ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES SCHOOL OF SOCIAL WORK

The Coping Mechanism of Road Traffic Accident Victims: The Case of ALERT Hospital Trauma CenterAddis Ababa, Ethiopia, 2016-2017

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A Thesis Submitted to the school for the partial fulfillment of the requirement for Master's Degree in Social work, Addis Ababa University

May, 2019

Declaration

I, the undersigned, declare that this thesis is my original work and not been presented for degree in any other University and that all sources of materials used for this thesis have been duly acknowledge.

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Signed by the Examining Committee

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Acknowledgement

Primarily my thanks go to the Almighty God for his unreserved support in every movement of my life, and the beginning and end of this study. I am immensely grateful to School of Social Work for allowing me to undertake this research. I owe the deepest thanks to my advisor Dr. MengistuLegessefor his continuous assistance and guidance during my work. I am happy to express my deepest thanks to ALERT Hospital Trauma Center doctors, Nurses, Social Workers, rehabilitation workers and RTA victims for their participation in the research process and their assistance throughout the data collection.

Last but not least, I would like to express my deepest thanks to my husband for his unreserved support in undertakeing this research.

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Acronyms

AHRI	Armahuer Hannsen Research Institute
ALERT	All African Leprosy, Tuberculosis and Rehabilitations Training Center
DSM	Diagnostic and Statistical Manual
NGOs	Non-Governmental Organizations
PTSD	Post Trauma Stress Disorder
RTA	Road Traffic Accidents
RTAVs	Road Traffic Accident Victims
WHO	World Health Organization

Abstract

Background: Road Traffic accident (RTA) is an unplanned occurrence of auto crash that may result in injuries, loss of lives and properties and it's a collision between two or more vehicles, vehicles and pedestrians, vehicles and animals, or vehicles and fixed obstacles. The factors contributing to these accidents can be classified as causes due human factors, external factor and Vehicle condition. RTA victims use different coping mechanisms to help them manage difficult and/or painful emotions. Coping mechanisms can help people adjust to stressful events while maintaining their emotional well-being. Some of the coping mechanisms are support from families, treatments and peer supports.

Objective: To explore the coping mechanism of road traffic accident victims in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.

Method: A qualitative health institution based study among 18 RTA victims admitted or attending outpatient department in ALERT trauma center wards and 6 key informants working in the center hospital was conducted from November 2016-June 2017. The variables in the study were like trend of RTA, coping mechanisms and supportive treatment are also assessed. The data was collected using an in-depth interview. The study used categorical analysis and reporting the findings on the interview in the aggregate for similar pattern of responses of participants.

Result: Based on the participants' expeleriences, the "supportive needs" which are treatment, social and peer-support were the major information extracted from the data of this study.The result alos show some challenges in the trauma center for both victims (Feeling of sadness when looking their body disfigured, to stay in the hospital any longer than they imagine etc.) and for the trauma center(mismatch between the number of caregivers and of patients coming to the center).

Conclusion: Both the key informant interview and in-depth interview of victims show that burden of RTA is increasing from time to time and patients are dealing with accident consequence in different ways. The study also drawn implication for different stakeholders to promote , to create awareness of the case, for further researches to be conducted so better action can be taken in the future.

Key words: Road traffic accidents, trauma, stress, victim survivor, PTD

CHAPTER ONE

1. Introduction

1.1. Background of the Study

Road taffic accidentsare a common cause of traumatic stress. The consequences of traumatic stress are known to precipitate a spectrum of psycho-emotional and physiopathological outcomes that brings on post-traumatic stress disorder (PTSD). PTSD is a psychiatric disorder that results from the experience or witnessing of traumatic or life-threatening events such as road accidents, terrorist attack, violent crime and abuse,etc (Ford, Farmington, Elhai, & Courtois, 2015). The presence of PTSD in individuals brings about psycho-emotional stress. According to Iribarren, et al (2005), psycho-emotional stress is defined as a perceived lack, or loss of fit of one's perceived abilities and the demands of one's inner world or the surrounding environment (i.e. person/environment fit). Traumatic events that trigger PTSD are perfect examples of such onerous demands that lead to the conscious or unconscious perception on the part of the person of not being able to cope.

The perception of stress is often associated with psychological manifestations of anxiety, irritability and anger, sad and depressed moods, tension and fatigue, and with certain bodily manifestations, including perspiration, blushing or blanching of the face, increased heart beat or decreased blood pressure, and intestinal cramps and discomfort. These signs mirror the spectrum of psychobiological symptoms in PTSD. These manifestations are generally associated with the nature of the stress, its duration, chronicity and severity. A group of symptoms, now referred to as the sickness behavior, is also noted that is associated with clinically relevant changes in the balance between the psychoneuroendocrine and the immune

systems (Chiappelli, et al., 2001; Chiappelli & Cajulis, 2004, as cited by Iribarren, et al (2005).

In this instance, Traumatic events are profoundly stressful. As defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), traumatic events (1) involve 'actual or threatened death or serious injury, or a threat to the physical integrity of self or others'; and (2) the person's response at the time involved 'fear, helplessness or horror' (or disorganized or agitated behavior in children). In short, survivors of road trafiic accident often experience a range ofemotional distress associated with PTDS. Hence, the conequencies of road tarffic accident include mental health difficulties such as posttraumatic experiences, stress, depression, and anxiety ((Davis, Racusin, Fleischer, Mooney, Ford, &McHugo, 2000a; b; Stallard, Velleman, & Baldwin, 2001; Mayou, & Bryant, 2001).

In view of the strong association between road accident and PTSD (posttraumatic stress disorder), various studies show that about 20 percent of those involved develop some degree of PTSD (Ehlers et al. 1998). about 1 percent of men and 2 percent of women in the general population will have PTSD at any one time (e.g. Perkonigg et al. 2000). Prevalence rates among groups that regularly encounter traumatic events are much higher.(Bennett et al. (2005)). PTSD often begins within a few weeks of the precipitating event, but can recur after symptoms have faded as a result of further trauma or life-events as diverse as trauma anniversaries, interpersonal losses, and changes in health status. Of the three key symptoms, re-experiencing appears to decrease most rapidly: people in whom hyper-arousal is the dominant symptom appear to have the worst prognosis (Schell et al. 2004).

Several recent reports, mainly from the United Kingdom, have concluded that posttraumatic stress disorder and other psychological and behavioral consequences are frequent (Di Gallo et al. 1997; Ellis et al. 1998; Mirza et al. 1998; Stallard et al. 1998, 1999; De Vries et al. 1999; McDermott &Cvitanovich, 2000). However, thesestudieshaveusedvaried methods of assessment of post-traumatic symptoms at different time intervals and have generally lacked a comprehensive view of outcomes. There has been no report on acute stress disorder in this population. This study used a range of measures comparable to those used in research with adult road accident victims in order to establish prevalence of acute stress disorder, post-traumatic stress disorder (PTSD) and phobic travel anxiety; examine the effects on behavior,

activities and sleep; investigate factors associated with longer-term psychiatric problems in children; and describe the effects of the child's RTA on the mother.

Given that individual responses to traumatic events are not the same, depending on the person's characteristics, support systems availability, biological and psychological being of each person, it is well recognized that individuals employ various coping strategies to deal with the trauma each encounters.This suggests that any traumatic experience has to take into account variations within and between individuals, and has also to be seen in terms of care and support the victim individual gets after the trauma. Hence, a number of different aspects are needed to be considered in generalizing the reactions of the victim. Furthermore, in view of the coping strategies of the person to recover from the traumatic experiences, any rehabilitation approach has to be suitable for each individual, or at least the individual who is injured should be consulted and involved during the recovery process.

In this light it is imperative to assess thecopying mechanisms of the victims of road tafiific accident.However, little data exists in regard to the coping mechanisms of road accident survivors in Ethiopia even though the problem of road accidents in the country is considered to be one of the highest in the world. Some argue that road accident in Ethiopia is one of the worst accident records in the world. Moreover, road accidents are concentrated in Addis Ababa which is the capital city of Ethiopia. In comparisonwith Oromia region that accounts 58% of all fatalities and two-third of all injuries, Ross (2011) reported that while Addis Ababa has the largest number of road accidents, Oromia has the largest number of fatalities. Not only the traffic accidents are concentrated in Addis Ababa city and Oromia region but also the volume of motorized traffic are very high as compared to the other parts of the country, AntenehKebede, (2015).

What is more pressing now than beforeis, notcomparative analysis of the prevalence of road accidents within the country or between countries of the world but how to curb the increasing road accidents? In relation to road accidents, the survival skills of the victims should also get attention to increase the treatment strategies and improve the quality of life of the road victims.Of course, coping occurs in response to psychological stress usually triggered by changes in an effort to maintain mental health and emotional well-being. Life stressors are often described as negative events. however, positive changes in life can also constitute life

stressors, thus requiring the use of coping skills to adapt. Coping strategies are the behaviors, thoughts, and emotions that one uses to adjust to the changes that occur in his or her life.

As the literature shows, there are many coping styles that people use, and some may prove more effective than others, depending on the nature of the stressful situation and the person who is employing them. Ineffective coping mechanisms, also referred to as maladaptive coping, may also be applied to stressful events or internal conflict, often unconsciously. Maladaptive coping mechanisms are counterproductive,Jane & Terry semel, (2017).

1.2. Statement of the problem

Road transportation provides benefits both to individuals and the nation; it also facilitates the movement of goods and people for jobs access, economic markets, education, recreation and health, which in turn has direct and indirect positive impacts on the health of peoples. However, nowadays the improved road transportation has placed a considerable burden on peoples and countries health by causing road injury there is a reduction in physical activity that impacts the economic, social and environmental outcomes of the victim and the society. From a different perspective, road vehicles emit gases to result in air pollution, greenhouse gas emissions, consumption of scarce resources, and noisedisturbances (Mohammed Seid, 2015). Furthermore, road traffic accidents have become public safety and development hindrances, resulting “in an estimated 1.2 million deaths and 50 million injuries worldwide each year”,Seid et al. (2015).

In Ethiopia, road traffic accident has been one of the top ten causes of death. For example, in 2013, the number of people killed by road traffic accident was equivalent to those who died due to malarial (which is 9th cause of death) throughout the countryWHO, (2013). Road traffic injuries and deaths have therefore been the key public health and development challenges of the country and will continue to adversely affect the livelihood of community and the economy of the country unless effective measures are taken to control the problem.

Road traffic accidents not only adversely affect the livelihood of victims but also their family members, as it can lead households into poverty through enduring effects of the episodes: the costs of medical care, treatment and loss of family’s income generations. Road traffic accidents have also an enormous impact on national economy by consuming the already inadequate resources, damaging valuable property and killing and disabling the productive member of the country. In general, the severity of the problem is becoming horrifically shocking and reaching a catastrophic level showing that sufficient work has not been done to control and/or reduce alarming rate of the accident. This also implies that timely, accurate, and relevant data need to be collected and analyzed periodically so as to examine the trends, scope, and severity of the problem and come up with reasonable solutions.

Road traffic accidents, which are generally unintended and preventable, are a common risk every day to the life that can happen to almost every one and anywhere. Data from WHO (2013) shows the risk of dying from RTA is high in Africa 24.1 per 100,000 making it challenging in line with struggling to overcome the burden of infectious diseases and increasing number of non – communicable diseases. The alarming increase in morbidity and mortality due to road traffic accidents over the past few decades is a matter of great concern globallyTeferiAbegaz, (2011)

There are only few studies conducted in Ethiopia on this particular issue. The studies focus on the magnitude, causes, and consequence of road traffic accident. However, there is limited information about the trauma experience and coping styles of the victim survivors. Moreover, there is no study conducted on assessing the living condition of road traffic accidents victims and their coping mechanism after the incidence of traffic accidentandthe support system for the victim is an area is not explored. Hence, this study attempted to contribute to fill the gap in this knowledge byassessing the multiple consequences of road traffic accident and how the victims cope from associated traumatic condition at ALERT Hospital, Addis Ababa.

1.3. Objective of the study

General Objective

- To explore the coping mechanism of road traffic accident victims in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.

Specific Objectives

- To identify the experiences of road accident victims when they are under medication in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.
- To examine how the medical treatment at ALERT Hospital Trauma Center help RTA victims to cope with their traumatic reactions in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.
- To explore the coping mechanismsof road traffic accidentvictims to recover and lead the lives as before the accident in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.
- To provide some suggestions to improve services at the center and conduct further studies in ALERT Hospital Trauma Center in Addis Ababa, Ethiopia, 2016/2017.

1.4. Research Questions

1. What experiences do survivors of RTA victims face during treatment/medication in ALERT trauma center?
2. What medical treatment is being given for RTA victims to help them cope with the accident?
3. What different coping mechanisms victims of RTAuse?
4. What should be done in the future from the perspective of the study findings?

1.5. Operational Definition of terms

Road Traffic Accident: The occurrence of auto crash that may result in injuries, loss of lives and properties on a road open to public circulation.

It's a collision involvingat least one road vehicle which can be between a vehicle and pedestrians, vehicles and animals, or between vehicles and fixed obstacles.

Killed person/s: are accidents victims who die immediately or within thirty days following the accident.

Injured person: are victims having suffered trauma requiring medical treatement (with or with out hospitalization)

Trauma Center: Trauma centers are hospitals with resources immediately available to provide surgical services and care to patients with traumatic injuries. They are not intended to replace traditional hospitals and emergency departments for minor injuries.

Rehabilitation Service: Special healthcare services that help people return to daily life and live in a normal or near-normal way by includng therapys like physical, occupational, speech and language, cognitive, and/or mental to rebuild physical, mental, and/or cognitive abilities that have been lost or impaired as a result of disease, injury, or treatment.

Coping Mechanism: an adaptation to environmental stress that is based on conscious or unconscious choice and that enhances control over behavior or gives psychological comfort

Victim: a person harmed, injured, or killed as a result of a crime, accident, or other event or action.

1.6. Significance of the study

WHO calculated the risk of loss of lives in a RTA in Africa to be 24.1 with under-reported injuries and fatalities are observed but still this area remains neglected by studies and in accessing urgent interventions in the continent. The problem of under- reporting is substantially higher for the non-fatal injury cases for vulnerable groups of road users (pedestrians, pedal cyclists, and motorcyclists).

