in KolefeKeraniyo Sub city, Addis Ababa, Ethiopia accordingly, the paired sample t- test result, HH Monthly income before the accident and HH Monthly income after the accident were evaluated to see the difference. Accordingly, the result with a p value <0.01, showed that the income of the households affected by the traffic accident was significantly decreased from 2815.1899 birr per a month to 672.7848 per a month.

The important coping strategies of families after the occurrence of the traffic accidents incorporates; acquire food from a companion or relative, send family individuals to ask, send youngsters to eat with neighbors, get government food help, limit sum size at meal times, and buy food using a credit.

Road traffic accidents have affect households in in getting nourishment for them and their family, made them to search for helps, send their kids for looking to food sources, leave school and begin working for getting for food, to hang tight for the help of companions, they lose their employment before the mishap, they couldn't supply the food sources for their family as before the mishap and the assortment of food we are utilizing is restricted contrasted with before the accident.

The results of the Household Food Insecurity Access Scale (HFIAS) revealed that food insecurity issues such as concern that the household would run out of food, being unable to eat the types of foods they preferred due to a lack of resources, eating a limited variety of foods due to a lack of resources, and eating foods they really didn't want to eat b were present in traffic accident affected families.

The regression analysis showed that the model was significant in predicting households' food security using road traffic accident as an independent variable, in which 76.6% of variance in households' food security can be explained by the impact of road traffic accidents (p value < 0.05). More specifically, the model shows that, as road accident level increases, households' food security will also decreased by 0.851. At 5% level of significance or 95% level of confidence. Therefore, road traffic accident have a negative and significant consequence on households' food security in KolefeKeraniyo Sub City.

5.2.Recommendations

Based on the results of this study, the following recommendations was forwarded.

- Food and nutrition security interventions should integrate family planning, education and awareness raising programs in order to reduce the increasing pressure on food security due to traffic accidents occurred on the bread winner member of the family.
- Road traffic accident and safety awareness campaigns should be established for all members of society, especially pedestrians, drivers, and traffic police, as well as a gradual examination of drivers who consistently violate traffic rules and regulations.
- Following the occurrence of traffic accidents, adequate compensation and rehabilitation programs should be offered to the households affected by these incidents in order to

secure their food security, with the help of NGOs, government bodies, and other interested parties.

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Appendix:

Data collection tool

Interview questionnaire for victim's households of traffic accident

My name is YafetAssefa and I am working on Master's thesis for the partial fulfillment of MSc degree in Food Security and Development studies and this studies complies with the regulations of Addis Ababa University. This Questionnaire has designed to *assessment of traffic accident and its implications to victim household's food security in kolefekeraniyo sub city of Addis* Ababa City Administration, Ethiopia. The data collected will be used for academic purpose only and will be confidential. I would like to thank you in advance for your time and providing me the appropriate information for the following questions.

N.B. 1. If the participant so desires, he or she is not compelled to give his or her name. 2. Make a mark ""inside the box of your preferred option. 3. The student researcher has set a deadline of three days for receiving the completed questionnaire.

SECTION A. IDENTIFICATION Interview date...../...../2020 wereda

.....

.....

Interviewer's Name.....

.....

.....

SECTION B: HOUSE HOLDERS' DEMOGRAPHIC INFORMATIONHH_ID:

Enumerator's Name: _____ District: _____ Village: _____ Date: _____

A.1. Demographic and personal information about the households

Respondent's Full Name: ..... Gender: Male Female

Is the respondent the head of the household? If No, 1) Yes, 2) No,Age of the Respondent: _____

Monthlyincome before accident_____

Monthly income after accident _____

Objective 1. Analyze the changes on food security strategies of affected households before and after the traffic accidents on the targeted households

1. How did you cope with food shortage in terms of reducing food insecurity in the household (allowing multiple responses)?

no	**Coping strategies**	**rank**
1	Buy less desirable and less expensive food	
2	Borrow food from a friend or neighbor	
3	Use credit to buy food	
4	Obtain government food assistance	
5	Reduce portion sizes at mealtimes	
6	limit the amount of food consumed by small children	

7	Skip meals	
8	send youngsters to dine with neighbors	
9	assign family members to begging	
10	If other specify	

no	In the Past 7 days, how often has your All the Pretty Once in Hardly household had to	**All the time every day**	**Often 3-6 per week**	**Once in while 1-2aweek**	**Hardly at all < 1 per aweek**	**Never per weeks**
1	Buy less desirable and less expensive food					
2	Borrow food from a friend or neighbor					
3	Obtain government food assistance					
4	Send children to eat with neighbors					
5	assign family members to begging					
6	Reduce portion sizes at mealtimes					
7	limit the amount of food consumed by small					

	children					

Objective 2: Investigate the effect of road traffic accident on food security of affected households?