RTA occur as a result of several factors associated with the traffic system (road users, road environment, & vehicles) making it difficult to manage and asks for a combination of effort from different sectors (Health, Policy makers, social workers, community, road authority).

While in Addis Ababa, each year, if not every day, thousands of people are victims of road traffic accident leaving them to experience ranges of physical and emotional trauma asking for more advanced centers and treatment modalities to cope up with the trauma left by RTA. But still the city has one well known trauma center and other centers giving treatment for RTAVs along with other services.

On the basis of the foregoing discussion, to alert different stakeholders on the severity of the issue and in light of the scarcity of published literature to provide us with information regarding the coping mechanisms of road trauma survivors, This study planned to explore the coping mechanisms used by victims of RTAVs in ALERT hospital trauma center so as it can also be used as a benchmark for other studies.

1.7. Limitation of the Study

This study was conducted by using qualitative approach only which contributes for the shortcoimg of the results/study. The main sources of data was fromvictims of RTAadmitted in ALERT hospital at the data collection time. Therefore, the findings from this research cannot be generalized to other health service centers providing care for RTAVs in Addis Ababa. Moreover, the data collection instrumentused was not standardized questioner and due to small sample size observational & cross-section studies were not conducted.

1.8. Challenges of the study

The challenges of the sudy are the time constriant on data collection and since the study was done in RTA victums particpaints was emotionally disturbed during the interview period since they have to remenber the course of the accident.

CHAPTER TWO

2. LiteratureReview

This chapter reviews literatures related to road traffic accident and the possible coping mechanisms of victims were reviewed. The review comprises of eight sections. The sections discusses the road traffic accident and its developments in Ethiopia, the causes, magnitudes and risk factors for road traffic accident as well as its consequences, socio-economic cost of road traffic accident, role of families in treating victims of the accident, and the exiting polices and rules of road traffic in Ethiopia, describtion of type of services provided to victums of road traffic accident in Ethiopia and finally describtion of the various models useful to understand a chain of psychosocial experiences, reactions, and responses and the adaptations to traumatic events,this sections show a serious ofcopying mechanisms that are used by road traffic accident victims.

2.1. Definition and Trends of road traffic accident in Ethiopia

Road Traffic accident (RTA) can be said to be an unplanned occurrence of auto crash that may result in injuries, loss of lives and properties and it's a collision between two or more vehicles, vehicles and pedestrians, vehicles and animals, or vehicles and fixed obstacles. RTA is causing a high effect on our society and the economy. RTA claims the largest toll of human life and tends to be the most serious problem all over the world (TeferiAbegaz, 2011).

Current trends from African countries and other low and middle income countries indicates that the situation is expected even to get worse, unless there is a coordinated response in these countries by the year 2030, RTA will be the fifth leading cause of death due to increase in motorization and developmental efforts as well as public health issues (TeferiAbegaz, 2011). In low income countries and in sub-Saharan Africa region including Ethiopia, the mortality and morbidity due to road traffic crashes is higher and even expected to become more in the future due to increasing number of vehicles and national economic development. The factors contributing to these accidents are classified in to three:

- Human factor: reckless driving, excessive speeding, over taking errors, alcohol use negligent pedestrians, passengers, cyclists and cart pushers.

- External factor: poor road conditions, bad surface, and lack of road signs and marking.
- Vehicle condition: poor mechanical condition like non-durable tires, poor body work, defective breaks and lose wheel nuts

One study done on the occurrence and characteristics associated with motor vehicles in Ethiopia in 1991 and found that over 91% of pedestrians and the incidence rate per 100,000 population was 179.4; the mortality rate was 17.6/100,000 population and per 10,000 vehicles the mortality rate was 59. Attributed risk factor in these finding were less experienced and younger age drivers as well as government owned and mass transit vehicles were more at risk (Osvaldo et al,(2012)Person(2008) while another study conducted Addis Ababa – Hawassa main road to evaluate the improved road safety applied by the Oromiya national regional state showed 4053 crashes were registered and among these 1193 (29.4%) were fatal and 24.2% injury crashes and almost half (1880 (46.4%)) were property damage resulted in 1.2 deaths and 1.8 injuries per crash, of all deaths more than half 800(57.5%) were pedestrians, 32% vehicle occupants and the rest147(10.5%) were drivers ; vehicle occupants were more vulnerable for injury crash 55.% (965) followed by pedestrians 614 (35.1%) and the rest drivers are equally at risk for injury like deadly crash accounting 9.7% (170) (Abegaz et al, 2014)

Regarding the type of crashes reported in the study area, 40.6% (1,645) were crashing with other vehicles, followed by pedestrian collision 32.9% (1,335), rollover crashes accounted 16% (651) and the rest 6% (238), 4.5% (184) crash with fixed object and others including animal vehicle crash respectively. Day time collision accounted 69% (2,795) of total crashes; in this study the authors find that the improved road safety has reduced the mortality by 12% and morbidity by 19% WHO ,(2009) Persson,(2008)

Even though this study clarified the effect of reduction in mortality and morbidity by the implementation of road safety measures it doesn't indicate the risk factors and their association to the outcomes (morbidity and mortality). A study conducted in Mekele City, Northern Ethiopia revealed behavioral factors which are distractive and leading to more serious accidents. Majority of the study subjects 233 (66.6%) had risky driving behaviors which is Significant number. More than a quarter 100 (28.6%) had less knowledge about basic traffic signs. Significant percent of them 148 (42.3%) had a habit of using mobile phone

while driving vehicle and 28 (9.7%) had experience of driving after drinking alcohol. 97(62.6%) house car and 58(37.4%) taxi unfasten their seat belt while driving. Majority 303 (86.6%) followed the recommended speed limit of driving. About 66 (18.9%) of them had experience of punishment or warning by traffic polices in the previous 1 year and 77 (22%) ever had car accident while driving. Drivers of secondary education and with high average monthly incomes were more likely to have risky driving behavior Abegaz et al. (2014); WHO,(2009).

2.2. Road Traffic Accidents and Development

Road traffic accidents can adversely affect economic development just like communicable disease such as HIV/AIDS, tuberculosis and malaria and thus should be considered as development issue. Some scholars argue that as income per capital increases and able to enhance the disposable income of households, the number of vehicles increases on the road of the countries that experience such events. For example, researches find that at very low levels of income road traffic fatalities per (100,000) person(s) augment with income (given that motorization goes up) up to a certain threshold, after which countries seem to be able to invest in safety measures (including safer cars) and possibly in measures that could bring behavioral changes to reduce traffic fatalities. Given poor road infrastructures (may be due to resource scarcity or misuse), lack of sound road safety regulations, and weak enforcement of road traffic laws, the increment in the number of vehicles (which is not accompanied by adequate improvements in infrastructure and road safety legislation) leads to mismatch between public expenditure required to accommodate increased number of vehicles and increase private expenditure on vehicles. This discrepancy in turn leads to high road traffic accidents which could be meticulously understood via the lens of development

2.3. Cause, magnitudes and Consequence of Road Traffic Accident

The association between the factors that contribute to accidents and accident occurrence is irreducibly statistical. By studying accidents without having any idea of how frequently, various hazards occur in traffic; no conclusions whatsoever can be drawn concerning the relative importance of factors contributing to accidents (WHO,2009)

Most of traffic accidents victims suffer from different types of injuries and disabilities, which can affect their quality of life. These problems may affect the quality of

patients' lives and their families. Injured people might experience limitation in different areas including physical and social functioning, mental health, and delay in returning to work and school.

Road traffic accidents occur as a result of several factors associated with the traffic system, namely: road users, road environment, and vehicles. In Ethiopia, in 2004/5, 93% of all accidents involved human factors, 5% accounted for vehicle factors, and 2% were associated with road environments WHO (2009) as cited in Persson, (2008)

According to Persson (2008), in Ethiopia, "81% of the total accident is attributed to "driver error". This not only shows the lack respect the drivers have to traffic rules but also puts the competency of the drivers in question. Although common traffic laws like seat belt, speed limit, and drinking while driving are in the books, they are neither strongly enforced nor followed. The so-called 'human error' may be explored in many different approaches on the basis of how it is perceived. The common sense of using 'human error' in the framework of everyday life and in safety research, gives the rise to an oversimplified conception of how events occur. Such an outlook neglects the complexity of accident phenomena which are the result of an amalgamation of factors. This affects the way to manage the root causes of accidents. RTAs are the results of a combination of factors and undesirable result of interaction between an operator and a task, arising from interaction between internal and external determinants.

In fact "speed limit is not respected by many of the drivers, and even police officers, and is not considered as a serious offense". This coupled with the lack of speed control devices is an impediment to enforcing the law. Enforcement against driving while impaired on alcohol or khat is also weak due to the absence of measuring devices. However, even those who get caught breaking the traffic rules are often able to get away with it by bribing the traffic police officers.

Furthermore, most drivers are inexperienced and unskilled because they are able to obtain their licenses without meeting most of the criteria by bribing people who work at the agency. Despite the fact the Ethiopian driver's license manual states, the criteria of licensure for motorcycle or vehicles including home automobiles, light trucks, and taxis, are that applicants must at least complete fourth grade education and be not less than 18 years of age.

Those wishing to operate buses, tankers and other freight trucks should have at least complete an eighth grade education and be not less than 24 years of age. Furthermore, any person to be eligible for certification license “shall take an integrated theoretical and practical driving training and pass the examination (Abegaz et al. 2014; WHO, 2009; Persson, 2008)

The traditional view of road safety considers road crashes are usually the sole responsibility of individual road users. Despite, the fact that, many other factors beyond their control may have come into play, such as the poor design of roads or vehicles. But human error does not always lead to disastrous consequences. Human behavior is governed not only by the individual’s knowledge and skills, but also by the environment in which the behavior takes place. Indirect influences, such as the design and layout of the road, the nature of the vehicle, and traffic laws and their enforcement affect behavior in important ways (Nantulya and Reich, 2002).

Moreover, traffic volume, traffic speed and traffic compositions have adverse effect on the frequency and severity of RTAs. As the volume of traffic grows; opposing vehicles increases, intervals for passing vehicles are less available, the accidents due to improper passing become frequent, and the frequency of accidents grows approximately in direct proportion to the average traffic volume. According to studies onthe volume of traffic increases, the speed of vehicles drops and the main kind of accident becomes a nose-tail collision (Nantulya and Reich, (2002)).

Another study claimed that, vehicle defects lead significantly to accidents which are mainly those related to the lack of regular maintenance, of which defective tires and brakes failure most frequently. Vehicle defects contribute to less than 5% of crashes. The rise in the number of motor vehicles and the amount of motorized traffic along with economic development are key determinates of risk of road crashes. The quality of road network, vehicle compositions, increase in car ownership and the extent of public transport and facilities for more vulnerable road users such as pedestrians and cyclists, all contribute to the level of risk. In low income and middle income countries, rapid growth in motorization has not been accompanied by sufficient improvements in the road design to allow for such growth to take place without an increase in the rate of road traffic crashes (Fatemeh P. et al., (2015)).

Generally, every accident is not usually attributable to a single cause but to a chain of unique multiple factors or failures associated with the road design deficiencies, vehicle defects, and road user errors. In most cases the traffic police associate traffic accident with a single most important cause on the spot of accident and do not list the multiple factors.

According different studies some of the risk factors for post-traumatic stress disorder following a road traffic accident are severe accident, fatalities or severe injury among those involved, Perceived life-threatening event, intrusive memory immediately following the event (flashback), subsequent difficulty driving or traveling in vehicles, history of prior traumatic experiences, history of underlying psychiatric disorder, ongoing litigation, accident severity, fatalities and severe injuries. Patients who perceived a significant threat to their life, regardless of actual injury, should be carefully assessed (Osvaldo A. eta al (2012), Abegaz et al., (2014), (WHO 2013, 2009), (Persson, 2008)).

Horrific and intrusive memories immediately following a motor vehicle accident are a strong predictor of PTSD symptoms, regardless of severity. Another variable associated with symptom persistence is litigation. This predictor is problematic because those pursuing legal action may be more severely injured or may be inclined to portray them as symptomatic. Other factors that complicate the diagnosis of PTSD are chronic physical impairment6 and financial strain.

Road Traffic Injury is of significant importance to deal with. Globally WHO reported on 2013 Road traffic accidents (RTA) are a major public health problem worldwide, accounting for almost 1.24 million deaths per year and it is a number one cause for the death among those aged 15-29 years. Men are more affected more than females, although low and middle-income countries (LMIC) only have half of the world's vehicles, they have 80% of RTA related deaths, unlike the high income countries which have RTA related death rates of 8.7 per 100,000 population middle and low income countries have higher rates 20.1 and 18.3 respectively. Among these all deaths fifty percent of all RTA related deaths are among pedestrians (22%), cyclists (5%) and motorcyclists (23%). Some post-traumatic stress symptoms are frequently associated with vehicular accidents ((Abegaz et al. 2014), (WHO, 2009), (Persson .A, 2008).

The re-experiencing of symptoms (flashbacks, distressing memories) is often precipitated by environmental cues. Newscasts frequently report severe traffic accidents and, given high volumes of traffic and heavy dependence on automobiles for transportation, accident victims face constant reminders.

Avoidance symptoms are manifested in alteration of travel behaviors in three ways: driving phobias, limitations on driving and anxious behavior as passengers. Patients may also develop phobic-like responses secondary to the accident, including fear of or resistance to medical examinations, procedures or treatments. Because accidents tend to be “man-made,” the physician should anticipate a complex interplay of emotional reactions. On one hand, many traumatic reactions result from experiences of terror and loss of control. The opposite can also occur: victims blame themselves and assume responsibility for the injuries. Fatalities can lead to grief reactions in survivors which, although expected, may disguise their underlying post trauma stress disorder (PTSD).

Another category mentioned was depression/sadness, which is constant in people's routine. It is exacerbated by the loss of loved ones, and the distancing of family, friends, work and uncertainty about the future. The impotence and incapacity to provide care to children also contribute to this melancholic mood. The limb amputation was another reason related to such depression, and contributes to emotional instability.

2.4. Socio-Economic Cost of Road Traffic Accident

The human suffering for victims and their families of road traffic–related injuries is incalculable. There are endless repercussions: families break up; high counseling costs for the bereaved relatives; no income for a family if a breadwinner is lost; and thousands of Dollars to care for injured and paralyzed people.

The above quote clearly explains the socio-economic impact of road traffic accident at micro level. Some of the costs of road traffic accident (such as medical, damage, lost output, and administrative cost) can be directly measured in terms of their economic value (money) while others (such as pain, grief, and suffering due to the accident) can’t be directly valued due to their nature. At individual and/or family level, road traffic affects the whole aspects (social, economical, and psychological) of victims and their families). The effect could be

medical expenditure, properly damage, funeral expenses and a loss of an active household member as well as incalculable costs related to pain, grief, and suffering.

Besides, additional post-accident costs related to insurance claims, legal issues and court awards create extra burden on individuals and families. Time spent in following up these issues, taking care of the victim(s), funeral and mourning is also among the costs of road traffic accident. All of these costs have a strong and enduring repercussion for disposable income of the household. In general, road traffic accidents drive many families into deeper poverty via the loss of main source of income (income earner), or high costs of extended medical care, or the additional burden of caring for a family member who is disabled due to a road traffic injury. For example, Babtie found that 75% of all poor families who lost a member to road traffic death reported a decline in their standard of living and 61% reported that they had to borrow money to cover expenses following road traffic accident. Likewise, The Economic and Social Commission for Asia and the Pacific (ESCAP) reported that road accident in Asian countries are strikingly affecting more low income families and thus contribute to poverty problems.

2.5. Role of Families in treating Road Traffic Accident victims

Studies addressing the caregivers' reality (belonging to family, affective or social milieu) and how they experience this process should compose the interest of investigators towards this theme. Another study emphasizes that the process of caring is permeated by suffering and privation, which is often accompanied by guilt and religiosity. There is affection ambiguity and demanding socioeconomic changes, which symbolizes the resume of personal projects in the caregivers' lives.

The literature reports that studies with family caregivers have been raising interest in many researchers. It is a growing field in healthcare. Despite the development, the publications that look at this topic are not many (Osvaldoetal, 2012; Abegaz et al., 2014; Persson, 2008).

After the occurrence of a traffic accident, the victims and their relatives face problems which were apparently hidden in the care perspective of most healthcare professionals. There are alterations in these patients' and caregivers' life styles. There is apparent sadness and even verbalizations of dismay. The gravity of physical injuries is not mentioned. There are body

limitations and limb amputations or even death of a loved one. Among the situations made evident by the participants, the victims and their relatives, those related to the emotional, family, economic and social aspects deserve attention. Besides premature death, physical and emotional problems and family conflicts caused by traffic accidents, there are other apparently obscure but important difficulties such as material and social damages.

In the emotional aspects, the subjects attribute their anxiety to surgery cancellation, delays in scheduling them, delays in health recovery and prolonged hospital treatment. In this perspective, it is important for the healthcare team to understand the victims and families' anxiety, in order to intervene appropriately. The literature shows that anxiety is multidimensional. It manifests in the cognitive sphere, which is evidenced by concern, obsession and self-confidence. In the affective sphere, it is evidenced by embarrassment and sadness.

In the family sphere, besides worrying about the hospitalized person and missing other family members, the lack of financial and/or emotional resources maximize dissatisfactions and conflicts inherent to traffic victims' hospitalization and their caregivers (WHO (2009).

2.6. Policies and rules in road traffic accidents

A population growth rate of approximately 3% and estimated annual increases in the motor vehicle fleet of 10-15% is increasing upward pressure on road trauma suffered in Ethiopia. The current systems for collection of fatality, serious injury and related road safety data mean that firm conclusions are difficult to draw about the scale of the problem. For example, fatalities recorded in official statistics have varied to those published by the World Health Organization.

Ethiopia has a major road safety problem. It is becoming worse, and will continue to do so unless major institutional, policy and investment reforms are affected. The problem is likely to be concentrated in areas with the highest population and traffic volumes. To these end, the National Road Traffic Safety Council was established in 2012 (Abegaz et al., (2014)).

The road traffic law of Ethiopia is too old and can't be applied to the current situation. From this perspective, the Roads Transport Authority has been reorganized as the Ethiopian Transport Authority and it has now started revising the road transport regulations. In this regard, the Authority had hired a consultant to identify the short falls of the existing legislations and regulations which were introduced in different years. The consultant finalized and submitted the report to the Authority four year ago. The report has identified three problems in the Ethiopian Roads Transport Legislation. Accordingly, the Road Transport Regulation Proclamation no. 14/1992, Definitions of Powers and Duties of the Central and Regional Executive Organs of the Transitional Government of Ethiopia Proclamation No. 41/1993, and Definition of Powers and Duties of the Executive Organs of Ethiopia Proclamation No. 4/1995 became susceptible to different interpretations and their practical implementation. This caused misunderstandings and controversies between the respective offices of the federal government and the regional states regarding the demarcation of the powers and duties between the Federal Road Transport Authority and Regional Road Transport Bureaus. The second problem was the absence of activities to regularly update and consolidate the several road transport legislations that were issued from time to time since 1943. Several amendments, deletions and replacements were made but no systematic compilations of these legislations were made so far. This made it difficult for users to find and trace relevant legislations and to identify and determine which law or provision is still valid, amended, repealed or replaced. This statement is true regarding the following four groups of legislations in road transport activities in Ethiopia:

I. Laws on Identification, Registration and Inspection of Vehicles

   a) Declaration of Motor Vehicles Proclamation No. 11/1942;

   b) Motor Vehicle and Trailer (identification, registration and inspection) Regulation No.360/1969;

   c) Motor Vehicles and Trailer (identification, inspection and regulation) Regulations Amendment No.77/1983; and

   d) Special Commercial Vehicle Registration and Operator's License Regulations No. 50/1976

II. Legislations on Motor Vehicle Operator's (driving) License

a) Motor Vehicle Operator's (License) Regulations No.362/1969;

b) Motor Vehicle Operator's License (amendment) Regulations No.41/1976; and

c) Special Mobile Equipment Identification and Operator's License Regulations No. 50/1976

III. Legislations on Traffic Control

a) Transport Regulations Legal Notice No.16/1943;

b) Transport (amendment) Regulations no.37/1943

c) Transport (amendment) Regulations no.279/1963;

d) Transport (carriage) Regulations no.28/1943; and

e) The Road Traffic (Speed Limit) Regulation No. 361/1969

IV. Legislations on Vehicle Size and Weight

a) Vehicle Size and Weight Regulations No 261/1962; and

b) Vehicle Size and Weight (Amendment) Council of Ministers Regulations No. 11/1990

The third problem was related to the role of the Ministry of Trade and industry in registering and giving business licenses to persons and enterprises engaged in road transport activities pursuant to the Commercial Registration and Business Licensing Proclamation No. 67/1997. However, till now, the proposed regulations have not been implemented and the problems are still prevalent.

2.7. Services for road traffic accident victims in Ethiopia

There are various services for road traffic accidents. Multidisciplinary Approach in RTA is provided in most services. Some of the Management of accident victims includes:

1. The importance of the "Golden Hour" in giving adequate treatment to the accident victim in saving the injured should be highlighted to both the health personals and the community.

2. Provision of medical care/first aid care facilities on highways and busy roads.

3. Provision of ambulances and trained health personals in shifting and transporting the injured person to nearby hospitals for treatment.

4. Awareness creation among all sections of the society to treat accident victims with sympathy and without fear so that the morbidity and mortality can be reduced (Osvaldo A. et al, 2012, WHO, 2013; Abegaz et al., 2014).

2.8. Coping mechanisms of road traffic Accidents

Coping mechanisms are the strategies people often use in the face of stress and/or trauma to help manage difficult and/or painful emotions. Coping mechanisms can help people adjust to stressful events while maintaining their emotional well-being. The literatures stated that as the traffic accidents happened suddenly, their costs and other items were not predictable, and the injured people might be taken to any hospital. In this respect, patients and their family faced with manyproblems, and it seemed that the insurance rules were troublesome.

Adapting with the new situation was a major theme emerged from participants' experiences. In various studies, the participants had returned to normal life gradually but had to adapt with physical limitations caused by the accident. The gradual reduction of patients' problems had facilitated their adaptation:

Different literature reviews that some of the copying mechanisms in which the victims used are peer-to-peer support, family support, religious justification for the accident, and media based information for relaxing themselves after RTA (Persson, 2008). The following are more common mechanisms used:

Support: Talking about a stressful event with a supportive person can be an effective way to manage stress. Seeking external support instead of self-isolating and internalizing the effects of stress can often greatly reduce the negative effects of a difficult situation.

Relaxation: Any number of relaxing activities can help people cope with stressful situations. Relaxing activities may include practicing meditation, progressive muscle relaxation, or calming techniques; sitting in nature; or listening to soft music, for example.

Problem-solving: This coping mechanism involves identifying a problem that is causing stress and then developing and putting into action some potential solutions for effectively managing it.

Humor: Making light of a stressful situation may help people maintain perspective and prevent the situation from becoming overwhelming.

Physical activity: Exercise can serve, for many people, as a natural and healthy form of stress relief. Running, yoga, swimming, walking, dance, team sports, and many other types of physical activity can help people cope with stressful situations and the aftereffects of traumatic events (Cramer, P, 2015).

The main contributing factors for road traffic accidents in Ethiopia are related to human factor, external factor and vehicle condition. Road traffic accidents can adversely affect economic development just like communicable disease such as HIV/AIDS, tuberculosis and malaria and thus should be considered as development issue.

Road traffic injury is of significant importance to deal with as it's recognized as one of the major public health problem in Ethiopia. Moreover, the human suffering for victims and their families of road traffic–related injuries is incalculable. With regard to the road traffic law, in Ethiopia there is a law which is too old and can't be applied to the current situation, for this reason the Roads Transport Authority has now started revising the road transport regulations. There are very few copying mechanisms in which the victims have used in Ethiopia. Some of which are peer-to-peer support, family support, providing religious justification for the accident, and media based information for relaxing themselves. Issues related to coping mechanismsrelevant to psychosocial adaptation to traumatic event is elaborately discussed in the next section.

2.9. Coping style and strategies

With the recent development of trauma center n hospitals and targer patients are identified as those who sustain life-threatening injuries. Victims are usually products of motor vehicles accidents. Being confronted with suddent and substatial physical trauma is a uniquely distressing expereince for both patients and family. Now the patient has the only opportunity to prepare for the effective coping mechanisms.

Many definitions have been undertaken, and most strive to highlight coping behavior's nonlinear, dynamic, interactive, turbulent, unpredictable, self-organizing, and fractal nature. Coping is a constellation of many acts rather than a single act, is constantly changing, and is highly individualized. Coping mechanisms are learned and developed over time. Individuals use them to manage, tolerate, or reduce the stress associated with significant life events and to attempt to restore psychological equilibrium after a stressful or traumatic event. Everyone has developed a variety of coping mechanisms through his or her life experiences, and each individual has a predominant coping style to reduce anxiety and restore equilibrium when confronted with a stressful situation.

Coping is manifested through behavior. Coping behavior is effective and adaptive when it helps individuals reduce stress and attain their fullest potential. It is ineffective and maladaptive when it inhibits growth and potential or contributes to physical or mental deterioration. Coping may be required not only for dealing with the initial diagnosis, but also for subsequent events. Conditions that are progressive with compounding limitations necessitate ongoing coping and adjustment to incorporate additional changes into daily life. Individuals cope with illness and disability in different ways. Some actively confront their condition, learning new skills or actively engaging in treatment to control or manage the condition. Others defend themselves from stress and the realities of the diagnosis by denying its seriousness, ignoring treatment recommendations, or refusing to learn new skills or behaviors associated with the condition. Still others cope by engaging in selfdestructive behavior, actively continuing behavior that has detrimental effects on their physical condition.

Effective coping must be viewed in the context of each individual's personal background and experiences, life situation, and perception of circumstances. Individuals tend to use coping strategies that have worked successfully for them in the past. When old strategies are no longer effective or are not appropriate to the new situation, new coping strategies must be implemented to neutralize events surrounding the chronic illness or disability and to adjust to any associated limitations.

Effective coping enables individuals to attain emotional equilibrium, to achieve a positive mental outlook, and to avoid incapacitation from fear, anxiety, anger, or depression. However, coping does not occur in a vacuum. The social milieu in which individuals find

themselves can facilitate or discourage effective coping. In general, an optimum environment is one that helps individuals gain a sense of control by actively participating in decision making and taking responsibility for their own destiny as much as possible. Coping strategies are subconscious mechanisms that individuals use to cope with stress. All individuals have predominant coping strategies to reduce anxiety and restore equilibrium when confronted with stress. The strategies they used in the past are often those employed when they are confronted with the stress of chronic illness or disability. The use of coping strategies reduces anxiety, helping individuals assume balance and productivity in their lives. Although these strategies can be helpful, overuse can be detrimental.

2.9.1. Denial

The diagnosis of traumatic symptoms and the associated implications can be devastating and anxiety provoking. Denial is a coping strategy some individuals use to negate the reality of a situation. In the case of care accident, individuals may deny that they have other healthcondition such as psychological problems resulting from the accident by avoiding recommended treatment or by denying implications of the accident. In the early stages of adjustment, denial may be beneficial in that it enables individuals to adjust to the painful reality of their situation at their own pace, preventing excessive anxiety. When denial continues, however, it can prevent individuals from following medical recommendations or from learning new skills that would help them reach their maximum potential(Krantz & Deckel, 1983; Meyerowitz, 1983).

Denial of the psychological problems or distress can have far-reaching effects on others if, by denying the condition, individuals place others at risk. For example, proper psychological counseling can greatly reduce the development of PTSD, such as fear, phobia, sleep disorders. Individuals in active denial of their symptoms or its ramifications may neglect to see psychologists or social workers regularly. Some individuals may put others at risk by denying their limitations, such as individuals who are legally blind but continue to drive even though driving has been prohibited.