no	Please tick one number for each question that comes closest to reflecting your opinion about it.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The occurred traffic accident affect me in securing food for me and my family					
2	The occurred traffic accident made me to look for aids					
3	The occurred traffic accident forced me to send my children for searching to foods					
4	The occurred traffic accident made my children to leave school and start working for securing our food					
5	The occurred traffic accident made me to look for the support of my family members					
6	The occurred traffic accident made me to wait for the support of friends					
7	Because of The occurred traffic accident, I lose my job before the accident.					
8	Because of The occurred traffic accident, I could not supply the foods for my family as before the accident					
9	Because of The occurred traffic accident, I could not feed my family frequently as before the accident					
10	Because of The occurred traffic accident, the variety of food we are using is limited compared to before the accident					

Objective 3: Compute the level of household food insecurity from access perspective using household food insecurity access scale (HFIAS)

This study will evaluate the house holds food insecurity access scale (HFIAS) in measuring victim of traffic accident household food insecurity in kolefekeraniyo sub city. Household food security will be measured by the item HFIAS questionnaire, which asks if a specific condition associated with the experience of food insecurity over the previous 30 days occurred. Households will be categorized into four categories depending on the HFIAS questionnaire score: food secure, mildly food insecure, moderately food insecure, and severely food insecure.

Each one of the questions in the following table has a four-week memory duration (30 days). The participant is first asked an occurrence question, which asks if the situation in question occurred in the previous four weeks at all (yes or no). If the responder says "yes" to an occurrence question, a frequency-of-occurrence question is asked to see if the condition occurred once or twice, three to ten times, or even more than ten times in the previous four weeks.

1. Have you been concerned about your household's food supply in the last four weeks?

0 indicates that the answer is no skip Yes = 1

1.1 How frequently did this occur? 1 = infrequently (once or twice in the past four weeks) 2 = sometimes (three to ten times in the past four weeks) 3 = frequently (more than ten times in the past four weeks)

NO	Occurrence Questions	
1	Have you been concerned about your family's food supply in the last four weeks?	
2	Were you or any family member unable to consume the foods you preferred in the last four weeks due to a shortage of resources?	
3	Did you or any family member have to consume a reduced variety of meals in the last 4 weeks due to the absence of resources?	
4	Did you or any member of your family have to consume meals you really didn't want to eat in the last four weeks leading to a shortage of resources to obtain alternative kinds of food?	

5	Have you or any of your family members had to eat a fewer food than you wanted in the last four weeks due to a lack of food?	
6	Have you or any of your family members had to eat less food meals each day in the last four weeks due to a lack of food?	
7	Is there really a time in the last four weeks when your household had no food to eat of any kind due to inadequate of resources to obtain food?	
8	Have you or any of your family members gone to bed starving in the last four weeks due to a lack of food?	
9	Have you or any of your family members gone a day or evening without eating in the last four weeks due to a lack of food?	

Victims of traffic accidents Qualitative questions about household food security (during last 12 months)

Q.3.1. Do you believe your household's basic daily food consumption has decreased, taking basic daily food demand as the minimum food consumption essential for life?

a. Slightly

b. major

c. completely

d. not in the least

Q.3.2 Have you or anyone members of your home ever skipped a food since you didn't get enough money to pay for food in the previous 12 months?

a. Once a week

b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never skipped the meal.

f. Don’t know

Q.3.3. Have you or other members of your home ever gone a day without eating because you didn't have enough money to pay for food?

a. Once a week

b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never happened.

f. Don’t know

Q.3.4. Have you or other members of your home ever eaten fewer than you or they wanted to eat? a. Once a week
b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never

f. Don’t know

Q.3.5. Have any of the kids ever skipped a meal because there was insufficient food?

a. Once a week

b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never

f. Don’t know

Q.3.6. Did any of the children ever not eat for a whole day because of lack of money to buy food?
a. Once a week
b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never

f. Don’t know

f. Don’t know

Q.3.7. if you ever could not afford to eat balanced meals what was the frequency?

a. Once a week

b. Once a month

c. Once in 3 months

d. Once in 6 months

e. Never

f. Don't know

Key informant interview (KII)

Key Informant Interview Guide

Dear Respondent,

My name is YafetAssefa, a M.Sc. in Food Security and Development student at College of Development Studies of the Addis Ababa University. Thisinterview has designed to assessment of traffic accident and its implications to victim household's food security in kolefekeraniyo sub city of Addis Ababa City Administration, Ethiopia. The data collected will be used for academic purpose only and will be confidential. I would like to thank you in advance for your time and providing me the appropriate information for the following questions.

In your opinion,

1. What are the major factors for the occurrence of traffic accident in kolefekeraniyo subcity?
2. How many traffic accidents were reported in the KolefeKeraniyo Sub-City in 2019?
3. What are the effect of road traffic accident on food security of affected households?
4. What should be done to reduce the occurrence of traffic accident?