2.9.2. Regression

In regression, individuals revert to an earlier stage of development and become more dependent, behave more passively, or exhibit more emotionality than would normally be

expected at their developmental level. In the early stages of disability, returning to the state of dependency experienced in an earlier stage of development can be therapeutic, especially if treatment of the condition requires rest and inactivity. When individuals continue in a regressive mode, however, it can interfere with adjustment and the attainment of a level of independence that would allow them to reach maximum functional capacity.

2.9.3. Compensation

Individuals using compensation as a coping strategy learn to counteract functional limitations in one area by becoming stronger or more proficient in another. Compensatory behavior is generally highly constructive when new behaviors are directed toward positive goals and outcomes. For example, someone who is unable to maintain his or her level of physical activity because of limitations associated with his or her condition may turn to creative writing or other means of selfexpression. Compensation as a coping strategy can be detrimental, however, when the new behaviors are self-destructive or socially unacceptable. For example, someone who experiences disfigurement as a result of his or her disability may become promiscuous as a way of compensating for the perception of physical unattractiveness.

2.9.4. Rationalization

As a coping strategy, rationalization enables individuals to find socially acceptable reasons for their behavior or to excuse themselves for not reaching goals or not accomplishing tasks. Although rationalization can soften the disappointment of dreams unrealized or goals unreached, it can also produce negative effects if it becomes a barrier to adjustment, prevents individuals from reaching their full potential, or interferes with effective management of the medical condition itself.

2.9.5. Diversion of Feelings

One of the most positive and constructive of all coping strategies can be the diversion of unacceptable feelings or ideas into socially acceptable behaviors. Those with chronic illness or disability may have particularly strong feelings of anger or hostility about their diagnosis or the circumstances surrounding their condition. If their emotional energy can be redefined and diverted into positive activity, the results can be beneficial, making virtue out of necessity

and transforming deficit into gain. As with all coping strategies, diversion of feelings can have negative effects if feelings of anger or hostility are channeled into negative behaviors or socially unacceptable activities.

2.10. Emotional reactions to vehicle accidents and the consequences of disability

Sudden, unexpected, or life-threatening car accidents engenders a variety of reactions. How individuals view their condition, its causes, and its consequences greatly affects what they do in the face of it. They may view their condition as a challenge, an enemy to be fought, a punishment, a sign of weakness, a relief, a strategy for gaining attention, an irreparable loss, or an uplifting spiritual experience. Although emotional reactions vary, the following are common.

2.10.1. Grief

Grief is a normal reaction to loss. Individuals with chronic illness and disability may experience loss of a body part, loss of function, role, or social status, or other perceived losses that lead to a reaction of grief. Although the grieving and the progression through stages of grief vary from person to person, a common initial reaction is shock, disbelief, or numbness during which the diagnosis or its seriousness may be denied or disputed. As individuals acknowledge the reality of the situation, the grief reaction may become more pronounced. After repeated confrontations with elements of loss, normal adaptation results in a gradual change in emphasis and focus that enables individuals to accept the loss emotionally and to make the adjustments and adaptations that are necessary to reestablish their place within the everyday world. When the grief reaction is prolonged, individuals may develop a pathological grief reaction, which may become more disabling than the chronic illness or disability itself.

2.10.2. Fear and Anxiety

Individuals normally become anxious when confronted with threat. A chronic illness or disability can pose a threat because of the potential loss of function, love, independence, or financial security. Threat causes anxiety. Some individuals fear the unknown or unpredictability of a condition, which provokes anxiety. For others, hospitalizations that immerse them in a strange and unfamiliar environment away from home, family, and the

security of routine produce anxiety. When conditions are life-threatening, fear and anxiety may be associated not only with loss of function, but also with loss of life. Fear and anxiety associated with chronic illness or disability can place individuals in a state of panic, rendering them psychologically immobile and unable to act. Helping them regain a sense of control over their situation through information and shared decision making can be an important step in reducing anxiety and facilitating rehabilitation.

2.10.3. Anger

Individuals with chronic illness or disability may experience anger at themselves or others for perceived injustices or the losses associated with their condition. They may believe that their chronic illness or disability was caused by negligence or that their condition was avoidable. If they perceive themselves as victims, anger may be directed toward the persons or circumstances they blame for the condition or situation. If they believe that their own actions were partly to blame for the chronic illness or disability, anger may be directed inward. Anger can also be the result of frustration. Individuals may vent frustration and anger by showing hostility toward those who have no relationship to the development of the chronic illness or disability and no influence over its outcome. Anger may also be an expression of the realization of the seriousness of the situation and its associated feelings of helplessness. At times, anger may not be openly expressed but rather expressed through quarreling, arguing, complaining, or being excessively demanding in an attempt to gain some control. Helping individuals express anger in appropriate ways and enabling them to experience a sense of control over their situation can help to resolve anger, which could otherwise be detrimental to successful rehabilitation.

2.10.4. Depression

With the realization of the reality, seriousness, and implications of the chronic illness or disability, individuals may experience feelings of depression, helplessness and hopelessness, apathy, and/or dejection and discouragement. Signs of depression include sleep disturbances, changes in appetite, difficulty concentrating, and withdrawal from activity. Not all individuals with chronic illness or disability experience significant depression, and, in those who do, depression may not be prolonged. The extent to which depression is experienced varies from person to person. Prolonged or unresolved depression can result in selfdestructive behaviors,

such as substance abuse or attempted suicide. Individuals with prolonged depression should be referred for mental health evaluation and treatment.

2.10.5. Guilt

Guilt can be described as self-criticism or blame. Individuals or family members may feel guilt if they believe they contributed to, or in some way caused, the chronic illness or disability. Those who develop lung cancer or emphysema after years of tobacco use, or those who receive a spinal cord injury from an accident that occurred because they were driving while intoxicated, may experience guilt because of the role they played. In other instances, they may experience guilt because they feel their chronic illness or disability places a burden on their family or because they are unable to fulfill former roles. Family members may experience guilt because of anger or resentment they have toward the individual with a disability. Guilt may also be associated with blame. Family members may actively demonstrate scorn or contempt toward the individual with chronic illness or disability, causing him or her to feel more guilty. Guilt may be expressed or unexpressed and can occur in varying dimensions. It can be an obstacle to the successful adjustment to the condition and its limitations. Self-blame or blame ascribed by others is detrimental not only to the individual's self-concept, but also to rehabilitative efforts as a whole. Guilt that affects rehabilitation potential or well-being is an indication that referral to appropriate professionals for evaluation and treatment may be appropriate.

2.11. Other issues in car accidents that causes disability and permanent injury

2.11.1. Self-Concept and Self-Esteem

Self-concept is tied to self-esteem and personal identity. It can be defined as individuals' perceptions and beliefs about their own strengths and weaknesses, as well as others' perceptions of them. Self-esteem can be defined as "the evaluative component of an individual's self concept" (Corwyn, 2000, p. 357). It is often thought of as the assessment of one's own selfworth with regard to attained qualities and performance (Gledhill et al., 2000). Self-concept influences the perceptions of others about an individual. A negative self-concept can produce negative responses in others, just as a positive selfconcept can increase the likelihood that others will react in a positive manner. Individuals' self-esteem is related to their self-concept and how others respond to them. Consequently, self-concept has a

significant impact on interactions with others and on the psychological wellbeing of the individual(Bramble & Cukr, 1998).

2.11.2. Body Image

Body image, an important part of selfconcept, involves individuals' mental view of their body with regard to appearance and ability to perform various physical tasks. It is influenced by bodily sensations, social and cultural expectations, and reactions of and experiences with others (White, 2000). Body image also changes over time as one's appearance, capabilities, and functional status change over the life cycle. It is influenced by each individual's personal conception of attractiveness, which is also determined by social and cultural influences. Body image is related to both self-concept and self-esteem(Bramble&Cukr,1998;Falvo,1999; 2005). Chronic illness or disability forces an individual to alter his or her self-image to accommodate associated changes. Factors influencing the degree of alteration include:

- The visibility of change
- The functional significance of the change
- The speed with which change occurred
- The importance of physical change or associated functional limitations to the individual reactions of others (Moore et al., 2000).

The degree to which an altered selfimage is perceived by the individual in a negative way influences social and intrapersonal interactions, functional capacity, and success or failure in the workplace (Cusack, 2000). The extent to which individuals incorporate change into their body image is also dependent on the meaning and significance of the change to the individual. The degree of physical change or disfigurement is not always proportional to the reaction it provokes. Change considered minimal by one individual may be considered catastrophic by another. Changes do not have to be visible in order to alter body image. Burn scars on parts of the body normally covered by clothing or the introduction of an artificial opening or stoma such as with colostomy may cause significant alteration in body image even though physical changes are not readily apparent to others. The concept of body image is complex and individually determined. Body image is not only the way individuals perceive themselves, but also the way they perceive others as seeing them. Negative views of one's body can be a barrier to psychological well-being, social interactions, functional capacity,

and workplace adjustment. Consequently, the ultimate goal is to help individuals adapt to changes brought about by chronic illness or disability, integrating those changes into a restructured body image that can be assimilated and incorporated into daily life.

2.11.3. Stigma

Stigma is a significant factor in many chronic illnesses and disabilities. Despite efforts to create a heightened awareness of the negative impact of prejudice and stereotypes, and despite changes in social and public policy that have helped to reduce the stigma associated with chronic illness or disability, it still exists for many individuals with chronic or disabling conditions. Acceptable standards of appearance, activities, and roles are socially determined. Individuals who deviate from societal expectations of what is acceptable are often labeled as different from the majority and, thus, often stigmatized. The degree of stigma varies from setting to setting, from disability to disability, and from person to person. Conditions that are particularly anxiety provoking or threatening are likely to have more stigma attached. Stigma results in discrimination, social isolation, disregard, depreciation, devaluation, and, in some instances, threats to safety and well-being. Gender and/or race or ethnic background can be additional sources of prejudice and subsequent stigma, causing additional stress and creating additional barriers to effective functioning (Nosek & Hughes, 2003).

Stigma can have a profound impact on the ability to regain and maintain functional capacity and on acceptance of one's illness or disability. Stigma not only affects self-concept and self-esteem, but it also produces barriers that prohibit individuals from reaching their full potential. In an effort to avoid stigma, individuals may deny, minimize, or ignore their condition and/or treatment recommendations, even though it is detrimental to their welfare(Corrigan, 2000; Falvo, 1999). Although efforts to reduce or obliterate stigma in society should continue, stigma is most likely to be overcome through individual effort. It is possible to reduce the negative impact of societal stigma by helping individuals establish a sense of their own intrinsic worth, despite the characteristics of their medical condition.

2.11.4. The impact of uncertanity

Uncertainty in the lives of individuals with chronic illness and disability can exist for a variety of reasons, but it is often related to concerns about an unknown future, erratic symptoms, the unpredictability of the progression of the disease, or ambiguous symptoms.

Some chronic illnesses and disabilities have an immediate and permanent impact on functional capacity, whereas in others the course of the illness or disability is more variable. Deterioration may occur slowly over the span of several years or rapidly within months. Some conditions have periods of remission, when symptoms become less noticeable or almost nonexistent, only to be followed by periods of unpredictable exacerbation, when symptoms become worse. In some cases, the same condition progresses at different rates for different individuals, rapidly for some and slowly for others. In some conditions, it is difficult to determine when or if the condition will reach the point of severe disability or whether a dramatic change of functional capacity will take place.

Uncertainty of prognosis or progression of the condition can make planning and prediction of the future difficult. This unpredictability can be frustrating for affected individuals as well as for those around them. There may be reluctance to plan for the future at all, so that inability to predict the future becomes more disabling than the actual physical consequences of the condition itself. In other instances, given the unpredictability of their condition, individuals may elect to follow a different life course than they would have otherwise chosen. Decisions not to have children, to cut down on the number of hours spent in the work environment, or to suddenly relocate to a different part of the country may be misinterpreted by those unaware of the individual's condition or its associated unpredictability (Flanagan, 1982, Frisch, 1999).

For those conditions in which symptoms or residual effects are unapparent to others, such decisions may be met with misunderstanding or criticism. Criticisms of such decisions may be particularly distressing to individuals who do not wish to disclose or share intimate details of their condition with the casual observer. Insecurity about the course of the condition may also cause those closest to the individual to withdraw emotional interactions or support in an attempt to protect themselves from potential future loss. Thus uncertainty poses particular challenges for individuals and their families and can be a source of stress. Living in the present, rather than dwelling on events that may or may not occur, can help to reduce stress and anxiety and enhance the quality of life.

2.11.5. Invisible disabilities

Some disabilities have associated physical changes that can be objectively assessed by others or have functional limitations that necessitate the use of adaptive devices. The visibility of a

condition has often been associated with stigmatization and marginality (Livneh & Wilson, 2003). Other conditions, such as diabetes or cardiac conditions, have no outward signs that alert casual observers to an individual's condition. The term invisible disability refers to these latter conditions. Because there are no outward physical signs or other cues to indicate limitations associated with chronic illness or disability, others have no basis on which to alter their expectations of the individual's functional capacity. Although this lack of reaction can be positive (in the sense that it prevents others from acting out of prejudice or stereotypes), it can also be negative in the sense that it can enable individuals to deny or avoid acceptance of their condition and its associated implications.

The degree to which a condition remains invisible may be a function of the closeness of the observer's association with the individual. Although casual acquaintances may not notice limitations, those more closely involved with the individual in day-today activities may more readily observe them. However, some conditions under normal circumstances may offer no visible signs or cues, no matter how close another person is with the affected individual. The unapparent aspect of the limitation in invisible disability may be a unique element related to individuals' adjustment and acceptance of their limitation. Without environmental feedback to create a tangible reality of the condition, individuals with invisible disability may postpone adaptation or ignore the medical treatment or recommendations necessary to control the condition and prevent further disability.

2.11.6. Sexuality

Human sexuality is more than genital acts or sexual function. It is intrinsic to a person's sense of self (Hordern & Currow, 2003). It is an ever changing, lived experience, affecting the way individuals view themselves and their body (Hordern, 2000). Sexuality encompasses the whole person and is reflected in all that individuals say and do. It is an important part of identity, self-image, and self-concept. Each person is a sexual being with a need for intimacy, physical contact, and love. Chronic illness or disability can have many effects on sexuality and can influence all phases of sexual response (McInnes, 2003). The expression of sexual urges is one form of sexuality. Chronic illness or disability can affect sexual expression because of physical limitations, depression, lack of energy, pain, alterations in selfimage, or the reactions of others. In some conditions, the main barrier to sexual expression may be

problems with self-concept and body-image; in other conditions, physical changes may present physical barriers that affect sexual function directly.

Regardless of the type of limitations associated with chronic illness or disability, sexual expression continues to be an important function that should be addressed (McBride & Rines, 2000). In some instances, it may be necessary to help individuals overcome their own misperceptions and fears in order to establish a means for sexual expression. In other instances, individuals may need assistance to overcome barriers or to learn methods of sexual expression different from those used previously. In any case, sexual adjustment is a significant element in the restoration of an individual's maximal functional capacity.

2.12. Family adaptaion to Traumaatic stress and illness

The family is the social network from which individuals derive identity and with whom they feel strong psychological bonds. "Family" has different meanings for different people and is not always based on blood or law. Family provides protection, socialization, physical care, support, and love. Each individual within the family structure plays some role that is incorporated into everyday family life. Chronic illness or disability has an emotional and economic impact on families as well as on individuals. Family reactions to chronic illness and disability may be similar to those experienced by the individual and may include shock, denial, anger, guilt, anxiety, and depression. Families must make adaptations, adjustments, and role changes both as a unit and as individual family members.

The way in which families react and adapt to chronic illness and disability affects an individual's subsequent adjustment. Whether families foster independence or dependence, show acceptance or rejection, or encourage or sabotage compliance with restrictions and recommended treatments has a profound effect on individuals' ultimate functional capacity. When a family member is no longer able to perform certain functions, families may react in various ways. There may be a strong desire to be a "normal" family again. Family members with prior expectations for the individual's future or "what he or she might have been" may experience anger, resentment, or disappointment if they see chronic illness or disability interfering with the achievement of their expectations.

Family members can also act as advocates for the individual. They may need to become more involved with health professionals and service agencies or may need to be

increasingly assertive to obtain necessary services. If individuals with chronic illness or disability require significant care or therapies to be administered at home, family members may become fatigued because of the extra responsibility and work required, especially if respite services are limited.

Families, like individuals, have differing resources, depending on their life circumstances, previous experiences, and the personalities involved. Individual family members may be called upon to provide not only emotional support but also physical care, supervision, transportation, or a variety of other services necessitated by the individual's condition. In addition, changes in roles or financial circumstances due to chronic illness or disability may alter the goals and plans of other family members, such as a sibling's plans for college or a parent's retirement plans. The amount of care and attention required by individuals with chronic illness or disability may create emotional strain among family members, resulting in feelings of resentment, antagonism, and frustration. Role change and ambiguity may make it necessary to redefine family relationships as new and unaccustomed duties and responsibilities arise.

2.12.1. Quality of life

Successful rehabilitation means more than helping individuals reach their maximum functional capacity. It also means helping them achieve and enhance their quality of life. Quality of life is subjective in nature and has no universal meaning. No two people define the term in quite the same way. Although some see it as optimal functioning at the highest level of independence, others may place greater emphasis on life itself, regardless of level of function. Only the individual can determine the personal meaning of this term. Individual value systems, cultural backgrounds, spiritual perspectives, and the attitudes and reactions of those within the environment all influence the interpretation of quality of life. As already stated, perceptions of the same condition and its impact vary from individual to individual (Burker, Carels, Thompson, Rodgers, & Egan, 2000; Crews, Jefferson, Broshek, Barth, & Robbins, 2000).

People with similar conditions, symptoms, and limitations may perceive their condition in totally different manners. Determining factors are the characteristics of the condition and its treatment, the age and developmental stage of the individual, the degree of

limitation and the extent of disability experienced, and how characteristics of the condition affect the individual's definition of quality of life. Symptoms or limitations that one individual accepts and adapts to may be overwhelming and intolerable to another. Because of the ambiguous nature of the concept, it is difficult to assess quality of life (Bishop & Feist - Price, 2001).

Attempts to discover and accurately measure quality of life have caused considerable confusion and resulted in the creation of multiple indicators, ranging from physiologic parameters to the ability to return to work to the ability to participate in social activities and the number of psychological problems experienced by the individual. In addition, studies of quality of life have often identified discrepancies between the judgment of service providers and that of the consumer regarding quality-of-life outcomes (Leplege & Hunt, 1997). Individuals' perception of quality of life is among the main determinants of demand for services, compliance with treatment, and satisfaction with treatment and services provided. How some individuals assess the impact of their condition on their quality of life is determined by the degree to which they feel control over their life circumstances or destiny. Accurate knowledge about their condition and treatment, together with active participation in decision making about the management of the condition, can enable individuals with chronic illness and disability to make judgments that will enable them to enhance their quality of life in terms of their own needs, goals, and circumstances.

2.12.2. Dynamic systems

Real-life, complex systems are dynamic and are neither fully random nor fully deterministic. They exhibit properties of both qualities. The components of the system are synergistically linked to one another. The degree of complexity inherent in a system depends on several factors, including the system itself, the context (or environment) that engulfs it, and the nature of the interaction between the two. Complex systems, therefore, are open systems because they exchange energy, material, and information with their immediate environment; closed systems do not. Furthermore, complex systems are dissipative because they experience energy losses over time; to survive; they must reduce internal disorder, referred to as entropy, and at the same time, receive energy and information from the environment. This set of conditions is described by the second law of thermodynamics. The level of entropy in a

system is, therefore, indicative of its degree of randomness, noise, and irreversibility; in other words, it is a measure of chaos.

Unlike open systems, closed systems proceed from order to disorder. Hence, the entropy of closed systems continuously increases as this irreversible process results in dissipation of unrecoverable energy. Closed, environmentally isolated systems, then, are at equilibrium or a state of maximum entropy. Consistent with these views, dynamic systems typically proceed from a phase of stable, orderly functioning through, first, an unstable, bifurcation phase, and second, a chaotic period. The chaotic period culminates in a phase of new and more complex order. Hence, chaos is the necessary phase before reorganization of previously malfunctioning components within a system.Upon the dissipation of chaos a new and adaptive pattern (higher order) is likely to emerge as the system successfully, and creatively, reorganizes itself. From the dynamic perspective, therefore, chaos serves two primary purposes.

- First, it facilitates adaptive functioning. Chaotic activity propels the dissipation of disturbance (or disorder) in a system.
- Second, through its openness to environmental interactions and increased probability of change, chaos creates the system potential for creativity and evolution.

2.13. Defense Mechanisms and Coping Strategies as Special Types of Attractors

Human behavior, under stressful conditions, loses its integrative balance and attains fractional dimensionality. As a result, defensive and coping strategies are used to function to attain and maintain psychic stability. A host of personal, social, and environmental experiences, demands, supports and resources, and coping strategies interact to influence adaptation outcomes (Livneh, 2001). The process of adjustment includes a search for meaning in the experience and an attempt to regain control and self-determination over events that affect one’s life. Most individuals with chronic injury and disability experience some loss, either a direct physical loss or a more indirect loss of the ability to participate in some previously performed activity.

Regardless of the nature of the loss, a variety of reactions may take place while individuals attempt to make necessary adaptations and changes. Stages of adjustment are individual and varied. The shock of diagnosis and its consequent implications may have a numbing effect, so

initially individuals may demonstrate little emotional reaction. As the reality of the situation becomes clear, they may experience a sense of hopelessness and despair, mourning for a self, a role, or a function that is lost. They may experience feelings of anger, which alternate with depression. Many individuals go through a period of mourning and bereavement similar to that experienced when a loved one is lost. Mourning is a natural reaction to loss and allows time for reflection and reestablishment of emotional equilibrium. As individuals begin to appraise their condition realistically, examine the limitations that it imposes, and adjust to the associated losses, they may gradually seek alternatives and adaptations to become integrated into a broader world. The ultimate goal of adjustment is acceptance of the condition and its associated limitations, along with a realistic appraisal and implementation of strengths.

As individuals accept their condition, they attain their maximal functional capacity. The amount of time that individuals need to reach acceptance is dependent on personality, the reaction of family and significant others, life circumstances, available resources, and the types of challenges that confront them. Some individuals never reach acceptance. Maladjustment and nonacceptance are characterized by immobility, marked dependency, continued anger and hostility, prolonged mourning, or participation in detrimental or self-destructive activities.However, it is important to know that just as coping mechanisms are vital parts of human nature, serving to protect against stress, reduce anxiety, and facilitate adjustment, overuse or maladaptive use of coping mechanisms can postpone or inhibit adjustment.

2.13.1. Functional aspects of chronnic injuries and disability

Immediately following the onset of traumatic injury, for instance, after car accident, psychic disequilibrium ensues. Previously adhered-to emotional, cognitive, and behavioral processes are disrupted, and the generally stable pre-injury functional complexity is shattered and reduced to lower dimensionality. The reduction to lower dimensionality is evidenced as life's focus shifts into the "here and now," physiological survival, and deflection of impending psychosocial crises. Time and space are constrained to the present and the immediate surroundings (e.g., hospital and home).

The functional effects of injuries or disability are many and varied. Each individual has different needs, abilities, and circumstances that determine how chronic illness or disability

affects his or her functional capacity. The extent to which the condition is handicapping depends to a great extent on individuals' perception of the condition, the environment, and the reactions of family, friends, and society in general. The severity of the condition as measured by diagnostic tests does not always indicate the severity of functional impairment. Also, individuals' ability to function is not always directly correlated with the severity of the condition itself. Professionals working with individuals with chronic injuries or disability need to understand the potential limitations or restrictions associated with a specific condition or treatment in order to help individuals and their families make appropriate changes. The effects of chronic illness and disability are far-reaching; they include psychological, social, and vocational effects, and changes and adjustments in both general lifestyle and activities of daily living. The medical diagnosis per se is not as important as the degree to which function in each area of an individual's life is affected.

The interactive nature of function between each of the areas determines the extent to which individuals reach their maximal potential. A focus on any one area without full consideration of the impact of the illness or disability on all other areas can dilute the effectiveness of rehabilitative efforts. Thus understanding and working effectively with individuals who have a chronic illness or disability requires a broad outlook that goes beyond medical diagnosis. The most important factor is the individual's ability to function with the condition within his or her environment and all areas of his or her life. In light of these circumstances, it seems approapriate to conceptualize and address togetehr chronic illness and disability as one entity rather than a separate entirty to discuss the consequences and outcome of car accident. Hence , after this, these two terms- chronimc illness and disability – are jointly discussed here. Such a discussion is similar to what Falvo (2005), and Livneh, & Antonak (2007) have explained.

2.13.2. Psychological Issues in Chronic Illness and Disability

Individuals react both cognitively and emotionally to events that involve them. These reactions, in turn, affect the further course of those events. Psychological factors are ever present in all aspects of chronic illness and disability and influence individuals' response to their condition; sometimes these factors are part of the symptoms of the condition. They affect not only individuals' adjustment and subsequent functional capacity, but also the outcome and prognosis.

2.13.3. Lifestyle Issues in Chronic Illness and Disability

Lifestyle comprises daily tasks and activities of daily living within an individual's environment. It includes the ability to perform tasks related to grooming, housekeeping, and preparing meals. It also includes activities related to transportation, daily schedules, rest or activity, recreation, sexuality, and privacy. At times, limitations in performing the activities of daily living result from environmental considerations that serve as barriers to effective functioning. Modifications such as widening doorways to permit the passage of a wheelchair, placing handrails in a bathroom, or installing more effective lighting may be required to increase functional capacity. Other lifestyle modifications may be necessary because of the additional tasks and time commitments related to medical treatment of a specific condition. In some instances, restrictions of diet or activity may require a considerable lifestyle change. Continued treatments, medical appointments, and related activities may require significant alteration of the daily schedule.

2.13.4. Social Issues in Chronic Illness and Disability

The social environment can be defined as individuals' perceived involvement in personal, family, group, and community relationships and activities. Social wellbeing is based on emotionally satisfying experiences in social activities with those within the individual's social group. Chronic illness and disability often lead to changes in social status. Individuals may find themselves in a socially devalued role. As a result, they may experience changes in social relationships or interactions, or they may have to limit the number of social activities, all of which can result in social isolation. Even when individuals with chronic illness or disability attempt to remain socially active, they may have difficulty entering community facilities because of environmental barriers or because of prejudice or stereotyping. Many factors contribute to an individual's adaptation or adjustment to the social limitations associated with a particular medical condition. Individuals' perception or misperception of the reactions of others in social groups may determine the level of acceptance that they receive. The degree to which they are able to adapt, accept, and adjust to their functional limitations is determined in part by their interactions with others in their environment, as well as by their interpretation of the reactions of others.

2.13.5. Vocational Issues in Chronic Illness and Disability

The significance of work in the rehabilitation of people with chronic illness and disability has been well documented (Cunningham, Wolbert, & Brockmeier, 2000). Work involves more than remuneration for services rendered and does not necessarily include only activity related to financial incentives. Work provides a sense of contribution, accomplishment, and meaning to life (Ben-Shlomo, Canfield, &Warner, 2002; Bond et al., 2001). Consequently, loss of the ability to work extends beyond financial consequences to social and psychological well-being. It also means the loss of a socially valued role. For many individuals, work is not only a major part of their identity, but also a source of social interaction, structure, and purpose in life. The degree to which chronic illness and disability affect individuals' ability and willingness to work depends on a variety of factors in addition to the limitations imposed by the illness or disability itself (Young & Murphy, 2002).

Other factors include the nature of the work, the physical environment of the work setting, and the attitudes of employers and coworkers. Psychosocial variables may also complicate functional capacity and, thus, the rehabilitation process. At times, individuals with chronic illness or disability may continue to perform the same work they performed before the onset of the condition. At other times, certain work tasks, environmental conditions, or work schedules must be modified to accommodate the limitations imposed by the chronic illness or disability. If modifications cannot be made in these cases, individuals must change employment.

Some individuals must assume disability status because appropriate modifications cannot be made or because their limitations are severe. Job stress or the attitudes of employers or coworkers can significantly interfere with individuals' ability to return to the work force. Problems with transportation to and from work because of limitations caused by the condition may also make a return to work more difficult. In other instances, the time required to carry out treatment recommendations related to the condition may make completing a full day at work virtually impossible. Individuals' capacity to function at a job can depend on cognitive, psychomotor, and attitudinal factors, as well as on the physical aspects of the illness or disability. Accurately assessing individuals' capacity to return to work consists of more than evaluating physical factors. Individuals' fear of reinjury, vocational dissatisfaction, or legal issues can also hamper return to work. Their ability to relate to and interact with others within

the work environment must also be considered. Interests, aptitudes, and abilities are always pivotal factors in determining vocational success, regardless of limitations. Effective rehabilitation that enables individuals to function effectively in their job often involves the interdisciplinary efforts of many types of medical and nonmedical professionals to conduct assessment, evaluation, therapy, and vocational guidance.

2.14. Summary of the literature review

Road Traffic Accident is the occurrence of auto crash that may result in injuries, loss of lives and properties on a road open to public circulation: Its alos a collision involving at least one road vehicle which can be between a vehicle and pedestrians, vehicles and animals, or between vehicles and fixed obstacles.

The association between the factors that contribute to accidents and its occurrence is irreducibly statistical.

This study reviewed different literatures on RTA. The literatures show:

- ✓ The socio-economic cost of RTA: RTA causes suffering for both the victims and their families. There are endless consequences: families break up, in case of loss of the family bread winner families will have no income to survive, thousands of dollars are spent to care for injured and paralyzed people and high counseling costs for the victims to cope up with the changed situation
- ✓ Role of families in treating RTA victims: families of victims of RTA play a vital role in the treatment process from the start up to recovery which might take up a very long time according to the degree of severity of accidents
- ✓ Polices and rules in RTA: this portion describes Ethiopia's polices and legislation of road transportation:

I. Laws on Identification, Registration and Inspection of Vehicles
II. Legislations on Motor Vehicle Operator's (driving) License
III. Legislations on Traffic Control
IV. Legislations on Vehicle Size and Weight

- ✓ Coping mechanisms(styles and strategies) victims use after RTA : this strategies include: Support from peers, treatment and families

- ✓ Other issues like changes in self-esteem, self-concept, body image, social interaction, life style changes etc.which are caused due to chronic illnesses (disability and permanent injury by RTA)

CHAPTER THREE

3. Research Method

The aim of this chapter is to clearly outline the procedures that guided the research: the research design, the setting, selection of participants, quality assurance, data collection and analysis issues and ethical considerations.

3.1. Research design

The study was conducted using qualitative approach to explore multiple consequences of road traffic accidents and different coping mechanisms used by RTA victims. It is also more appropriate in terms of documenting rich and detailed information. The flexibility nature of the study approach crated active participation of the study units as well helped the study to understand real perception and life context (Kreuger, &Neuman, 2006).

Qualitative social research seeks to establish knowledge of the social world by the study of people's own interpretations of the social world (Kelly, 2011). Qualitative research provides detailed description and analysis of the quality, or the substance, of the human experience (Marvasti, 2004). It is also affirmed by that qualitative research is in general concerned with how individual make sense of the world, experience events and what meaning they attribute to the phenomena in this case the changes in living situation cause by RTA (Pietkiewics& Smith ,2012).

3.2. Study Area

The study area is ALERT Hospital which is found south western border of Addis Ababa, "Kolfe-Keraniyo" sub-city commonly known as "Zenebework".The hospital was initially established in the area aiming at addressing a leprosarium. As a result of an increase in the magnitude of leprosy and its impact in Africa, the idea of establishing a leprosy training center was conceived by many international donor agencies (CDC, USAID, CBM, MSH, ICAP, Gondar University) and now it's under the support of FMOH (ALERT, 2017).

In the past 5 years the center has expanded its service areas and currently addresses different areas of health services (Dermatology, Surgery (Reconstructive, plastic surgery,

Neurosurgery and also Orthopedic surgery, Internal medicine, Pediatrics, Ophthalmology, Obstetrics & Gynecology and Dental.

ALERT hospital trauma center is equipped and staffed to provide care for patients/victims suffering from major traumatic injuries such as RTA,falls, motor vehicle collisions, or injuries, severe burns, amputated limbs, and multiple stabbing accidents. A trauma center can also be referredas an emergency or accident department. The reason to choose this hospital for this study was mainly due to the existence of many road traffic accident victims who more often than other hospitals come for intensive, intermediate, and rehabilitative phases of treatment and recovery(pebulik relation directorate ALERT Hospital, 2010). In fact, I myself have been working in the hospital long enough to develop good working relationships with the staff and to know the levels of the lived experiences of accident victims. Being a staff member has also a better advantage of understanding the complex interplay of the external threat and internal feelings of the patients than outsiders do.

3.3. Selection of Study Participants

The study used a combination of non-probability sampling method with purposive sampling.The participants of the study are 18victims of road traffic accident admitted to the hospitalorthose who are on follow up in the outpatient department services of the hospital and 6 key informants. The key informant participants are those persons who are currently providing in the trauma services: The department head, the social worker, psychologies and physiotherapist.

Inclusion critera

- RTA victims admitted in the trauma center ward and are conscious
- RTA victims who are attending physiotherapy

Exclusion critera

- RTA victims who are admitted in ICU
- RTA victims who have brain injury
- RTA victims who are admitted in the emergency room

3.4. Source of Data

The research used both primary and secondary source of data. Primary sources of data were obtained from informants while secondary sources of data were obtained from published research articles, books, internet sources, magazines, and newspapers relevant to the objectives of the study.

3.5. Data Collection methods

The data was collected using face to face interview with closed ended questions (for personal) and open ended questions (for assessing coping mechanism of RTA victims).

3.5.1. Key informant interview: the study used 6 key informants to conduct the study. The informants were selected purposively based on their direct experience in the trauma center. Those who have worked for over three years as direct caregivers were included. A series of interviews were conducted with the selected informants. This method was used to find out the major problems and coping mechanisms used by victims. Unstructured interview guideline was developed and used to facilitate key-informant interviews.

3.5.2. In Depth Interview Victims: 18 victims who have been affected by road traffic accident were purposively selected and interviewed. The sample size was based on data saturation. Unstructured in-depth interview guideline was developed and used to facilitate in-depth interviews.

3.6. Data processing and Analysis

The model of analysis used in this study is categorical analysis and reporting the findings on the interview in the aggregate for similarpattern of responses of participants. The results were interpreted and presented under the result/finding and discussion section of this paper.

The principles of qualitative research data analysis approach were used to analyze the collected data.

According to Cresswell (2003), the process includes six steps.

1. The first step was transcription of collected data. All interviews and in-depth interviews audiotaped in Amharic language were translated and transcribed into English.
2. The second step was pre-coding. Depending on the sources of information, the transcribed interviews were sorted and arranged, and then read critically in order to obtain a general sense of information from the data.
3. The third step is coding of the pre-coded sorted and arranged transcriptions. At this step, text data were labeled into paragraphs, the main sayings and feelings that showed the situation of participants were painted and labeled based on categories and relationship among the data gathered.
4. The fourth step was establishing of core category. At this step, the most important concepts were retrieved from the various narrations and paragraphs coded earlier at step three, based the researcher's critical analysis and decision.
5. The fifth step was developing of themes. At this stage, themes that appear as key findings based on multiple perspectives from individuals supported by diverse quotations and specific evidence were itemized, hence to be shown under separate headings in the findings sections of this research.
6. The final step was writing up of the composite analysis of the research after examining the emerged collective themes that fits the main objectives of the research.

3.7. Quality Assurances

To increase the trustworthiness of the study a combination of in-depth interview of victims with key informant interviews is used, direct words of participants and health care providers is also cited in the study findings, record reviews are done and a checklist was prepared to assess the completeness of the questioners.

The informants were allowed to identify the multiple consequences of road traffic accidents and their copying mechanism. In doing this, it also used to obtain in-depth information on the psycho social and economic consequence of RTA and how they cope up after the accidents that enabled the researcher to show picture of all issues related to the study.

3.8. Ethical Consideration

The research ethical committee of The School of social work of Addis Ababa University was asked for the ethical clearance of this research. In addition an approval from ALERT Hospital, trauma center and the respective Key informats befire conducted any filed work.

Informed consent a nd issue of confidentiality: Before participating in the study, the purpose of the study was explained to the participants in detail. A consent form was attached to the questioner to assure that respondents will not be asked any kind of personal questions and that their name will not appear any were in the study, and that any finding is to be handled with greater confidentiality and that they are free to stop their participation and withdraw from the study any time they want. Their understanding of the terms and their will to participate was ensured by the signature they put on the document.

Risk of the study: There is no risk in participating in theses research

The benefit of the study: Even though there is no direct short term benefit for the participants, in the long run the study will be used to address the short comings seen in the area compeing mechanisms by RTA victums.

CHAPTER FOUR

4. Findings

In this section, findings of this study are presented into five major categories: Socio-demographic characteristics of study participants, Trends of RTA in the trauma center and consequence of RTA, services to the victims, challenges of RTA victimsand their copying mechanisms. This chapter discusses these issues from the perspectives of health care providers, social workers and other rehabilitation workers, and from victims.

4.1. Socio-demographic characteristics of victims of RTA

The mean age of respondents is25.6 year years with the youngest victum being 18 years old and the oldest 50 and majority of the respondnts were Male (13) while the rest 5 are femals and majority of the aprticipnats are married (10). 10 of the respondants are educated up to primary education while the rest are illitrates (4) and in secondary education(4) respectively. 5 of the particpants from the health care provoders are male and the work experiance of health care professionals involved in the study has a work experiance between 3-10 years. Most of the accidents were caused by private automobiles (5) followed by motorcycles& Bajaj(4), and long distance minibus (Aba-dula) (4) respectively. (Table 1)

Table 2: Socio-demographic characteristics of victims of RTA and health care providers in ALERT Hospital in Addis Ababa, Ethiopia, 2016/2017 (n= 24)

variables	Category	No
Age of RTA victims	18	2
	19-45	14
	45-50	2
Sex of RTA victims	Male	13
	Female	5
Sex of Health workers	Male	5
	Female	1
Educational status of RTA victims	Illiterate	4
	Primary education	10
	Junior and senior Secondary Education	4
Marital Status of RTA victims	Single	4
	Married	10
	Divorced	2
	Widow	2
Profession of Health care providers	General doctor	2
	Public health officer	1
	Nurse	1
	Social Worker	1
	Physiotherapist	1
Profession of Health care providers	0-4 years	4
	5-9 years	1
	10 years	1
Type of vehicles involved in causing accidents	Long-distance travelling Minibus	4
	Taxi	2
	Long-distance travelling Bus	1
	Isuzu	2
	Private automobile Pickup, Lada,	5
	Motorcycle Bajaj Other vehicle types	4

4.2. ALERT hospital Services for the victims and Coping Mechanism/support system of RTA victims

The Surgeries ALERTtrauma center provides include, plastic, reconstructive, orthopedic, General and Nero surgery. The plastic surgery is time taking and the time line of insurance period is very short which puts challenge both to the hospital and victims of RTA. The center also provides psychosocial support and post trauma counseling by social workers. The social work service in this hospital is very importantbecausepatents might not have family members attending their needs.

Based on the participants' experiences, the "supportive needs" was the major information extracted from the data of this study. This involved treatment, social and peer-support need.

Treatment Support: Despite shortages in some facility, the participants feel that the treatment team's support together with their unlashing work was the major a factor for their survival from the accidents and for adapting the problems they faced after survival (disabilities). Participants also introducedtheirfavorite nurse interactions as the cause of their recovery: *"The support of the nurses in the ward was very helpful. They help us to return to normal life and to get along with others in the community. They help us to lead a normal life. Had it not been for their support, I wouldn't have been here in this better situation today"* (Mr. X)

Social Support: The participants stated that as the traffic accidents were very devastating especially for most of them who had no health insurance, the medical cost was very high and which was not the only issue since there is a social cost related to the accidents. As a result, they need social support and acceptance to facilitate their recovery and integrate into the mainstream society. Itallhappened suddenly, the costs and other things were not predictable, and the injured people might be taken to any hospital (they don't have the ability or the chance to pick a hospital in their situation) that might not accept their insurance. In this respect, patients and their family faced with many troubles.

"*No supportive source exists to reduce this suffering and losses due the accident. We have been left alone with lots of debts for my treatment. For the first time, I had free hospital services but then after I am left with many debts to pay back when I recover fully. There is no any welfare organization to help us. Our family members cannot afford the hospital cost.*

However, they are often close to us to encourage and support us in every way possible. We rely on our relatives and family when we go back home"(A pedestrian victim).

Peer-Support: The participants reported the value of peer support as an encouragement in the recovery process. One of the participants expressed his feelings as follows: "*In a time of crisis, there is no one better than good friend who can give moral support than anyone else. By visiting us in the hospital and being sympathetic to our burden, they offer us their time to discuss what the future might hold for us when we leave the hospital*".(A pedestrian victim)Another participant added that '*friends are valuable assets: they are with you, no matter what has happened"*(A 42 years old bus user victim).

The participants regard the high value of friendships in times of crisis, and during recovery: "*When we are together and talk about our common problems, I really feel relieved of my pains, and really no one can help us like people who experienced it*"(A "Bajaj" driver).

4.3. Challenges in the Trauma Center

The research shows the following as major challenges that the study participants encountered in the trauma center. Some of the challenges are from the victims themselves and others are from the trauma center.

- *Challenges from victims:*

- ✓ Lack of full attention especially during the first few days of admission
- ✓ Feeling of hopelessness when they have the intolerable pain
- ✓ Feeling of uncertainties about what kind of life they would find after the discharge
- ✓ Feeling of sadness when looking their body disfigured
- ✓ The key informants, on the other hand, reported that some of the patients become aggressive towards the nurses, complain about the food, become restless, and depressed when they see themselves unable to walk or move.
- ✓ Impatient to stay in the hospital any longer than they imagine

Regarding what the healthcare workers encountered from the patient, they said "How can you provide this type of treatment while I am suffering this much?"(A social worker in the trauma center)another health care provider said that one of the patients told her that "he would prefer

another nurse by complaining that the nurse in the morning shift is kinder and approachable" (A Nurse from the trauma center).

- *Challenges from the trauma center:*

- ✓ Lack of qualified staffs to work around the clock, disclose information about the severity of the injuries and counsel the patients to control their emotions.
- ✓ Issues of follow up and special support for orthopedic surgery since victims who undergoes orthopedic surgery need better food qualities and longer treatment than other types of victims
- ✓ Some victims have economical problem and have no one to turn to when they want something special and the hospital is not providing enough social workers and the once working don't have a lot of access to solve such issues
- ✓ The shortage of beds and medical equipment.
- ✓ There is a mismatch between the number of caregivers and of patients coming to the center.

4.4. Coping mechanism

The severity/degree of the trauma determines the strength of the victims. Some perceive the extent of their traumatic events as simple while others as its devastating. The ability of coping differs from person to person. Usually multiple injured victims have less strengths and coping mechanisms than those who experienced injuries to a particular. The nature of the trauma and which part of the body is injured also determine the coping mechanisms and the adoption time and techniques. A health care provider stated that, "some victims even go to the extent of thanking God for being saved from such catastrophe." (An orthopedics doctor)

Adapting with the new situation was a major theme emerged from participants' experiences. In this study, the participants had returned to normal life gradually but had to adapt with physical limitations caused by the accident. The gradual reduction of victim's traumatic reactions had facilitated their adaptation: "*during the first few days of the accident things were tough both for me and my family. I could hardly walk. But I gradually accepted everything. I was trying to live in the best possible way. I didn't show my pains to my wife*

and child. I tried hard to hide my pain. Instead I was praying hard" (A transportation user who was in a private car while the accident occurs).

The point to consider among the participants was that their personal characteristics and use of adaptation skills were effective in accepting the situation after being injured: *"I tried hard to view this event as a rebirth. I continuously encouraged myself because my friend died in front of me so I should be grateful for being alive. Now thank God I'm happy and I think I will become normal and can continue living like other normal people, I see my new life as unwavering God's mercy and I think that made me to adopt things better"*(A 50 year old pedestrian victim).

Also transition from functional limitation was an issue emerged from the participants' interview. In order to be functional, a strengths-based approach can increase the coping mechanism of the victims. *"I am a surgeon. If I lost my hands, I would think that I could not do anything. However, I can do other types of activities. So alternative strategy and strength based intervention to the victim is necessary. This needs training and more collaborated efforts of different adoption techniques. Is there any organization that supports victims and bring alternative means? Because when some one's primary function is lost there must be an alternative" (General practitioner in the trauma ward).*

The participants gained their physical abilities gradually, as they stated they had various limitations at the beginning, which were later returned to acceptable level of physical activity.

"Now, I can walk with a stick, I can bathe alone, but I didn't do anything like this for too long. I was physically so weak in the first few days that I could not get off from my bed. I was always in bed, but I am improving gradually"(A 34 years old victim who was in a car accident while traveling out of Addis Ababa using public transportation "Aba Dula").

Three of the victims reported that they are always playing games like 'Dama' or Cards with each other and others patients in the ward. . They stated that they repress their memory of the trauma when they play gambling type of games. Of course, other two victims also mentioned how happy they feel after physical exercises.

The participants perceive that they would not have the same roles as they had: they were feeing whether they could not do their personal, familial, and social roles and care responsibilities they used to do.

"*I couldn't do anything forme and my family now. But I hope I will recover soon and act normally soon*" (A 50 year old pedestrian victim).

While the center social workers state: "*The need to be informed of the steps they have to take in order to feel good and integrate into the community. Moreover, they need to know how to develop their coping skills and live with amputated leg as well* individuals in a particular social network should acquire enough information about the injury and the life challenges accompanying the injury" (A social worker in the trauma center).

CHAPTER FIVE

5. Discussion

In this section, the findings of the study were discussed in light of the literature review. For a better understanding, this section is categorized into three parts: trends and consequences of RTA victim, services given for RTA victims and the challenges ofRTA victims and the trauma center along with the coping mechanism used by the victims.

5.1. Trends and consequence of RTA on the victims

The trends of RTA in Africa were predicted to be the fifth leading cause of death due to increases in motorization and developmental efforts as well as public health issues A study done in Ethiopia in 1991 on the occurrence and characteristics associated with motor vehicles found that over 91% are pedestrians use roads inappropriately even though this study clarified the effect of mortality and morbidity by the implementation of road safety measures it doesn't indicate the risk factors and their association to the outcomes.(TeferiAbegaz, 2011). Person (2008)) unfortunately, the RTA trend is not known in the trauma center because of lack of data to show whether it is increasing or not.

Traffic Accidents occur suddenly, taking the lives of many people and leaving many to suffer traumatic experiences. A sudden change of life due to accident complicates not only the life of the victim but also of the family, and friends. The catastrophic event also results in depression and anxiety as aseessed by this study.The Depression ca be beacuse of reasons of loss of loved ones, family, friends, work uncertainty and limb amputation contbuting to emotional instability (Osvaldo et al, 2012). Theconsequences of RTA on the victim includeloss of beloved oncesor family menebrs, loss of job, death and creat ceratin mental disturbances like driving and traveling phobia(Falvo, 2004; 2007; Gledhill, Rangel, & Garralda, 2000).

5.2. Services for RTA victims

According to the finding of the study indicated that "supportive needs" was importantfor returning to normal life for RTA victims and thus needs could be in different forms: treatment support, peer support, and social support. The need for Support was

common and was effective in reducing their stress and coping with injures disabling they faced. This result is consistent with the findings of the study by Persson(2013) in which the participants found that the family support is an effective factor in reducing accident-related problems and important changes that might occur in their family life. Also, the participants in this study perceived treatment support as an important factor in adaptation with the problems and disabilities appearing after the accident. They considered favorable interaction in the treatment team as a reason for their recovery and emotional stability. The results of WHO (2009) study showed that traumatic survivors struggled a lot to return to normal life but seriously need to receive support and security from the health worker team, especially nurses. (WHO 2009, Persson (2013)

Though Strong social support has an important role during dealing/coping with injury/accident and also participants in this study had experienced the need to social support in different dimensions of their life but have discussed on lack of adequate social protection in different ways. This result is consistent with WHO's (2009) study in which support by family and friends and peer group help to other patients in finding a solution to the problem, authenticating, navigating to the information, creating positive emotions and comfort.

The participants of this study gradually acquire management of their own affairs and life following the changes in physical, mental, and social functioning. The results showed that the potential return to work after traffic accidents was also a means to be productive and independent, and adapting to challenges caused by the injury. This result is confirms a study of Abegaze(2014) that pointed returning to work in trauma patients was accompanied with increased sense of self-esteem and independence.

5.3. Coping Mechanism

Various coping mechanisms were mentioned by the study participants like: Making oneself engaged in different activities, talking with friends and families, having optimistic attitude and religious prayers to increasetheir quality of life and cope with the new life demands. They had gradually coped with the problems and disabilities caused by the accident and gained independence and self-discovery. This result might be due to the participants' ability to reduce their stress. Moreover, the participants understood the value of the new life.

Another study shows that positive thinking and self-acceptance can facilitate adaptation and return to pre-injury life in RTA victims and also the results of this study revealed that the above mentioned facts help in returning to normal life since RTA is a complex, difficult, and long-term process for traffic accident victims. The requirements for the victims to return to normal life included access to training and support (strong treatment, nursing, and social support) and participating in self-care activities.AntenehKebede (2015))

Based on the findings of this study, participants often prefer having support from their family and friends and sometimes they also used the avoidance as coping strategies. People want to be around their family and friends, in fact people facing RTA run first to their family and friends when they have problems because they get strength from them.

A study conducted by Salah(2015) found that problem-focused strategies are one of the coping mechanism used by the RTA victims. In this coping mechanism the victim thinks about his work, families and life. By doing so, the victimincreases his/her problem solving skills. Similarly one of the participants was using this strategy.

Talking about a stressful event with a supportive person can also be an effective way to manage stress and the use of recreational activities or games can also help people cope with stressful situations. Making light of a stressful situation may help people maintain perspective and prevent the situation from becoming overwhelmed and physical exercises can serve for many people as a natural and healthy way of stress management. Running, yoga, swimming, walking, dance, team sports, and many other types of physical activities can help people cope with stressful situations and the aftereffects of traumatic events This coping mechanism involves identifying a problem that is causing stress and then developing and putting into action some potential solutions for effectively managing it (Cramer, 2015).

“After the accident I always stay positive and healthy in every aspect of my life; I become more alert and more careful of my surroundings in that case, I will feel safe and will not bring back unwanted feelings and can cope easily; I push myself to concentrate on my family and other stuff; I focus on my work more to keep things out of my mind; I concentrate on the positive things in my life that help me to cope with what happened; I eat the foods I like and I will instantly feel good; I accept that it already happened and stop being in denial; I set new goals for myself; I tell myself that it will not happen again; Whenever I think about it, I try to

relax myself and be at ease; I just think of the positive outcomes of the accident rather than the negative ones"(A RTA victim attending outpatient physiotherapy *due loss of one leg by the accident.*

CHAPTER SIX

6. Conclusion and Recommendation

6.1. Conclusion

Vehicle is one of the most widely used transport alternatives and the major cause of road traffic accidents in the world. Everybody travels from one place to another to work, do business, study and to visiting places. Due to road traffic accidentsmany road users lose theirlives, spent days, weeks, months, or even years in health centers and/or hospitals, and never be able to work or play as they used to do before. Nowadays RTA has been both public health and developmental issue and due to its high magnitude and sever degree of consequence its being the concern of the governments, civil society organizations, business and community leaders.

According to the World Health Organization (WHO, 2013) report, every year more than 1.25 million people die due to RTA and about 50 million people are injured or left disabled in the world. Principally, injured people have occupied 30 to 70 percent of orthopedic beds in the hospitals of developing countries. WHO (2013) report also addsif business as usual continues, on the issue of RTA “road traffic injuries are estimated to be the ninth leading cause of death across all age groups globally and are predicted to be the seventh-leading contributor to the global burden of disease and injury by 2030”.

The study found out that once RTA happened, victims arerequired to use various coping mechanisms. Among those are adaptation to the new environmentand returns to acceptable physical activities. The capacity of the ALERT trauma center is limited due to the increasing number of the victims from time to time and in some cases victims are unable to get quick emergency treatments, in some cases victims has to wait for treatment until a committee led by a doctor makes the decisions. Those victims who have poly trauma get service first.

The number of victims who were injured by Bajaje(a three wheels-car) is increasing and mostlyaffectspedestrians. In thetrauma center a treatment of Orthopedic and Plastic surgery is offered along with other surgery. However the center lacks documentation on the types of injury making it difficult to talk about the trends of the RTA victims.

6.2. Recommendation

6.2.1. For social work

- ✓ Social workers like other medical professionals need to learn about PTSD and its consequences. In this vein, they need to be well versed with identification and assessment of PTSD. Counseling services and diagnostic process or procedures in hospitals can be carried out by social workers as a member of the trauma specialist team.
- ✓ Trauma treatment practitioners should take various steps toward health promotion and recovery of victims. For instance, it is necessary to form small teams with the involvement of the victims and their families. Group therapy, recreational games and indoor exercises should be increased. Considering the substantial improvements that have been made regarding post-crash care facilities in ALERT trauma center during recent years, there is a need for further research to investigate if the accessibility to a specialized trauma team and the service utilization of PTSD care could be improved even at community level.

6.2.2. For Education

- ✓ Crate a frequent awareness rising events (on how to avoid RTA by obeying the rules and regulations of RTA while walking and driving) for an effective instrument to frame the behavior of pedestrians and drivers about of the adverse causes of RTA focusing at primary schools levels.

6.2.3. For researchers

- ✓ Due to lack of research studies conducted in Ethiopia, it is imperative to do many different studies involving victims and health care providers and all others that are working in the area of trauma certain various hospitals. This study may serve as a spring board to do further researches andto have a better insight of the challenges and coping mechanisms that enhance the well-being of trauma survivors in Ethiopia.

6.2.4. For AAU

- ✓ The role of social worker is not well recognized, hence, more efforts should be made by the School of Social Work in AAU to develop and train health social workers to work in health settings.

6.2.5. For ALERT trauma center

- ✓ Increase capacity to do plastic surgery
- ✓ Multidisciplinary team approach involving social worker, psychologist, nurses, medical workers, and the victim family should be adopted.
- ✓ The importance of bio-psychosocial/spiritual and strengths-based approaches should be given due place to improve the coping abilities of the victims.
- ✓ Improve qualified and competent professionals
- ✓ Increase the role of families to supporting the victim.
- ✓ Increase the types of recreational activities to engage the victims.

References

• Jonathan C. Samuel, E. S. (2012). Under-Reporting of Road Traffic Mortality in Developing Countries: Application of a Capture-Recapture Statistical Model to Refine Mortality Estimates. *PLOS*.

Abdul-kadir, M. (u.d.). Training lay people as first responders to reduce road traffic mortalities and morbidities in Ethiopia: Challenges, barriers and feasible solutions.

Busuttil, A. (1997). Coping and Psychological Morbidity After Road Traffic Accidents: The Development of a Coping Scale and An Examination of Stressor Variables. *The Development of a Coping Scale and An Examination of Stressor Variables, Coping and Social Support in Relation to Post Traumatic Stress Disorder*.

Caddick, B. S. (2012). Qualitative methods in sport: a concise overview for guiding social scientific sport research. ss. 60-73.

Fatemeh Pashaei Sabet, K. N. (2016). Road Traffic Accident Victims' Experiences of Return to Normal Life: A Qualitative Study. *Iran Red Crescent Med J*.

Krueger, W. a. (2006). *Social Research Methods: Qualitative and Quantiative Approaches.* Toronto: Pearson.b. core.

Marvasti, A. B. (2004). *Qualitative Research in Sociology* . London: SAGE Publications Ltd .

P., C. (2015). Understanding Defense Mechanisms. *Irn Red Crescent Medical Journal*, 523-52.

Shandiz Moslehi, P. A. (2015). The relationship between problem-focused coping strategies and quality of life in schizophrenic patients. *Med J Islam Repub Iran*, 29: 288.

T Abegaz, Y. B. (2014). Effectiveness of an improved road safety policy in Ethiopia: an interrupted time series study. Oromia Regional State, Ethiopia : Oromia Regional Transport Bureau.

WHO. (2013). *Global status report on road safety 2013.* Geneva: World Health Organization Department of Violence & Injury Prevention and Disablity.

Andrews, B., Rose, S. & Kirk, M. (1999).Acute stress disorder and posttraumatic stress disorder in victims of violent crime.*American Journal of Psychology* 156, 360–366.

Ben-Shlomo, Y., Canfield, L., & Warner, T. (2002). What are the determinants of quality of life in people with cervical dystonia? *Journal of Neurology and Neurosurgical Psychiatry*, 72, 608–614.

Bishop, M., &Feist-Price, S. (2001). Quality of life in rehabilitation counseling: Making the philosophical practical. *Rehabilitation Education*, 15(3), 201–212.

Bond, G. R., Resnick, S. G., Bebout, R. R., Drake, R. E., Xie, H., &McHugo, G. J. (2001). Does competitive employment improve nonvocational outcomes for people with severe mental illness? *Journal of Consulting Clinical Psychology*, 69, 489–501.

Burker, E. J., Carels, R. A., Thompson, L. F., Rodgers, L., & Egan, T. (2000). Quality of life in patients awaiting lung transplant: Cysticfibrosis versus other end -stage lung diseases. *Pediatric Pulmonology*, 30, 453–460.

Crews, W., Jefferson, A., Broshek, D., Barth, J., & Robbins, M. (2000). Neuropsychological sequelae in a series of patients with end-stage cysticfibrosis: Lung transplant evaluation. *Archives of Clinical Neuropsychology*, 15, 59–70.

Cunningham, K., Wolbert, R., &Brockmeier, M. B. (2000).Moving beyond the illness: Factors contributing to gaining and maintaining employment.*American Journal of Community Psychology*, 28(4), 481–493.

Cusack, L. (2000). Perceptions of body image: Implications for the workplace. *Employee Assistance Quarterly*, 15(3), 23–29.

Davis, W. B., Mooney, D., Racusin, R., Ford, J. D., Fleischer, A. &McHugo, G. J. (2000a).Predicting posttraumatic stress after hospitalization for pediatric injury. Journal of the American Academy of Child and Adolescent Psychiatry 39, 576–583.

deVries, A. P. J., Kassam-Adams, N., Cnaan, A., Sherman-Slate, E., Gallagher, P. R. & Winston, F. K. (1999). Looking beyond the physical injury: posttraumatic stress disorder in children and parents after pediatric traffic injury.*Pediatrics* 104, 1293–1299.

Di Gallo, A., Barton, J. & Parry-Jones, W. (1997). Road traffic accidents: early psychological consequences in children and adolescents. *British Journal of Psychiatry* 170, 358–362.

Dudgeon, B. J., Gerrard, B. C., Jensen, M. P., Rhodes, L. A., & Tyler, E. J. (2002). Physical disability and the experience of chronic pain.*Archives of Physical Medicine and Rehabilitation,* 83(2), 229–235.

Ehlers, A., Mayou, R. A. & Bryant, B. (1998).Psychological predictors of chronic posttraumatic stress disorder after motor vehicle accidents.*Journal of Abnormal Psychology* 107, 508–519.

Ellis, A., Stores, G. &Mayou, R. (1998).Psychological consequences of road traffic accidents in children.*European Child & Adolescent Psychiatry* 7, 61–68.

Falvo, D. R. (2004). Effective patient education: A guide to increased compliance. Boston: Jones and Bartlett.

Ford, D. J., Grasso, J. D, Elhai, J. D., &Courtois, A. C. (2015). Posttraumatic Stress Disorder: Scientific and Professional Dimensions, 2nd.ed. Academic Press

Gledhill, J., Rangel, L., &Garralda, E. (2000).Surviving chronic physical illness: Psychosocial outcomes in adult life.*Archives of Disease in Childhood,* 83(2), 104–110.

Hordern, A. (2000). Intimacy and sexuality for women with breast cancer.*Cancer Nursing*, 23(3), 230–236.

Hordern, A. J., &Currow, D. C. (2003).A patient-centered approach to sexuality in the face of life-limiting illness.*Medical Journal of Australia*, 179(Suppl. 6): S8–S11.

Kovac, J. A., Patel, S. S., Peterson, R. A., & Kimmel, P. L. (2002). Patient satisfaction with care and behavioral compliance in end-stage renal disease patients treated with hemodialysis. *American Journal of Kidney Disease*, 39(6), 1236–1244.

Leplege, A., & Hunt, S. (1997). The problem of quality of life in medicine.*Journal of the American Medical Association*, 278(1), 47–50.

Livneh, H. (2001). Psychosocial adaptation to chronic illness and disability: A conceptual framework. *Rehabilitation Counseling Bulletin*, 44(3), 150–160.

Livneh, H &Antonak, F, R (2007).Psychological Adaptation to Chronic Illness and Disability: A Primer for Counselors. In A.D.E. Orto& Power, W.P. (ed) The Psychological & Social Impact of Illness and Disability (5th ed.). Springer Publishing.125-144.

Livneh, H & Parker, R. (2007). Psychological Adaptation to Disability: Perspectives From Chaos and Complexity Theory. In In A.D.E. Orto& Power, W.P. (ed.) The Psychological & Social Impact of Illness and Disability (5th ed.). Springer Publishing 611- 633.

Livneh, H., & Wilson, L. M. (2003). Coping strategies as predictors and mediators of disability-related variables and psychosocial adaptation: An exploratory investigation. *Rehabilitation Counseling Bulletin,* 46(4), 194–208.

Mayou, R. A. & Bryant, B. (2001).Outcome in consecutive emergency department attenders following a road traffic accident.*British Journal of Psychiatry* 179, 528–534.

Mayou, R. A., Bryant, B. & Ehlers, A. (2001).Prediction of psychological outcomes one year after a motor vehicle accident.*American Journal of Psychiatry* 158, 1231–1238.

McBride, K. E., &Rines, B. (2000). Sexuality and spinal cord injury: A road map for nurses. SCI Nursing, 17(1), 8–13. McInnes, R. A. (2003). Chronic illness and sexuality.*Medical Journal of Australia*, 179(5), 263–266.

McDermott, B. M. &Cvitanovich, A. (2000). Posttraumatic stress disorder and emotional problems in children following motor vehicle accidents: and extended case series. Australia and New Zealand Journal of Psychiatry 34, 446–452

Moonilal, M.J. (1990). The trauma center: A new dimension for hospital social work. In Davidson, W. K. & Clarke, S.S. (ed). Social work in health care: A handbook for practice. 749-762 The Haworth Press.

Moore, G. M., Franzcp, N., Hennessey, P., Kunz, N. M., Ferrando, S., &Rabkin, J. G. (2000). Kaposi's sarcoma: The scarlet letter of AIDS. The psychological effects of a skin disease.*Psychosomatics*, 41(4), 360–363.

MorofLubkin, I., & Larsen, P. A. (2002). Chronic illness: Impact and interventions. Boston: Jones and Bartlett.

North, S.C. (2007). Psychiatric and Psychological Issues in Survivors of Major Disasters. In In In A.D.E. Orto& Power, W.P. (ed.) The Psychological & Social Impact of Illness and Disability (5th ed.). Springer Publishing 214-229.

Nosek, M. A., & Hughes, R. B. (2003). Psychosocial issues of women with physical disabilities: The continuing gender debate. *Rehabilitation Counseling Bulletin*, 46(4), 224–233.

Orto, E. D.A, & Power, W.P. (2007). The Psychological & Social Impact of Illness and Disability (5thed.). Springer Publishing

Shaw, L., Segal, R., Polatajko, H., &Harburn, K. (2002). Understanding return to work behaviours: Promoting the importance of individual perceptions in the study of return to work. *Disability Rehabilitation*, 24(4), 185–195.

Smart, J. (2001). Disability, society, and the individual. Gaithersburg, MD: Aspen.

Stallard, P., Velleman, R. & Baldwin, S. (1998). Prospective study of post-traumatic stress disorder in children involved in road traffic accidents. *British Medical Journal* 317, 1619–1623**.**

Stallard, P., Velleman, R. & Baldwin, S. (2001). Children involved in road traffic accidents: psychological sequelaeand issues for mental health services. *Clinical Child Psychology and Psychiatry* 6, 1339–1345.

Stevens, S. E., Steele, C. A., Jutai, J. W., Kalnins, I. V., Bortolussi, J. A., &Biggar, W. D. (1996). Adolescents with physical disabilities: Some psychosocial aspects of health. *Journal of Adolescent Health*, 19, 157–164.

Vergouwen, A. C., Bakker, A., Katon, W. J., Verheij, T. J., &Koerselman, F. (2003).Improving adherence to antidepressants: A systematic review of interventions.*Journal of Clinical Psychiatry*, 64(12), 1415–1420.

White, C. A. (2000). Body image dimensions and cancer: A heuristic cognitive behavioural model. *Psych-Oncology*, 9, 183–192.

World Health Organization. (1980). International classification of impairments, disabilities, and handicaps: A manual of classification relating to the consequences of disease. Geneva, Switzerland: Author.

Young, A., & Murphy, G. A. (2002).A social psychology approach to measuring vocational rehabilitation intervention effectiveness.*Journal of Occupational Rehabilitation*, 12, 175–189.

Yule, W. (1999).Treatment of PTSD in children following road traffic accidents. In The International Handbook of Road Traffic Accidents and Psychological Trauma: Current Understanding, Treatment and Law (ed. E. J. Hickling and E. B. Blanchard), pp. 376–387. Elsevier Science Ltd.: Oxford**.**

Informed Consent

Dear participants

My name is HirutAdmasu, a post-graduate student in Addis Ababa University School of Social Work. In order to complete my MSW, I have to conduct a research. To this end, I would like to request your willingness to take part in my research. My research is titled "*The Copying Mechanisms of Road Traffic Accident Victims: The Case of ALERT Hospital Trauma Center*". The research is significant for my partial fulfillment of the requirement for the completion of my postgraduate degree. This study will have a number of contributions. Hence, your genuine and kind cooperation to be interviewed is highly appreciated. Your names will remain undisclosed to anyone. You have also the full right to reject to answer any question you feel uncomfortable. You can ask unclear questions for clarification, or skip if you are not interested in it.

Can we start? Yes_____ no_____

If yes: we can continue and

If no: thank you for your time to listen to me up to now.

Thanks you in advance for your participation

Annex: Data Collection Guidelines

A. Data collection guide for victims of RTA

I. Socio-demographic characteristics

1. Age category of drivers/Victim (years) A) less 18 B) 19-30 C) 31-50
2. Victim sex A) Male B) Female
3. Victims occupation A) student B) Government C) employee/servant D) Farmer E) jobless F) Daily laborer G) private H) others
4. Educational status of the victim A) Illiterate B) Primary education C) Junior secondary education C) Senior secondary education D) Post senior secondary school C) unknown
5. Types of vehicle A) Bicycle/Motor bike B) Automobile C) Taxi D) Taxi 12 seat capacity E) Lorry with various capacity

II. Questions for Assessing the Coping Mechanism of RTA victims

1. How do you view yourself in relation to your problems?

2. Do you feel as guilty?

3. Are you aware of your own strengths?

4. If yes, what kind of strengths do you think you have?
5. Have you been asked to identify your personal strengths by the organization to cope from your problem?
6. Have you thought about your strengths before RTA happened and admitted to the rehabilitation center?
7. Why do you think identifying your strength is important for copying from RTA and future problems?

8. Have your strengths helped you overcome difficult situations? If yes, please explain how?
9. Would you prefer to have your strengths or problems identified and worked with?
10. What are the feelings of the victims after the accident happened?
11. What is the living condition of victims of road traffic accident victims?
12. How do they cope up with the effects of the accident?
13. To what extent does the accident change their way of life?
14. What are the lives of the victim have changed as a result of the accident?
15. How do you view their live in comparison with the lives before the accident?
16. What are the copying mechanisms they have adopted to continue to survive?
17. What types of copying mechanism have been helpful for them

B. Key Informant interview Guide lines for Health care Workers

I. Socio-demographic characteristics

1. Sex ----------
2. Educational background …….
3. Role in the ALERT Hospital trauma center
4. Involvement in arranging rehabilitation center and RTA victims admission , treatment and follow up

II. Questions for Assessing the role of health care providers in Coping Mechanism& treatment of RTA victims

1. How do you see the trends of RTA victims?
2. Do you feel RTA victims need special care than other patients in the hospital?
3. What are the main problems that RTA victims face?

4. Do you feel there is the need for availing the different services are important for rehabilitation of RTA victims?
5. If ‘yes’, what are the services and who provides them? [*Probe for specific services]*
6. Do you think the services are comprehensive?
7. Which services are working well?
8. Do you have provided medical support for RTA victims, if yes what kind of support you provided, what is the mode of provision?
9. Do you have mechanisms to ensure that the medical support are practicing and functioning?
10. How do you measure progress and impact of your support on RTA victims’ wellbeing?
11. Have you been able to measure behavioral change among the RTA victims?
12. In your opinion, how would you rate the effectiveness of the available services to address the RTA victims problem
13. Are there other external agencies which support the Rehabilitation center particularly, RTA victims*? (probe for specific supports Who & What kind of support)*
14. Do you think RTA victims have strength to copy from the problem?
15. If yes, what are the copying mechanisms they used?
16. Is the copying mechanism introduced by themselves or external body?
17. Do you think RTA victims have strength?
18. If yes what kind of strengthen you has observed?